UNLOCKING NEW IDEAS

Good, Replicable and Innovative Practices

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HEALTH CARE TECHNOLOGY

POSTERS

INTROD

Introduction

From the first summit held in 2013, the National Summit on Good and Replicable Practices and Innovations in Public Healthcare Systems in India, has, in a short space of time, become an institutional mechanism for the sharing of innovations supported by the National Health Mission.

This is the fourth publication in this series and captures 98 best practices and innovations, including health programmes, medical devices and technologies. They span programmatic areas ranging from health systems, maternal and new-born health, family planning, tuberculosis and other communicable diseases, non-communicable diseases and mental health. They also include innovations that apply systems thinking to health problems such as the use of information technology to strengthen continuum of care and to addressing human resource shortages and challenges in capacity building, and innovations that address the needs of vulnerable slum popualtions in the National Urban Heath Mission. The publication includes the presentations made at the fourth national summit held at Indore where both 46 oral and 49 poster presentations were made.

The National Health Innovation Portal (NHiNP), which was launched during the Shimla summit of 2015, represents the Ministry of Health and Family Welfare's unstinting effort towards identifying and nurturing good practices and innovations. Since 2015, over 500 proposals have been received through this portal. In the last one year, more than 200 proposals have been uploaded on NHiNP. These have been subjected to criteria based reviews by various technical and programme divisions of the MOHFW, and the National Health System Resource Centre. The aim is to ensure that as we move towards realizing the aspirations of National Health Policy 2017, all sections of population, specially, those most disadvantaged, are benefited by new knowledge and new learning.

The portal has attracted interest from several policy think-tanks, the NITI Ayog and the Prime Minister's Office. This further supports and encourages future endeavours on enabling and fostering innovations at all levels, through public and private sector and addressing various dimensions of health systems challenges, both unfinished and emerging.

Innovations that are included in the publication include Programme and Product Innovations. Programme innovations are designed at various levels of health care delivery as a response to a specific problem to improve a health outcome or addressing a programmatic dimension required for improved performance. This may include (but are not limited to) innovations in service delivery, human resources for health, community processes, financing and governance. Among health product innovations, medical devices, innovative technologies in Healthcare IT, m-health, and tele-health/e-health form a large proportion. New vaccines and drugs are not included in this set of innovations since there are other mechanisms for identification, assessment and incorporation into large scale systems.

PRINCIPLES OF IDENTIFICATION AND ASSESSMENT OF INNOVATIONS

All innovations that are uploaded on the portal are assessed using certain guiding principles. They include:

INCLUSION CRITERIA FOR PROGRAMME AND PRODUCT INNOVATIONS

- Innovations that are relevant to health care needs of the population, particularly those who are disadvantaged and marginalized.
- Innovations that address locally endemic health problems or diseases.
- Innovations that facilitate better health care reach to people in terms of accessibility (including reach to the rural areas, tier II and tier III urban settlements), affordability (including potential to reduce cost of care), quality (inclusive of safety of a health care product or process) and equity.

- Innovations that bridge a crucial specialized skill gap required in delivery of health care services.
- Innovations that apply a systems approach to health problems that are persistent and are common across states.
- Innovations that address issues of convergence with implications for social and environmental determinants.

EXCLUSION CRITERIA

- Specific drugs, surgical, medical procedures or practices that need evaluation through Randomized Control Trials or Systematic Reviews.
- Incomplete documentation of innovation: For any innovation to be reviewed the document should include adequate information on process, human resource requirements, and infrastructure need, capacity building strategies, outcoomes, costs, and challenges.

EVALUATION OF INNOVATIONS

Criteria for evaluation of proposed innovations include- as per norms- i) Strength of Evidence; ii) Scale of Coverage; iii) Impact and iv) Potential for Replicability across varying contexts.

All stakeholders involved in health issues, centre and states, public sector, Non -Governmental Agencies, private sector organisations, academic and research agencies, and development partners must work in tandem utilizing each other's strengths to design innovative models of healthcare delivery.

The transition from the MDGs to SDGs, the realisation of the ambitious goals of Universal Health Coverage and of the National Health Policy 2017, require new ways of thinking, not in fragmented vertical programmes, but through a broader health systems approach. Existing solutions need to be reworked and innovations that address current realities and people's aspirations need to be nurtured. The National Health Mission will continue to provide a platform for the engagement of stakeholders in creating innovations that can be scaled up for universal access to affordable and equitable health care.

TEMS
HENING

SWASTHYA VIDYA VAHINI

PROBLEM STATEMENT

Providing health education to rural population is important in order to improve their health literacy and standard of living which decreases the burden of disease in community.

PROGRAMME DESCRIPTION

SVV is an innovative health promotion programme launched by Govt. of AP on 24-12-2016 and is being implemented since 2-1-2017. Students of medicine, dental, nursing, AYUSH and home science lead SVV by visiting villages with message to promote health. Every month, one theme of health selected on which team of students address rural population to improve their health literacy. In one month, all villages covered in the state and same student repeat the same villages in second month.

PROGRAMME OUTCOME

Students has provided health education on public health aspects like water and sanitation hygiene (SHH), environmental hygiene, communicable diseases and regularly on personal hygiene.

The data collected by the students helped to resolve so many health related issues in villages.

During household visits of the students antenatal and postnatal women were also educated regarding personal hygiene, nutrition, immunization and family planning.

KEY CHALLENGES

- Scheduling of large-scale number of under graduate medical and para-medical students from colleges to villages.
- Identification of eligible students for participation in view of their academic schedules, year of study and university exams.
- Provision of logistics like arrangement of vehicles and Health education materials (SVV Kits).
- Arrangement of health care personnel (health supervisors) for guiding batches of students to villages.

IMPLEMENTING PARTNERS

Govt. of Andhra Pradesh.

SCALABILITY

Under this program, one crore rural population were imparted health education and health related issues were resolved.

As health education is continuous learning and teaching program, more health related topics can be introduced to rural population so that their health literacy will be improved.

INTEGRATED HOSPITAL SANITATION MONITORING SYSTEM DASH-BOARD

PROBLEM STATEMENT

The erstwhile Sanitation Policy in the State of Andhra Pradesh had two major lacunae:

a) **Policy:** A single service provider was selected to provide three services - Sanitation, Security, and Pest & Rodent control and often the quality in the services was sub-optimal.

b) **Monitoring:** Monitoring of such diverse services by a single nodal officer was prone to allegation to personal biases.

PROGRAMME DESCRIPTION

To address the issue, GoAP formulated New Scientific Sanitation Policy 2015, which was largely based on Swachhata Guidelines and Kayakalp parameters by decentralising all 3 services to different service providers. It resulted into qualitative improvement and enhanced patients' satisfaction.

For effective monitoring, a web based application named Hospital Sanitation Monitoring System was developed with Dynamic checklists and Assessment sheets duly linking to a Dash Board. It captures following critical monitoring data elements for all the three services:

Name of Services	No. of Monitoring Items	No. of Measurable Elements	No. of Check points
Sanitation	9	53	53
Security	6	5	54
Pest Rodent Control	7	39	48

IMPLEMENTING PARTNERS

Dept of HM&FW, GoAP & NHM, AP.

PROGRESS OUTCOME

Visible impact is noticed with patient satisfaction and public perception about the hospital services. The transparency accountability and integrity of the programme is maintained through dynamic process, which is displayed on public domain.

FINANCIAL IMPLICATIONS

The HSMS tool has been developed with one time implementation cost with no recurring costs/additional financial burden.

SCALABILITY

The monitoring tool has been developed for improving the efficacy and efficiency of the services and objective monitoring. This is scalable at other institutions & health facilities.

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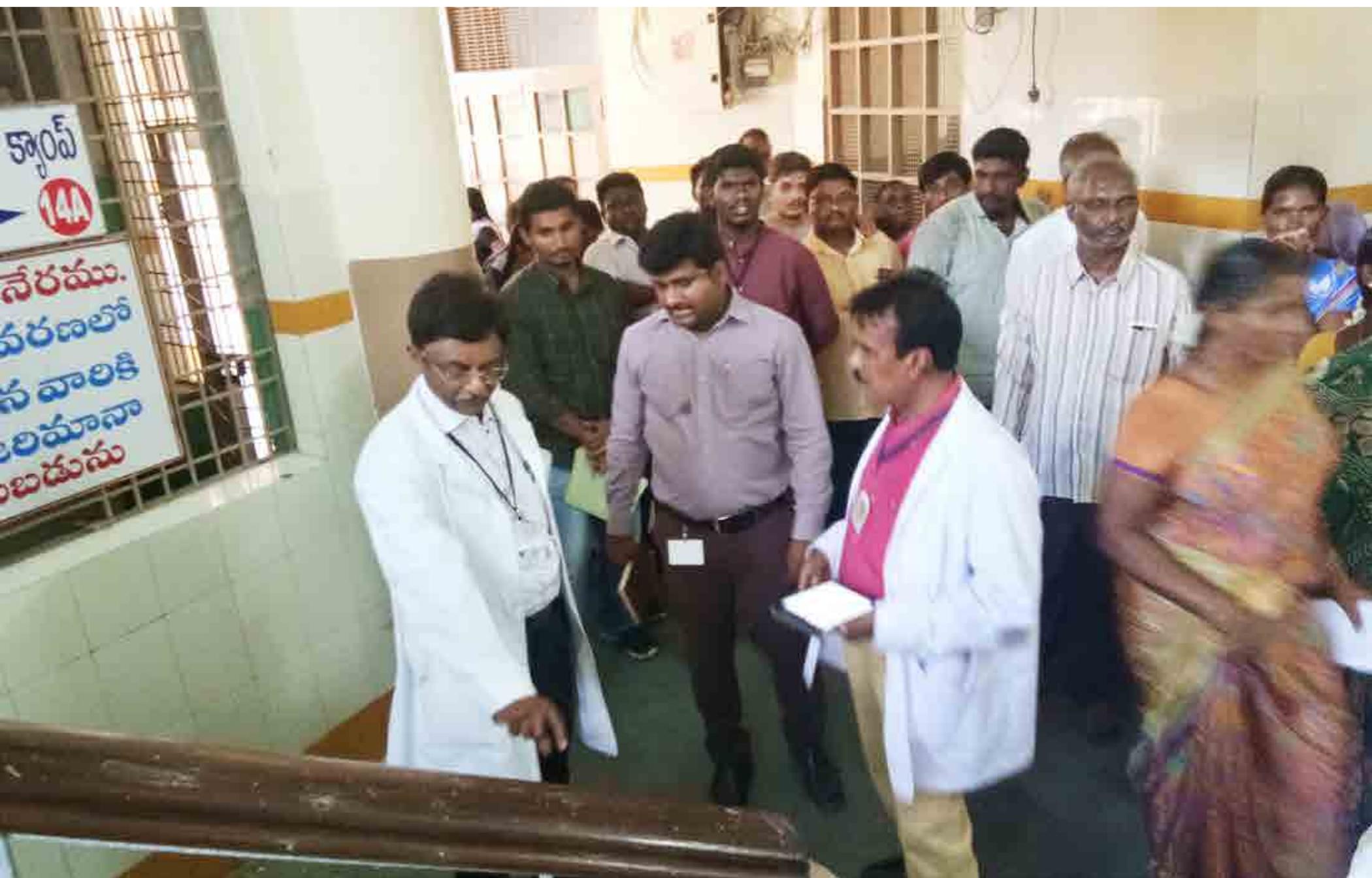
GRIEVANCE REDRESSAL MECHANISM
104 call facilitation center

PROBLEM STATEMENT

Since 2008, after the implementation of NRHM, State Health Society has initiated several mechanisms to collect grievances from community and health facility level however not a single strategy has worked effectively. The state health society took a new strategy to resolve public grievances of health delivery system under the umbrella of "Lok Shikayat Nivaran Adhiniyam 2015".

PROGRAMME DESCRIPTION

Bihar Assembly had passed an Act on Public Grievance Redressal in the year 2015, "Lok Shikayat Nivaran Adhiniyam 2015". This act has given legal power to community to complain about any public service provision to respective authority. The authority should then ensure time bound compliance of all grievances. State Health Society has initiated a 5-seater 104 call center at the state level for grievance redressal mechanism under the umbrella of this Act on March 2016 on a pilot basis. Response of this initiative has been escalating in the first year itself.

Initial days of 104 call centre, encountered several challenges like fake calls, quality training of call mangers, software issues etc.As per the analysis of one-year's data, the total average calls received per month are approximately 95000, however genuine calls related to grievances, enquiry and medical advice are only 50%. Regular IEC's positive impact could be seen as reduction in number of fake calls and enhancement in quality of calls. Majority of fake calls received were related to Vodafone phone call center and Jharkhand state grievance redressal calls.

This call center is managed by total 19 persons (15 operators and 4 supervisors), human resource with the support of 5 nodal officers and one state level administrative officer. The total annual cost of running of the call center is around30 lakhs per annum however this call center is able to resolve 95% grievances in time. The data of 104 call center has been used for ensuring services related to de-addiction center, referral transport, drugs and blood related issues.

PROGRAMME OUTCOME

Type	Total Cases	Solved	Not Solved	Percentage of total resolved cases
Grievance Issus	3427	3328	99	97.11
Blood Related Issues	626	573	53	91.53
Enquiry related to 104 Call Centre	24309	24292	17	99.93
Medical Advice	7838	7198	540	91.83

FINANCIAL IMPLICATION

30 Lakhs Per Annum.

SCALABILITY

With the learnings of 104 call center, state has decided to scale up this initiative as per GoI guideline. Below are some learning points:

1. Regular IEC of 104 call center is very important.

2. Time bound grievance redressal mechanism with escalating facility to the respective senior level officials in spite of conference between complainer and service provider as envisages in GoI guideline.

3. Linkages of Grievances redressal system with the provision of "LokShikayatNivaranAdhiniyam 2015".

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CHHATTISGARH

NURTURING HUMAN RESOURCES
for providing healthcare in rural India

PROBLEM STATEMENT

India faces a constrain in availability of functional Human in rural India. Clinical problems even at a population of 100,000 require knowledge of at least 20 clinical specialties. Besides, knowledge and skills of those already working in public health systems tend to stagnate along with frequently getting de-motivated. While the infections and MCH can be managed through institutions and are somewhat communitised, the NCDs need a model of community management.

PROGRAMME DESCRIPTION

Methodology/strategy adopted:

With an aim to provide comprehensive primary health care and overcome the human resource shortage, advocacy campaigns along with training and supportive supervision of various cadres of health personnel with focus on the middle level health worker (ANM, GNM, Senior health worker, nurse practitioners) are being conducted. Resources and technologies like -Training materials, manuals, videos for middle level HW have been developed. Activities include:

- Train mid level HW: as healers.
- Development of bridge courses in coordination with IGNOU.
- Courses on BSc community health.
- Courses for ANMs.
- GNM Course for tribal and Dalit girls.

- Nurse practitioners in midwifery.
- Train specialists as generalists - DNB family medicine.
- Mentor MBBS physicians as all competent rural GPs.
- On job training and mentoring in quality of care.

PROGRAMME OUTCOME

The programme has helped in development of Bridge course for nurses and Ayush Physicians by providing advice on content and methodology. A regional centre has been established. More than 10 useful technologies for use by health workers have been developed and 30 physicians have been trained as GPs at JSS in the last few years.

FINANCIAL IMPLICATION

The course fee for the middle level health workers including nurses is paid for by the department of tribal affairs in the government of CG and MP. The ASHA programme costs 2500 rupees per health worker per month.

SCALABILITY

It is possible to provide quality healthcare services at affordable costs using mid level care providers. The strategy is more or less consistent with what is envisaged in draft national health policy and Indian Public Health Standards. The concept is now being scaled up at the national level.

IMPLEMENTING PARTNERS

Jan Swasthya Sahyog, Government of CG and MP. yogeshjain. jssbilaspur@gmail.com

CHHATTISGARH

RECRUITING AND RETAINING
specialists and other HRH in tribal districts

PROBLEM STATEMENT

Non-availability of doctors in remote, Left Wing Extremism affected areas is a major challenge in State. The urban rural disparity is very high with availability of four times more doctors in urban areas as compared to tribal areas. Vacancies in tribal (Bastar division) public health institutions are large (59.8%) which results in inequitable access to health care services in these areas.

PROGRAMME DESCRIPTION

In the year 2015, Directorate of Health Service (DHS) and National Health Mission collaborated with UNICEF to conceptualize a project to strengthen the health care delivery services in the districts of Bijapur and Sukma. A planned approach of policy change, advancing technical support to the existing Human resource and intensified strategies to attract specialist doctors was initiated in these regions. Consultative workshops were organized with various stakeholders at state and district level. The recommendations made through these workshops were contextualized to develop a lucrative incentive package for Bastar region.

Key highlights of the package include: Differential salaries with additional incentives based on place of posting, policy reforms like preferred place of transfer after serving a fixed tenure, compulsory rural postings for new recruitments, benefits for family like facilitation for education of children, accommodation for family in any city within the state, amenities like recreation facilities and transit hostel for specialist doctors, academic incentives etc.

PROJECT OUTCOME

The state was able to achieve 18% reduction in vacancies for medical staff and 15% reduction in vacancies of specialist in these regions in one year. Infrastructural improvements and lucrative packages resulted in retention of staff which in turn improved quality/range of services being provided in these facilities.

FINANCIAL IMPLICATIONS

The local available resources like NHM untied funds and other grants such as, Backward Region Grant Fund, District Magistrate funds and Integrated Action Plan grants, CSR funds etc were utilized for strengthening infrastructure (medical as well as recreational) and HR incentives. Social Media platforms were used along with print media to achieve maximum coverage of advertisement in minimum costs.

SCALABILITY

It is evident that the process of transforming health-care availability and delivery for the tribal region has made a humble beginning. The efforts taken by the State and District Administration towards HR policy reforms are admired and acknowledged by the Ministry of Health and Family Welfare and is being advocated for further scale up.

IMPLEMENTING PARTNERS

Directorate of Health Services, Government of Chhattisgarh, National Health Mission Chhattisgarh, UNICEF.

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GUJARAT

'SWACHHTA MISSION AUDIT'
infection control in public health care institutions

PROBLEM STATEMENT

There are total 1700 health facilities in Gujarat. The culture of monitoring & supervision of cleanliness as per the laid standard was lacking in all the health care facilities. Moreover, the Medical Officer, busy with clinical work always have limited time to monitor and supervise the cleanliness in the hospital including infection control practices.

PROGRAMME DESCRIPTION

The 'Swachhta Audit' is conducted on 6th of every month in all the Public Health Care Institutions since 2014. The audit aims to provide inter-departmental convergence for the monitoring & supervision of standards of cleanliness aiming to reduce nosocomial infections. The facilities are rated based on 25 questionnaires, each comprising of 5 scores, hence a total of 125 scores for 25 questionnaires in the tool. The facilities are graded based on the scores achieved as per below grading:

- 90% = A Grade
- 80-90% = B grade
- 70-80% = C grade
- >40-50% = D grade

PROGRAMME OUTCOME

Reduction in Hospital Acquired Infections & improvement in Patient Satisfaction.

IMPLEMENTING PARTNERS

- Health & Family Welfare Department
- PRI members

- Local leaders
- Members of VHSNC
- NGOs

FINANCIAL IMPLICATIONS

There is zero cost incurred in the initiative as it is conducted by involved stakeholders.

SCALABILITY

The 'Swachhata Audit' initiative is convergent initiative with concerned stakeholders which is implemented in all the health care facilities of Gujarat starting from District Hospital to Sub Centres.

Contact: State Quality Assurance Medical Officer.

SKILLS & STIMULATION CENTER

PROBLEM STATEMENT

There is a large proportion of health care service providers in the public health system in J&K who lack certain essential skill based competencies. Lack of accredited nursing and paramedical training institutions as well as issues in the curriculum of medical colleges have resulted in semi-skilled and semi-trained health professionals in the health system.

PROGRAMME DESCRIPTION

A gap analysis in skills of health personnel working under the Directorate of Health Services, Kashmir undertaken in 2011 found that increasing the skills of healthcare professionals as per the modern protocols of skill enhancement in key areas related to (MCH), trauma/cardiac care management, BLS will lead to improvements in health outcomes. The DHS, Kashmir through the Regional Institute of Health And Family Welfare, Dhobiwan initiated ToT (training of trainers) programmes in collaborations with international organisations on these key areas. These include BLS in 2011 and Emergency Trauma Room Course in 2013 with International Committee of Red Cross (ICRC), Advanced Cardiac Life Support with American Heart Association in 2014 and High Altitude Training Lab since 2012. All these trainings continue to happen at the RIHFW. To facilitate these trainings state of the art stimulators and mannequins like SIM-MOM, SIM MAN, Mega Code Kelly have been procured by the institute. All the trainings conducted on these mannequins and simulators are being continuously monitored and regular feedback from the trainees is being analyzed. In addition, impact assessment studies are being regularly conducted in the institutions where the trained staff is being deployed.

PROGRAMME OUTCOME

Till date, more than 7000 people have been trained in Basic Life Support, around 651 doctors trained in Emergency Room Trauma Course, 923 Doctors and Nurses trained in Obstetrics & Skill Trainings, above 465 doctors and paramedics trained in High Altitude Sickness management. In 2016, 83% on the total injured patients that were received at peripheral health institutions were managed in these institutions while as only 13% were referred to tertiary care hospitals. The referral rate during similar situation in 2010 was around 40%.

IMPLEMENTING PARTNERS

Directorate of Health and Family Welfare, Kashmir.

SCALABILITY

This initiative of having a high end simulation center in other states will improve the healthcare delivery system in those states.

MEDICO-LEGAL PROTOCOL FOR EXAMINATION

PROBLEM STATEMENT

The Criminal Law Amendment Act 2013 and the Protection of Children from Sexual Offences Act and Rules of 2012 has changed the scenario related to medico-legal examination of the victims of sexual offences and the medical management of the victims. Unfortunately, doctors are generally unaware of these changes. Government of India and NGOs have issued modified formats and guidelines for medico-legal examination of victims of sexual offences. However, these formats had many deficiencies and lacunae, especially in relation to certain legal aspects.

PROGRAMME DETAILS

Kerala is the first state to implement a comprehensive medico-legal code – The Kerala Medico-legal Code in 2011. It defined all medico-legal examinations, prescribed the conditions for their conduct, conditions regarding provision of facilities, formats and materials necessary for medico-legal examinations and maintenance and issue of medico-legal documents in all medical institutions. A protocol was formulated and implemented in 2015. It contained clear cut directions regarding intimation, consent, examination, documentation, preservation of evidence, formulation of opinion, allied examinations like examination of age, examination to look for signs of intoxication, physical or mental disability etc and issue of the reports. Directions regarding the approach to the victim, facilities for conducting the examination, treatment for physical ailments caused by the offence, psychological support to the victim etc were also included. Instructions for each step during the examination were incorporated in the format itself. The first TOT on the protocol was organized in the last week of March 2015 and the Protocol was published in the official website of the Director of Health Services. Training programs were organized at each district and also at the State Health and Family Welfate Institute, Thruvananthapuram and Regional Institute of Health Family Welfare, Kozhikkode. For doctors working in private sector, training programs were conducted with the cooperation of IMA and other organizations of doctors. The protocol was also detailed to Investigating Police Officers and members of the legal profession on various occasions.

PROGRAMME OUTCOME

The Hon'ble Courts, the Child Rights Commission and police officers are now insisting on getting the report in the format provided in the Protocol shows its acceptance to them. Five institutions which were regularly following the Protocol, provided the feedback in a very positive manner.

IMPLEMENTING PARTNERS

NHM Kerala, Health Department Kerala, Kerala Medico-legal Society.

SUSTAINABILITY

These protocols follow a robust methodology and can be used in other states as well.

IMPROVING HOSPITAL BUILDING DESIGNS
to improve quality of care – an initiative

PROBLEM STATEMENT

Technical inappropriateness of building designs in district hospitals as well as the block and sub-block level facilities limits the process of improvements in ensuring adherence to service protocols leading to poor quality of services being rendered.

PROBLEM DESCRIPTION

Model Health District (MHD) interventions, initiated in September 2015 at District Sagar and Satna, as part of the efforts to improve service protocols and critical care practices it was recognized that the design of building and physical infrastructure posed a critical roadblock, in existing as well as new buildings.

The institutional process of designing hospital buildings and their approvals also had critical gaps, which led to persistent problems in design.

NHSRC supported the state by organising a workshop on Hospital Building Designs in Bhopal in Feb 2016,and state NHM team and teams from all districts were oriented.

The state leadership initiated a review of hospital buildings, undertaking a comprehensive assessment of 20 DHs in first phase. The review of nine DH buildings was completed between, May to June 2016. Till now 18 DHs have been assessed and process is being undertaken for all remaining DHs.

Design changes are mainly at two levels:

A) To improve process flow, technical protocols and quality of services, eg. Creating 3 clean zones before OT & labor room, changes for improving infection control practices.

B) For integration of new constructions with existing building, particularly to ensure appropriateness of process flow in a "Patient Centric Approach".

Chief Secretary of state, in a meeting in Sep 2016, was apprised of the challenges, esp. administrative and interdepartmental, in the process of revision of hospital building designs and his approval was taken on actions planned.

PROBLEM OUTCOME

1. A revised master plan of building design of 18 DHs prepared, which will be binding for all new additions or modifications. A consolidated fund of Rs. 1.4 Crores has been proposed and duly approved in state's PIP, for 2017-18, for implementing necessary design changes and alterations as per the master plan, and implementation has started. Field engineers of state under NHM, were trained on Hospital Planning in National Institute of Construction, Hyderabad, in Dec. 2016.

2. Government Order issued making technical and administrative approval from state mandatory before all constructions/alterations in the hospital premises.

3. Based on extensive negotiations,PWD, the principal construction agency of state has issued directions that all future hospital buildings will be designed and also further reviewed by Hospital Planning agencies and Experts.

IMPLEMENTING PARTNERS

NHSRC – collaborated in initiating the process of review, gave technical guidance and facilitated in pooling available expertise resources across the country.

HOSPITAL PLANNING AGENCY

Hospihealth, and Hospital Planning Expert, Dr. Vinay Kothari, who have been lead planners for nationally recognized, low cost new building of MCH Centre MGIMS Sewagram Wardha.

State team of NHM led the process.

FINANCIAL IMPLICATIONS

A cost saving of Rs. 19 Crores is estimated to as a result of design modifications in the new constructions in four DHs. A comprehensive assessment of cost benefits is being undertaken.

SCALABILITY

As explained above the process of review of building designs in all 51 district hospitals of the state, is being undertaken in the first phase and a master plan is being prepared.

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BRINGING ACCOUNTABILITY IN HEALTH
backtracking of severe anaemia and eclampsia

PROBLEM STATEMENT

Ensuring accountability of the health service providers towards highly professional and outcome oriented practices which meet ethical standards and fixes their responsibility.

PROGRAMME DESCRIPTION

The process of backtracking of the cases of severe anaemia and eclampsia was initiated across the State in year 2016-17. The Intervention is aimed at ensuring best practices at the service delivery level, by creating avenues to expect higher professional standards from the health service providers right up to the level of the ANMs and to fix their accountability for better outcomes.

Tracking of ANMs is being done in case of late referral of severe anaemia (Hb<6 g/dl) and eclampsia cases or maternal deaths reported due to these causes. District and block teams later investigate for any negligence on the part of ANM with respect to diagnosis and treatment during ANC for this particular case. In case of negligence, ANM together with the RCH officer and MCH Consultant/DPHNO/DCM of district is called at State office for two days on their own expenses. One day for review of all documents/case sheets by the state committee and next day for intensive training on Core Skills at Skills lab, Bhopal. Action in the form of Show cause notice and withholding of increments is recommended from state and ensured by district head quarter.

PROGRAMME OUTCOME

The Back Tracking has taken roots into the system of professional standard setting and monitoring has started in the districts. The district authorities have taken cognizance of the cases and fixed responsibilities of the erring ANMs who have been found to be negligent. The practice in those districts where this approach has been implemented has improved and the quality of care has shown significant advancement as revealed by patient satisfaction levels. A total of 84 show cause notices have been issued till date and 4 ANMs have been terminated.

SCALABILITY

The project is a holistic approach ensuring accountability and responsibility of human resources towards the beneficiary as well as the system. Further the capacity building component allows for error corrections thereby strengthening the quality of service delivery.

IMPLEMENTING PARTNERS

National Health Mission, Government of Madhya Pradesh
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MEGHALAYA

THE BIOWAT

PROBLEM STATEMENT

Primary Health Centre, Nartiang, West Jaintia Hills (Meghalaya) generates approximately 560 litres of liquid waste daily. Routine practices of unsafe discharge of the liquid waste into a nearby stream raised the environmental concern and the practice is against the provisions of the BMW Rules 2016.

PROGRAMME DESCRIPTION

The BIOWAT, (Acronym for Biomedical Waste Water Treatment) has been developed as a low cost primary care intervention for the treatment and safe disposal of liquid waste generated at the PHC.

Under the Initiative, the liquid waste, after a simple primary treatment (Sedimentation & Filtration) undergoes following four stages of treatment:

1. Slow sand filtration
2. Chlorine Disinfection
3. Carbon adsorption and
4. De-chlorination with Vitamin C.

The BIOWAT is technically simple to operate and utilises existing manpower to run. No complicated laboratory tests are involved. The intervention does not require energy source.

PROGRAMME OUTCOME

The BIOWAT has been consistently able to achieve the following discharge parameters of the effluent:
1. Free chlorine: 0 mg/L
2. pH: 7-7.5
3. Fish Survival: >96 hours: 100%
4. Turbidity: <5NTU

IMPLEMENTING PARTNERS

- Health Engineering Wing, Dept. of Health and Family Welfare, Govt. of Meghalaya.

FINANCIAL IMPLICATIONS

- Start-up expense: approximately Rs. 2.50 Lakh
- Daily running cost: Rs. 20/-
- Periodic maintenance cost: Rs. 10,000/- per Annum.

SCALABILITY

Health Department Govt. of Meghalaya is in the process of replicating the BIOWAT across PHCs and CHCs of the state.

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PUBLIC HEALTH CADRE
current status, continuing challenges and way forward

PROBLEM STATEMENT

Some of concerns plaguing the public sector includes following:

1. Need for creation of quality public health care facilities (which use ICT for health and abide by IPHS norms) filled with adequate supplies (beds) and trained human resources who can deliver public health functions.

2. Ensuring comprehensive primary health services which include the establishment of effective disease surveillance and prompt corrective actions with a continuum of care approach.

3. Enhancing community action for health focusing on public health issues (social determinants of health, intersectional coverage).

PROGRAMME DESCRIPTION

To further strengthen the functioning of Directorate of Public Health and to have the right skill-mix of HR in public health functions; the State is now focusing on institutionalizing and strengthening the public health cadre. This is to be carried out by:

- Restructuring the OMHS and making provisions for medical officers to join public health stream; supporting capacity building of MOs from public health stream; ensuring that specialists are not posted in public health positions; creating dedicated public health positions at block and above.

- Finalizing job descriptions.

- Development of training and reorientation modules; roll out training courses.

- Finalization of recruitment rules: including criteria and qualifications of those who wish to join public health cadre.

- Development of clear rules for promotions, leave and posting for the cadre.

- Rules for pursuing higher education.

PROGRAMME OUTCOME

1. Effective planning, implementation and monitoring of public health activities including various National Health Programs.

2. Improved provision of clinical care services and better utilization of public hospitals.

3. Increase in the number of medical professionals choosing to join government services due to creation of more promotional avenues of doctors at higher level.

FINANCIAL IMPLICATIONS

Current estimated budget around Rs. 50 crs.

SCALABILITY

High scalability for states with acute shortage of human resources for health.

IMPLEMENTING PARTNERS

Government of Odisha, National Health Mission, missiondirector@nic.in

RAJASTHAN

STRIVING FOR EXCELLENCE IN QUALITY OF LAB SERVICES
a case study of district hospital laboratory

PROBLEM STATEMENT

Laboratory services are critical in health care service provision. The Labs for Life laboratory services have been initiated in 20 Public Health institutions across 10 Districts and 6 States in India. This case study aims to present the effectiveness of the initiative in Paota District Hospital Laboratory, Jodhpur (Rajasthan).

PROGRAMME DESCRIPTION

The Labs for Life Project(L4L) is a pilot partnership initiative between Ministry of Health and Family Welfare (MoHFW), U.S. Centers for Disease Control and Prevention (CDC), BD and Christian Medical Association of India (CMAI):

- Implementation: After baseline assessment and closure of the gaps, following interventions were undertaken for implementation of Quality Management System (QMS).

- Safe collection practices for infection control and sample integrity.

- Safety: Safety audits, Fire safety drills, Disaster management drills, Vaccination of staff.

- Equipment management: Daily maintenance, Calibrations, Downtime monitoring.

- Quality Controls: Initiation of internal controls with LJ monitoring, Registration with External Quality Assurance Scheme (EQAS).

- Documentation: Formats to record activities, SOPs, Quality Manual and Quality System Procedures.

Above mentioned initiatives were supported under NHM, L4L Project and the State.

PROGRAMME OUTCOME

The overall Quality score increased significantly from 27.2% at baseline to 59.7% at midterm (increase of 119%). It also resulted into all-round improvement in knowledge and skills, ability to adapt, responsiveness to changing requirements, team-work, communication, staff attitude, motivation and morale of employees.

IMPLEMENTING PARTNERS

MoHFW, CDC, CMAI, Govt. of Rajasthan, DH Jodhpur.

FINANCIAL IMPLICATIONS

Initial – Rs. 8.0 Lakh PA, Recurring – Rs. 4.0 Lakh PA (cost of control).

SCALABILITY

Can be replicated at DH Laboratories.

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CADAVER TRANSPLANT PROGRAMME AND TISSUE TRANSPLANTS

PROBLEM STATEMENT

The shortage of live organ donors and scams that arose from this shortage which exploited the vulnerable and poor, caused the State government to look at cadaver transplant as the way forward. Cadaver donation must be governed transparency on all fronts to ensure the sentiments of all stakeholders both the receiver and the donor's family are respected.

PROGRAMME DETAILS

The Cadaver Trasnplant programme was started in 2008. In order to further streamline the programme the Transplant Authority of Tamil Nadu was set up in 2014. It functions as the Regional Organ and Tissue Transplant Organisation (ROTTO) and State Organ and Tissue Transplant Organization since 2015. Its functions include streamlining all procedures related to Cadaver and living organ transplantation, helping hospitals identify brain stem death, distributing organs in a transparent manner, maintaining an online waitlist registry, improving capacity related to donor maintenance, helping hospitals in medico-legal procedures, liasing with police on providing Green Corridor for transport of organs, compiling state and regional database and liasing with GoI. The registry is available publicly online ensuring transparency.

PROGRAMME OUTCOME

The State saw 135 deceased donors during the year 2014, 155 in 2015 and 185 in 2016. A total of 72 hospitals are registered for this programme, there have been 919 donors in total and 5138 organs and tissues have been distributed by waitlist to registered patients.

IMPLEMENTING PARTNERS

Department of Health, Tamil Nadu.

SUSTAINABILITY

The programme provides a methodology to help cope with the shortage of donors which is an acute problem through out the country. This is a programme that can be adopted by all states.

TAMIL NADU

STRENGTHENING OF DISTRICT HOSPITALS
through commencement of diplomate of national board

PROBLEM STATEMENT

District hospitals often encounter constraint of specialist HR. Commencement of DNB courses in secondary care hospitals to provide specialty care is the need of the hour.

PROGRAMME DESCRIPTION

The State Government has identified the district hospitals as per requirements of the NBE norms and made provisions for necessary infrastructure & facilities as per requirements for the DNB programme. The following criteria were identified for selection of district hospital.

- PG teacher from Medical College in the specialty concerned.
- Tie-up for Ethical Committee to review research & Thesis work.
- Library Services.
- Rotational Posting in different modalities/departments/areas/OTs such that exposure as prescribed in the DNB curriculum.
- Training in the area of Basic Sciences specialties.
- Hands on training provision.

PROGRAMME OUTCOME

Secondary care hospital strengthening with DNB courses will indirectly help to commence paramedical courses like Specialty nursing courses like Neo-natal nursing, Midwifery nursing, O.T room nursing, Orthopedic & Rehabilitation nursing; Para-medical courses like MLT, X-ray/CT technicians, Renal dialysis technician, OT technician, Ophthalmic assistant etc.

FINANCIAL IMPLICATIONS

NHM Funding

SCALABILITY

More potentially high demanding courses will be identified in high performing facility.

IMPLEMENTING PARTNERS

NHM/directorate of Medical education/Directorate of Medical & Rural Health services jdshstn@gmail.com

RMNCH+A

JAMMU AND KASHMIR

ROLE OF FACILITY BASED NEWBORN CARE IN REDUCING IMR

PROBLEM STATEMENT

Analysis of SRS reports since 2007 showed that J&K showed a very slow decline in IMR from 51 in 2007 to just 37 in 2013. The state was also lagging behind the national levels in terms of Neonatal Mortality Rate and Early Neonatal Mortality Rate. It was found that SNCUs suffered from many HR issues which was contributing to this problem.

PROGRAMME DESCRIPTION

A baseline assessment and gap analysis was performed by the State Health Society and Government Medical Colleges in the state. The staff of SNCUs and NICUs were provided training on FBNC with help of National Collaborative Centre for FBNC, New Delhi. The protocols for admission and management of neonates were put up as posters in all units. Regular supportive supervision visits were taken and the reports were shared with the centres to address gaps in implementation. A SNCU Online portal was started with help of MoHFW & UNICEF to improve quality of care and accountability. Funds were spent on strengthening NICUs as level III referral centres and improving the SNCUs. Staff rationalization was also performed.

PROGRAMME OUTCOME

There has been a drastic decrease in IMR in the state from 37 in SRS 2013 to 26 in SRS 2015.

IMPLEMENTATION PARTNERS

State Health Society, State Medical Colleges, MoHFW, UNICEF.

SUSTAINABILITY

The initiative involved pro-active state intent along with a combination of strategies can cause a dramatic improvement in neonatal health outcomes and can be replicated in other states as well.

KARNATAKA

OVERCOMING VACCINE HESITANCY IN MR CAMPAIGN

PROBLEM STATEMENT

Initially there was a hesitancy for schools, minority communities Measles Rubella vaccination campaign targeted wide age group of 9 months to 15 years with strategy of School sessions, outreach sessions, health facility sessions and special teams for migratory populations.

PROGRAMME DESCRIPTION

Big FM radio channel roped in as official radio partner for MR campaign. School mobilisation done through live radio shows. Radio Jockey along with team of experts- Health department, Unicef and WHO experts addressed concerns of parents and teachers in prominent large schools. Motivational activities regarding Measles Rubella elimination conducted through participation of school children. One hour episode of expert's interaction and motivational messages by teachers and students aired live on radio daily morning during school campaign which motivated other large chain of schools to come forward for MR vaccination clearing many of their apprehensions and hesitancy. Apart from this there was social media campaign through Whatsapp, Twitter and Facebook as well as utilization of hoardings, banners and flyers. Also part of the activity was the involvement of prominent personalities including actors, politicians and health experts in a video message campaign. To convince the minority communities, prominent community leaders addressed these local communities about the advantages of MR vaccination.

PROGRAMME OUTCOME

128 hesitant schools visited and all got convinced and many other schools too came forward for MR vaccination listening to live radio motivation. Yielded 100% positive results in three

major cities of Karnataka- Bengaluru, Mysuru, and Mangalore. 10 schools out of 128 schools had to be visited more than once but eventually agreed.

IMPLEMENTING PARTNERS

Government of Karnataka, Big FM, Unicef, WHO.

FINANCIAL IMPLICATIONS

Big FM sponsorship Supported by Unicef and Government of Karnataka.

SCALABILITY

Feasible in all major cities where there will be challenge of hesitancy in spite of multiple channels of communication. The schools, media partners, community leaders also get positive publicity from this campaign which has a snowball effect on other schools and communities.

Piloting of
ANC BASED GDM SCREENING AND MANAGEMENT

PROBLEM STATEMENT

Worldwide, one in 10 pregnancies is associated with diabetes, 90% of which are GDM. Undiagnosed or inadequately treated GDM can lead to significant maternal & fetal complications. Moreover, women with GDM and their children are at increased risk of developing type 2 diabetes later in their life. The average prevalence of GDM in India is 14.33% - higher than any other ethnic group of women in South Asia. Although these GDM figures include women who were previously undiagnosed diabetics, 90% of pregnancy-related diabetes develops during pregnancy. Currently screening for GDM is not being done universally as part of the ANC bouquet of services.

PROGRAMME DESCRIPTION

A baseline assessment was done across all 23 blocks of the district to check the status of GDM screening and knowledge among service providers. Based on the national guidelines and training materials localised guides and job aids were developed for MOs, SNs, ANMs and ASHAs. A district level one day sensitisation workshop was organised for all service providers. In a phased manner all 1574 service providers including doctors, nurses, lab technicians, ANMs, ASHAs etc. Pre and post training knowledge assessment tests were done which showed marked improvement. The GDM testing is being done at facility and VHND levels. The first test is done at 16 weeks and if negative a follow-up test is done around 24th week. If any of the test is positive the Pregnant Woman is asked to visit for testing every two weeks with the role of ASHAs and Anganwadi workers being to inform them in advance and provide continuous counselling and information. Treatment methodology includes Medical Nutrition Therapy or Insulin as required. Continuous supportive supervision visits and preventing stock outs of required materials are stringently followed. Linkage with NPCDCS is provided for post-partum follow-up.

PROGRAMME OUTCOME

Out of a total of 25520 pregnant women who received ANC services 13465 (58%) were screened for GDM between June 2016 and March 2017. Out of the screened PWs 877 (7%) were diagnosed GDM positive. 869 of them were treated with MNTs and the rest 8 with insulin. 174 GDM positive women have delivered till March 2017.

IMPLEMENTING PARTNERS

Department of Health, Madhya Pradesh; JHPIEGO; Novo Nordisk.

FINANCIAL IMPLICATIONS

The cost for diagnostics per person is Rs. 30.

SUSTAINABILITY

With some modifications this programme can be scaled up across the country considering the rising burden of NCDs. Also the GoI already has approved the GDM guidelines and this project has been implemented according to these guidelines.

District Level Orientation
on Gestational Diabetes Me...
Hoshangabad
August 22, 20...

UTERINE BALLOON TAMPONADE PACKAGE (ESM–UBT)
every second matters for mothers

PROBLEM STATEMENT

It is estimated that 2.8 million women annually either lose their lives or are injured from pregnancy related causes, with Post-Partum Haemorrhage (PPH) being the most common cause. The majority of our world's pregnant women that lose their lives each year live in India.

PROGRAMME DESCRIPTION

The ESM-UBT is an ultra-low cost, easy to use, safe cost effective package designed to stop PPH. The package includes

a 3 hour training curriculum compliant with both WHO and GoI guidelines for PPH management, a PPH wall poster checklist, a job-aid checklist, a teacher's training flipchart, a learner's booklet and the USM-EBT device. The device rapidly stops blood loss in women suffering from uncontrolled blood loss. Since 2015, the GoI has recommended uterine CBT as best practice for PPH management. From January 2017, the package was introduced across 11 medical colleges in Maharashtra with Mahatma Gandhi Institute of Medical Sciences leading the initiative. By April 2017, all 11 facilities completed training of their OB/Gyn and skilled birth attendants.

PROGRAMME OUTCOME

As of date the device has been used on 54 mothers who were actively haemorrhaging and most of the 54 were in active shock. 53 of these women are alive and the 1 death was associated with advanced hepatitis.

IMPLEMENTING PARTNERS

MGH-Harvard, MGIMS.

SCALABILITY

The EBT is an effective and proven device to tackle PPH and it can be scaled to a national level with a robust plan to introduce it state-wise as part of NHM.

COMMUNITY ENGAGEMENT FOR SAVING DAUGHTERS

PROBLEM STATEMENT

A steep decline of 66 points in Child Sex Ratio has been reported during the period of 1991 to 2011 in Rajasthan (Census). Trend analysis report on sex- ratio at birth in India by UNFPA, for the period of 2001-2012, revealed that more than 7 lakh girls didn't come on this planet in the state, due to sex selection.

PROGRAMME DESCRIPTION

The state launched Mukhbir Yojna' (Informer Scheme) in 2014. The Scheme promises a reward of 2.0 lacs to be divided among the Informer, Decoy lady and the Assistant who help in the entire proceedings.

Other strategies included:

- Comprehensive community mobilization campaign, named 'Daughters are precious' aimed at achieving behaviour change within the community.
- Tracking of sonography machines through GPS.
- Robust Complaint mechanisms.

PROGRAMME OUTCOME

The sex ratio (at birth) improved by 12 points in the last two years. The State was successful in breaking the network of touts, who were engaged in the business of luring pregnant women for sex determination and sex-elective abortion. More than 32 successful decoy operations have been conducted in the state in the last one year. 110 people have been arrested in these operations.

FINANCIAL IMPLICATIONS

The award money under the project has been supported by the state fund. A special supervisory fund has also been generated for decoy operations in the state.

SCALABILITY

The project is cost effective. Simple strategies of IEC and Advocacy increases the accountability within the community. What is only required is a great political will and inter-sectoral convergence to implement the program.

IMPLEMENTING PARTNERS

National Health Mission, Government of Rajasthan, md-nrhm-rj@nic.in

CAPACITY BUILDING & MENTORING FOR NEWBORN CARE
through state regional resource center

PROBLEM STATEMENT

Dependency of state on National level Training Centers due to non availability of State and Regional training institutes for Child Health was cost intensive, ineffective and required trainees to be away from their duty stations for long period of time. This adversely affected the services being provided at the facilities. Hence the need for creation of state level training centers was felt.

PROGRAMME DESCRIPTION

In the year 2013, National Health Mission, Rajasthan along with support from NIPI, conceptualized establishment of State Resource Centre (SRC) and Regional/District Newborn Care Resource Centers (RRC) in the State.

J K Lon Hospital at SMS Medical College, Jaipur was designated as the State Resource Centre for Newborn care. The SRC, as technical support agency visited districts across the State for assessment of SNCUs. The mentors provided on-job training to medical and paramedical staff posted in these facilities and addressed the operational issues.

From 2015 the centre started conducting SNCU observer-ship training of two weeks duration for medical and paramedical staff as required under the Child health guidelines. A composite index of seven indices (SNCU Quality of Care Index (SQCI) was also developed by the SRC for guiding the experts on ensuring quality of care during mentoring.

PROGRAMME OUTCOME

State achieved establishment of One State Resource Center and 8 Regional/District Newborn Care Resource Centres in the districts of Alwar, Chittorgarh, Hanumangarh, Beawar, Baran, Bharatpur and Pali. 459 Medical and paramedical staff have been trained and 55 mentoring visits to the district and sub district level have been undertaken till now.

FINANCIAL IMPLICATIONS

Project was implemented with technical support from the government medical colleges; no cost was incurred on Human resources. One time cost of development of SRC and Regional Newborn care centers were covered under NHM.

SCALABILITY

The project adopted strategy of interdepartmental convergence, and efficiently utilized resources to overcome gaps. The project is scalable and can easily be replicated in other parts of the country.

IMPLEMENTING PARTNERS

National Health Mission, Rajasthan and Norway India Partnership Initiative (NIPI) Contact: md-nrhm-rj@nic.in

REDUCTION IN DEATHS FOLLOWING STERILIZATION

PROBLEM STATEMENT

Tamil Nadu has one of the best Public Health system in the country, but it recorded huge number of deaths (post sterilization) of 11.2 per lakh sterilization procedures for the year 2011-12.

PROGRAMME DETAILS

CME Programme was organized in all districts to update the knowledge of service providers. All deaths post sterilization were audited by the District Quality Assurance committee (DQAC) members. State level panel of experts with operating surgeons and anesthetists to understand causes of deaths and to sensitize the service providers about shortcomings was organised. The panel findings was conveyed to all districts. Supportive supervision to the districts was strengthened from the state level wherein the state Nodal officer and other state level officers conducted various visits to observe quality of pre-medication, anesthesia, surgical procedures and post-operative care. An assessment of the quality of infrastructure of the facilities across various districts was also undertaken. State level and district level workshops were conducted to disseminate QA policy, guidelines and to ensure quality of care. Emphasis was laid on clinical assessment and screening of clients prior to surgery. Periodical monitoring by the state and district officials was ensured to identify bottlenecks in quality of services and post operative care.

PROGRAMME OUTCOME

Number of deaths post sterilisation has decreased from 11.2 per lac in 2011-12 to 3.3 per lac in 2016-17 due to these state initiatives.

IMPLEMENTING PARTNERS

Deparment of Health, Tamil Nadu.

SUSTAINABILITY

The state initiatives of adhering to the Hon'ble Supreme Court Directives and GOI Guidelines with strong administrative support of the state and commitment of the service providers resulted in considerable constant reduction of deaths following sterilization. As a best practice it has shown the effectiveness of the current guidelines and directives and can be replicated in other states as well.

DEPARTMENT OF FAMILY WEL...
KANCHIPURAM DISTRICT
DISTRICT LEVEL WORKSHOP O...
...ARDS OF FAMILY PLAN...
...CE & ...MNITY...

KANGAROO CARE PROJECT

PROBLEM STATEMENT

Problem Statement: Near universal coverage of KMC has the potential to avert 450,000 newborn deaths globally, and at least 60,000 newborn deaths in UP alone. Universal coverage of KMC as envisioned in INAP is achievable, but requires an evidence-based context-sensitive scalable implementation model.

PROGRAMME DESCRIPTION

The UP Kangaroo Care Project is being rolled in 8 District Women's Hospitals across the state, and 13 community health centers across 4 districts through an implementation research model in close collaboration between the Health department and Community Empowerment Lab as a technical partner.

The key strategies include:

- **Expanding ownership beyond conventional stakeholders:** building ownership for Kangaroo Care amongst stakeholders across the political leadership administrative system, health system, clinical care providers, public and private health facilities, and community stakeholders.
- **Establishing KMC as a social norm:** An innovative 'Hug of life' campaign has been launched across the state to spread awareness of KMC, enhance visibility and normalize behavior.
- **Creating KMC lounges to promote mother and baby centric humanized care:** setting up beautifully designed spaces within facilities to maximize the comfort of mothers and prolonging their stay to allow for timely initiation and maintenance of life-saving newborn care practices.
- **Technology platform for learning and sharing:** participating facilities and providers can learn and share strategies and innovations.
- **CSR partnerships for availability of Kangaroo kits:** basic supplies for prolonged KMC include cap, mittens, blanket, diapers, etc. that are being made available to all low birth weight babies through CSR partnerships.

PROGRAMME IMPACT

KMC practices in the community have significantly improved and state is moving towards achieve universal coverage of prolonged KMC (>18 hours) as envisaged in INAP.

FINANCIAL IMPLICATIONS

Financial implications: The project utilized existing funds allocated for newborn care and leverages CSR partnerships.

SCALABILITY

Scalability: The project is already being scaled across the state.34 additional DWH will be ready to be launched in May 2017.

IMPLEMENTING PARTNERS

Mission Director, National Health Mission UP, mdupnrhm@gmail.com

PPIUCD PROGRAMME IMPLEMENTATION
a success story

PROBLEM STATEMENT

Over many years the contraceptive choice by women in reproductive age group has been an obstacle in the achieving targets in Family Planning in West Bengal. Out of Contaceptive Prevalence Rate (modern methods) of 57% in the State NSV (0.1%) and IUCD (1.2%) rank among the lowest, whereas OCP (20%) is the most common spacing method despite of contraindications and long-term side effects. With this background, state decided to promote IUCD with an objective to achieve at least 15% prevalence by the year 2020 with a view to reduce OCP dependency.

PROGRAMME DETAILS

A gap assessment conducted in 2015 helped identify the gaps in supply, service provision and the community level understanding of IUCDs. A strengthening exercise was then set in motion. The highest quality of training was ensured for the trainers from the Medical Colleges. Initially only one Medical College had the national level trainer, they trained faculties of other Medical colleges who in turn started

Training of Trainers. Identified motivated Gynaecologists of the District Hospitals thereafter initiated trainings and hand holding support of peripheral MO and Staff nurses posted at labour rooms. The ANMs started quality follow ups to build confidence of the community and ASHAs started intensive counselling both for the community and antenatal mothers. Uninterrupted logistics supply was ensured and fund disbursement was regularised through

monitoring to keep the motivation of the ASHA and the providers upbeat. The individual performances were monitored and regular reviews at State, District and Block levels helped to identify gaps for correction and kept motivation of all stakeholders including administrators. Districts were appreciated and performers were rewarded to create a healthy and competitive environment.

PROGRAMME OUTCOME

Both IUCD and PPIUCD performance were improved substantially over a period of two years. IUCD increased from 1.37 lakh during 14-15 to 1.76 and 2.07 lakh during 15-16 and 16-17 respectively. PPIUCD insertions experienced a boost from 5800 to 26900 and to 1.94 lakh during the corresponding period.

IMPLEMENTING PARTNERS

Department of Health, West Bengal

SUSTAINABILITY

Strict adherence to programme guidelines alone is sufficient to achieve desired result. Initial identification of gaps helps to set priorities for better implementation of the programme. Identification of key personnel and keeping their motivation is the managerial task for the administrators. Regular monitoring, supportive supervision and appreciation are the key factors behind the success.

Nuhm

CHHATTISGARH

LEVERAGING COMMUNITY PROCESSES IN NUHM
to improve access to health for urban slum population

PROBLEM STATEMENT

Lack of primary healthcare facilities and outreach compromise the health of slum population which constitutes 32% of the 6 million urban population in Chhattisgarh.

PROGRAMME DESCRIPTION

The State Government launched Urban Health Programme in 2012 with a focus on urban slums. Under this, Community Health Workers (CHWs) known as Mitanins and Mahila Arogaya Samitis (MAS) were selected through community consensus. 3775 Mitanins were selected in slums of 19 towns and 3699 MAS were constituted, covering more than 2 million population in urban slums and vulnerable areas. Mitanins received 25 days of training over 3 years. ANMs were appointed for urban slums and urban PHCs were started. Main activities carried out by the Mitanins included- home visits for new born care, ANC visits, management & identification of cases of early childhood illnesses and mobilization of suspected TB and Leprosy cases to visit health facilities for investigations. The major tasks of MAS included conducting vulnerability mapping and working on social determinants like drinking water, sanitation and nutrition.

PROGRAMME OUTCOME

In 2015, reports show that 80% of pregnant women were mobilized for institutional delivery, 87% pregnant women received home visits, 68400 cases of diarrhea were managed with ORS and more than 1,20,000 other patients were treated by Mitanins using drug-kits. Mitanins and MAS intervened in 4540 cases of violence against women.

IMPLEMENTING PARTNERS

NHM Chhattisgarh, State Health Resource Centre (SHRC) Chhattisgarh.

SCALABILITY

Since urban health is still in an early phase, this model can be scaled up to improve the outreach of the programme, especially in vulnerable pockets.

Contact: MD, NHM, Chhattisgarh.

CONDUCTING SPECIAL OUTREACH CAMPS AT UPHC
in convergence with ULBs

PROBLEM STATEMENT

Finding venue for special outreach camps in the slum areas and mobilizing community was a big obstacle. Intersectoral convergence can act as a bridge to overcome this barrier.

PROGRAMME DESCRIPTION

For effective convergence with ULBs and bridge the gap, members of ULBs (MP, MLA, and ward councilors etc.) have been included in SKS of UPHCs and annual meetings were conducted with the ULB members at the UPHC level instead of city level workshop. UPHC meeting model act as a platform to discuss the area specific issues like sanitation, security, health etc. and develop strategies for better health activities and increase utilization of services being provided by UPHC.

PROGRAMME OUTCOME

- Easy arrangement of venue for outreach camps with proper facility of drinking water, seating etc.

जन-जन तक पहुंचे स्वास्थ्य सेवाएं : नोडल आफिसर

भिवानी , 25 मार्च (तंवर) : सिविल सर्जन डा. रणदीप सिंह पूनिया के निर्देश पर शनिवार को भिवानी अर्बन पीएचसी केंद्रों पर अर्बन लोकल बॉडीज की मीटिंग हुई। मीटिंग में पीएचसी केंद्रों के अंतर्गत आने वाले क्षेत्र के पार्षदों, आशा वर्कर्स, आंगनवाड़ी वर्कर्स, स्कूल मुखिया व सुपरवाईजर ने विशेष रूप से भाग लिया। अर्बन नोडल आफिसर डॉ. अहूजा ने बताया कि इस मीटिंग का मुख्य उद्देश्य स्वास्थ्य सेवाओं को जन-जन तक पहुंचाने का है। जिसमें सभी का सहयोग जरूरी है। ताकि सभी जरूरतमंद लोग सरकार की स्वास्थ्य

सेवाओं का लाभ उठा सकें। शहर की तीनों अर्बन पीएचसी में अलग-अलग मीटिंग आयोजित की गई। चिकित्सकों ने पार्षदों से बच्चों के आधार कार्ड बनवाने व टीकाकरण अभियान के लिए प्रेरित किया। इस मौके पर डा. विनय कौशिक, डा. अश्वनी बिंदल, डा. नवीन तक्षक व अर्बन हैल्थ कंसल्टैंट सतपाल पंचाल ने भी पार्षदों को स्वास्थ्य सेवाओं की जानकारी दी। बैठक पार्षद किरण, बलवान, रेखा राघव, मंजू, प्रवीण, दलबीर, हरदीप, मुखिया सुमित्रा देवी व विकास समेत पीएचसी केंद्रों के स्टाफ सदस्य व आशा वर्कर्स मौजूद थीं।

मीटिंग के दौरान लोगों को किट उपलब्ध करवाते नोडल आफिसर।

- Outreach Camps inaugurated by local ward/municipal councilors to increased their accountability.

  - Involving local leaders increased faith & community mobilization to camp sites. OPD attendance increased by 19% in FY 16-17.

  - Media and press coverage of the special outreach camps increases awareness on the programme.

IMPLEMENTATION PARTNERS

Government of India's.

FINANCIAL IMPLICATIONS

Funding through NUHM.

SCALABILITY

Convergence between health and ULBs increases local accountability and ensures programme sustainability in the long run.

Contact:
md-hr-nrhm@nic.in, pouh.nhm-hry@gov.in, pouhharyana@mail.com

INTENSIVE NON COMMUNICABLE DISEASES SCREENING PROGRAMME
in urban primary health centres

PROBLEM STATEMENT

Increase in the burden of non communicable diseases in urban population.

PROGRAMME DESCRIPTION

The programme consists of annual wellness health check-up for residents of Tamil Nadu above 30 years of age. Screening programme is conducted 2 days a week, on Thursdays and Fridays at 31 UPHCs. Implementation team includes MO, SNs, LTs, pharmacists, ANMs, UHNs etc. Monitoring is carried out by State, District and City officials. NCD data is collected on 25 pre-listed parameters. The programme includes screening for hypertension, diabetes, CA cervix, CA breast, oral cancer, anaemia, dermatological conditions, visual acuity and cataract. Along with this, sputum microscopy is also carried out. USG Abdomen, ECG and X-ray is carried out, if needed. An online patient record is maintained and printed copies of test reports signed by the Medical Officer are given to the patient on the same day itself. The UHN/ANM will identify the beneficiary with Chief Minister's Comprehensive Health Insurance Scheme card (not mandatory). Also, ration card and Aadhaar card (if available) can be updated during registration. This is to ensure that the beneficiaries are not duplicated in the system and for an attempt to create a comprehensive Electronic Health Records for the individual beneficiary. Patients are referred to the concerned facilities while all others are given a review date for subsequent annual screening. Access to online screens is provided to existing NCD nurses on their user IDs.

PROGRAMME OUTCOME

Demonstration of a model combining screening for multiple chronic conditions with referral and follow up, facilitated through Electronic Health Records.

IMPLEMENTATION PARTNERS

Government of Tamil Nadu.

SCALABILITY

Contact: MD, NHM, Tamil Nadu.

DCP & NCDs

SYSTEMATIC ACTIVE CASE
FINDING EFFORTS IN TRIBAL TB UNITS

PROBLEM STATEMENT

Burden of TB is high in tribal population and owing to their cultural practice of staying in clusters/close hamlets transmission is likely to be higher. Difficult geographic terrain makes it difficult for them to approach Health facilities frequently. India mainly uses passive case finding to detect tuberculosis (TB) patients through the Revised National Tuberculosis Control Programme (RNTCP). Systematic Active case finding activities can bring TB services closer to the Tribal community.

PROGRAMME DESCRIPTION

The Tribal communities gather in large numbers at certain specific places like weekly markets, bus stations, during patient-health care provider meetings, Gram sabhas, monthly religious rituals etc. Eight Tribal TB Units with a population of 557,572 (14.55% of total District population) were selected to conduct 'Active TB case finding 'activities. Since March 2015, health camps to screen patients with symptoms of TB are being organized systematically once every month in one of these specific places as per a pre-planned calendar. The Medical Officer of the Primary Health Centre, the RNTCP Supervisory staff and the Laboratory Technician participate in the camps. House to house awareness campaigns are conducted throughout the year by the Health staff about these camps. These camps are called 'Shandy Camps' and act as Sputum Collection Centers. All patients with symptoms are encouraged to give spot sample of sputum for testing and asked to report with early morning sample at the nearest Health facility.

PROGRAMME OUTCOME

TB case detection rates are moderately increased.

1. The number of sputum samples collected and sputum positive TB cases detected amongst them are increasing steadily every month and have nearly doubled in 2016-17 as compared with cases in 2015-16.

2. The Shandy camps have also spread awareness and more patients with TB symptoms (Presumptive TB cases) are attending the Health facility to confirm TB diagnosis.

FINANCIAL IMPLICATIONS

There are no additional financial implications.

SCALABILITY

1. This can be scaled up to include all Tribal/agency areas in the State or Nation since data shows that such efforts incur no additional expenses and can contribute towards a moderate increase in identification of TB cases. The existing health system and programme staff with support of ITDA can implement this.

2. Budget plan for ITDA may include this head of expenses specifically to improve supporting activities, strengthen and ensure that this scheme is continued without interruptions as a part of tribal area financial plan.

WOMEN'S HEALTH PROGRAMME
NCD screening and treatment

PROBLEM STATEMENT

NCDs are on the rise amongst the rural population. Women are particularly impacted because of poor health-seeking behaviour, financial and social disempowerment and lack of access to good quality health resources.

PROGRAMME DESCRIPTION

The MMHC programme by the Government of Andhra Pradesh aims to screen and treat as needed, all 7 million rural women between the ages of 30 and 60 years for 7 non-communicable diseases which include oral, breast, cervical cancers, hypertension, diabetes, hormonal and vision disorders. Basic screening is done by the ANMs. Medical officers in the Mobile Medical Unit or PHC will screen for & manage hypertension, diabetes and vision disorders. Suspected cancer cases are referred to secondary & tertiary levels for investigation, diagnosis and treatment as needed.

To ensure good implementation, the programme is enabled by a technology innovation for stakeholders. It is a mobile, cloud, analytics solution with a unique, Aadhaar health record for every individual that can be securely viewed, modified and updated by the caregiver at primary, secondary and tertiary level. Dashboards allow health officials to monitor performance at every level, and to drill down to village-level. Healthworkers use android app on tablets that is in the local language with many user-friendly features. All other stakeholders use web portals.

There are process innovations to ensure good quality implementation. Common diseases are handled in the PHC or MMU to reduce burden on the hospitals. Every women is given a health report card to increase awareness and to help in tracking the woman between primary, secondary and tertiary levels.

There are monthly reviews, retrainings, continuous handholding support and weekly calls based on dashboard data with all district groups to review progress and address their problems.

PROGRAMME OUTCOME

So far, 11850 ANMs, 300+ specialist doctors, hundreds of medical officers and 200+ health officials have been trained on the clinical and technology aspects of the program. More than 7.4 lakh women have been screened so far. 28,000+ women have been referred for various diseases.

IMPLEMENTING PARTNERS

Department of Health, Medical and Family Welfare AP. The technology partner is Dell-EMC, and Tata Trusts which handles trainings, field monitoring & support, and deployment issues.

FINANCIAL IMPLICATIONS

1. Programme costs – Supplies for screening. Training costs. Awareness & communications material. Booklets.
2. Hardware costs – android tablets for healthworkers, infrastructure costs in the data center.
3. Software customization, deployment and technical support.
4. Personnel costs – PMU, deployment support team.

SCALABILITY

The technology solution is scalable and is customizable for different states. The process innovations can be adopted by other states, and the same model can be followed for trainings and support, with the necessary human resources.

Contact: ddmiscfw@gmail.com, sunita.nadhamuni@dell.com

IT SYSTEM FOR SCREENING AND FOLLOW-UP
of NCD Patients (Mahila Master Health Checkup)

PROBLEM STATEMENT

Economic Burden of Non-communicable Diseases in India Report 2014, Andhra Pradesh is among the Top states with high Prevalence of Non communicable diseases. Early detection and management is essential to minimize the mortality and morbidity arising out of Non communicable diseases.

PROJECT DESCRIPTION

Mahila Master Health Check-up (MMHC), a health care programme for the women of Andhra Pradesh, was inaugurated in September 2014. It is being implemented in more than 7000 health sub centers across the state and covers 6 Million Rural Women between 30-60 years for screening of 7 health conditions namely Oral, breast and cervical cancers, hypertension, diabetes, hormonal disorders and vision disorders.

MMHC uses a software based technology, consisting of the tablet application for the health workers, the web apps for the secondary level and tertiary level doctors, and dashboards for the health officials. The solution is run and managed by the Health Department on NIC cloud infrastructure.

PROJECT OUTCOME

Since the last two years more than 6,78,086 women have been screened for NCDs. 11850 Health workers and 350+ Doctors have been trained and are effectively using the application for providing services.

FINANCIAL IMPLICATIONS

The MMHC programme provides free of cost services to all women in the target group. No additional charges for further referral or diagnostic services are levied from the beneficiaries. The required investment under the scheme is being borne by State and NHM funds.

SCALABILITY

The project is a part of MOHFW's Campaign for achieving Universal Health Care coverage. The system has a potential of replication in other parts of the country. However there the programme still needs strengthening in terms of capacity building and behavioral change among the staff for acceptance of the system.

IMPLEMENTING PARTNERS

Department of Health and Family Welfare Andhra Pradesh - NCD Screening & Treatment, Dell-EMC and Tata Trusts.

Contact: HM & FW Department, Govt. of Andhra PradesH

LifeCare NCD – Android App Features

50 NCD screens
- All 7 disease screenings
- Examination, Symptoms

Individual Enrolment
- Aadhaar ID, QR Code reader
- Personal info, photo

User-friendly UI
- Visual feedback, Warnings, prompts
- Pictorial, touch, select

Login
- 2-step authentication. Password, Code

Register Summary
- Searchable list of all registers
- All individuals entered

Refer, Search Individual
- Doctor's feedback

Social Media Links
- Awareness videos
- In Telugu, for each disease

Patient History
- Vitals, Medical, family, history, social habits and complaints

Offline with Sync
- Intelligent & fast
- Works with multiple users

Tablet Dashboards
- Counts for all diseases
- Filter by dates, village

Audio-Video help
- Telugu instructions – every screen
- Training Manual

Telugu & English
- Select language for screens

LifeCare NCD – Web App & Dashboards Features

Broad NCD coverage
- All 7 diseases
- 18 webpages

Patient Record
- Visible to Secondary and Tertiary
- With history, vitals

Screen Patient
- Examination, symptoms
- Procedures, Investigations
- ANM summary report

Confirm & Treat
- 5 rounds of treatment
- Can refer mid-way

Login, Search
- Captcha: Accounts for 5 specialists
- Search by ID, Name, Disease

Refer Patient
- Between secondary and tertiary hospitals

Laboratory Tests
- 63 Standard tests
- Standard result options

Sync to Cloud
- Intelligent & fast
- Works with multiple users

User-friendly UI, Help
- Pictorial, select
- Training manual & Help screens

Dashboards
- Screen, confirm, treat
- ANM, Secondary, Tertiary
- Linked to AP CM Core

Performance Charts
- Program, Disease counts
- Staff performance counts
- Agewise & Weekly trends

Dynamic Graphs
- Drill-down - District to village
- Switch numbers or charts

EFFECTIVE SERVICE DELIVERY FOR TB PATIENTS
seeking care from private providers

OBJECTIVES

Private providers dominate tuberculosis (TB) care in India, requiring effective engagement models for TB control. The objective of the Patna Private Provider Interface Agency (PPIA) model was to engage private providers to facilitate early diagnosis; improve the quality of TB diagnosis; increase TB case notifications by private providers; and monitor treatment adherence and outcomes for privately treated patients.

METHODS

PPIA was implemented in Patna district, the urban capital of Bihar, State India covering a population of 6.4 million. PPIA engaged private providers including registered formal providers, informal providers, diagnostic facilities, and chemists into a network. Free services including sputum microscopy, chest x-ray, Xpert MTB/Rif, and anti-TB drugs were provided through an e-Voucher system. Patients were notified at point of care through mobile phone calls to a Contact center and documented in an e-health application.

Notified patients were monitored through mobile calls that documented daily dosing information in the e-health application. Patients were prioritized for household visits with dynamic escalation based on prescription refills and adherence information. Providers were monitored for compliance to standard diagnostic and treatment guidelines.

OUTCOMES

From May 2014 – May 2017, the programme engaged 597 (71%) of targeted formal providers, 455 informal providers, 699 chemists, and 131 diagnostic facilities. PPIA notified 47,035 TB cases, 76% of total district's case notifications. Quarterly annualized Case Notification Rate (CNR) per 100,000 population increased five-fold from 73 in 1Q2013 (before the program) to 332 in 1Q2017. Drug sales surveillance data by third-party agency IMS estimated that PPIA achieved 66% patient coverage by the last reporting period. Microbiological testing across pulmonary notified cases improved from 35% to 68% over the reporting period; microbiological confirmation improved from 9% to 37%; and drug susceptibility testing (DST) improved from 14% to 60%. 1160 DR-TB cases were diagnosed by PPIA providers with Xpert MTB/Rif. Six-month treatment completion rate among notified patients was 75%.

CONCLUSION

Private provider engagement in Patna has demonstrated that notification and surveillance for improved quality of TB care at scale is achievable in the private sector. With India seeking to dramatically achieve TB elimination on an accelerated timetable and requiring rapid improvements in private TB notifications and quality of care, this experience provides a basis for RNTCP adaptation and replication.
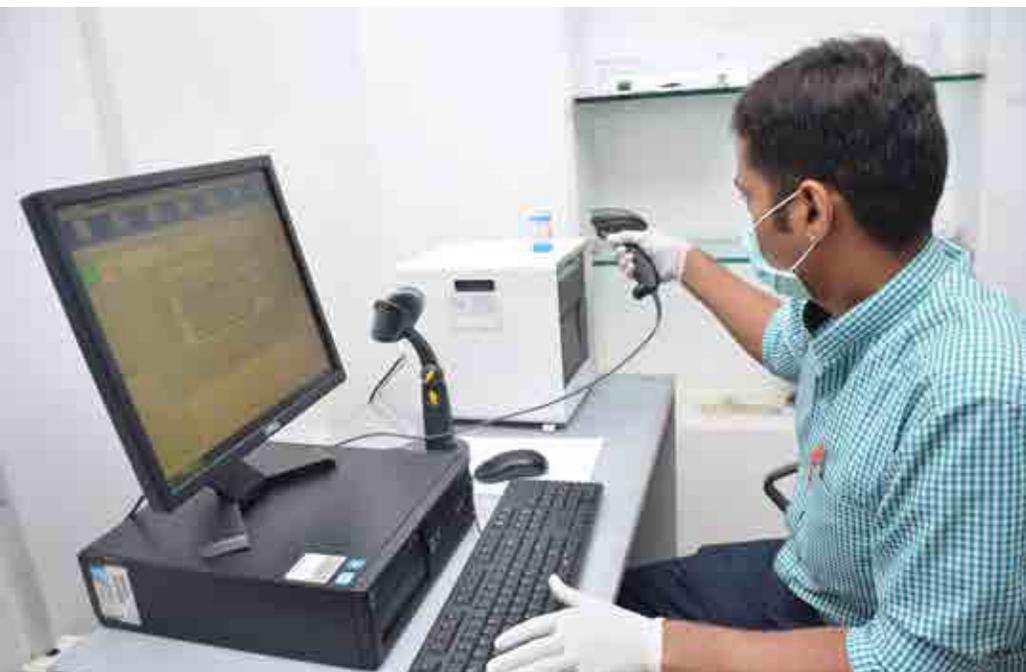
CHHATTISGARH

TB notification on sales of
ANTI-TB DRUGS FROM PRIVATE CHEMISTS

PROBLEM STATEMENT

1,671 private health establishments are registered on NIKSHAY portal in Chhattisgarh. This has helped in increasing notifications from private sector – from 807 in 2013 to 8579 in 2016. However, there are two challenges faced by State:

1. Not all private facilities are reporting on NIKSHAY

2. Informal and unqualified providers are acting as first point of contact in many instances in State and there is over-the-counter sale of anti-TB drugs based on prescription from unqualified practitioners.

PROGRAMME DESCRIPTION

State has leveraged the Schedule H1 policy of Government of India under the Drugs & Cosmetics (4th Amendment) Rules, 2013 which has following provisions:

a. Restriction on over-the-counter sale of 46 drugs (from March 1, 2014). The list includes 24 antibiotics and 11 anti-TB and anti-leprosy drugs.

b. Mandates that these 46 drugs should not be sold without a prescription issued by Registered Medical Practitioner.

c. requires chemists and druggists to maintain a sales register and to retain the physician's prescription copy as a proof of drug sales.

All the CMHOs in State are now required to report monthly on volume of anti-TB drugs sold, along-with name and address of the patient, and name of the prescribing physician.

PROGRAMME OUTCOME

Information on 11,535 TB patients was received from chemists in the private sector in the year 2016.

SCALABILITY

Chhattisgarh has implemented this across all districts. As it is a GoI notification others States can also implement it.

KARNATAKA

Web enabled system for surveillance of
CDs & NCDs IN BRUHAT BENGALURU MAHANAGARA PALIKE

PROBLEM STATEMENT

Bruhat Bengaluru Mahanagara Palike (BBMP) provides health services in the city through its own network of Urban Primary Health Centers, Maternity Homes and Referral Hospitals. The system of data collection, recording & reporting, for both public and private facilities was manual and often lead to under reporting.

PROGRAMME DESCRIPTION

To strengthen the disease surveillance and reporting system, adaptation of a web based reporting system was envisaged. For this purpose, a task force was constituted in the year 2015, consisting of Joint Commissioner Health Services, representatives of public health wing of BBMP and IDSP State Surveillance Unit.

Series of meetings were conducted among members towards development of a Public Health Information and Epidemiological Cell (PHIEC) portal. The portal facilitated online entry and reporting of cases through various forms. Alerts are generated via colour coded highlights on the city map. Alerts via SMS are also sent to the concerned Medical officer for immediate action.

PROGRAMME OUTCOME

Coordination between Health department and the Bruhat Bengaluru Mahanagara Palike resulted in improved notification from BBMP run healthcare facilities. A total of 425 BBMP Health Centers and 370 Private Hospitals of Bangalore Corporation have now been actively reporting under the portal. The portal ensured timely alerts for effective prevention and enhanced control measures towards disease outbreaks.
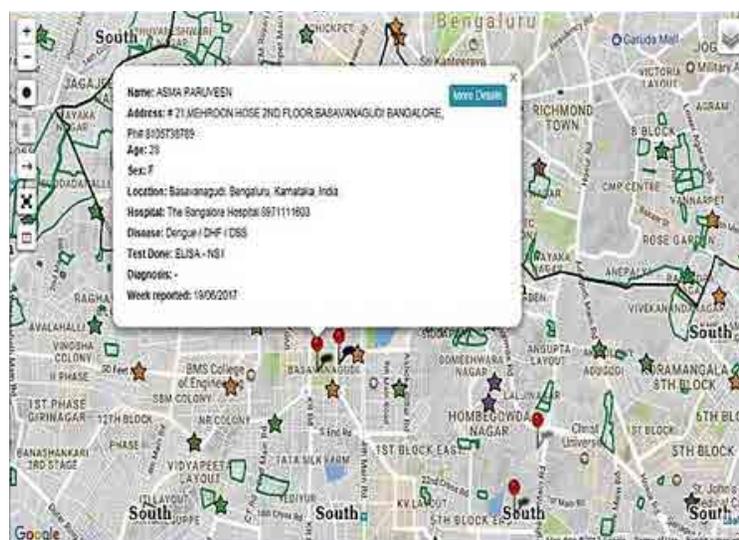
FINANCIAL IMPLICATIONS

The project was implemented through inter-sectoral convergence between the BBMP and health department. Existing Human resources were utilized. Expenses related to training and workshops were taken from State NHM budget.

SCALABILITY

BBMP is now considered as a block under District Surveillance Unit Bengaluru Urban. The cell collects information on both communicable as well as non-communicable diseases for surveillance purpose.

IMPLEMENTING PARTNERS

Bruhat Bengaluru Mahanagara Palike (BBMP), IDSP Karnataka and Bengaluru ssuidspbangalore@gmail.com

KERALA

DISTRICT MENTAL HEALTH PROGRAMME
Sampoorna Manasikarogyam

PROBLEM STATEMENT

A performance audit by the Comptroller and Auditor General of India has concluded that Kerala, where 5.86% of the population suffers from mental illness, compared with the national average of 2%, is precariously perched in the mental health care sector. In addition Kerala contribute to 10.1% of all the suicides occurring in India though our population constitutes only 3.4% of the Nation's population (World health report 2001).

PROGRAMME DESCRIPTION

First District Mental Health Programme (DMHP) was started in Kerala in Thiruvananthapuram in 1999. Since then DMHP has been rolled out in 14 districts. Thiruvananthapuram district achieved successful integration of Mental Health care into Primary Care by 2014. Now Mental Health Clinics are being conducted in all PHCs and CHCs in the district by trained doctors of the concerned institutions and psychiatric medicines are made available at PHCs. 26 day care centres, school mental health prog, 'ASWASAM'- Depression management at PHCs, 23 de-addiction Centres, 10 new de-addiction centres are being started under 'VIMUKTHI' scheme with financial support from Excise Department and mobile medical team.

PROGRAMME OUTCOME

Doctors were trained in diagnosis and management of Depression at Primary care, ASHAs have been trained on mental health, Proposal for remuneration of Rs. 100/- per mental health case referred and followed up has been accepted.

FINANCIAL IMPLICATION

All 14 DMHPs have been included in Plan fund 2017-18 with total Outlay of 656 Lakhs. Rs. 550 lakhs have been allocated in plan fund for development of 3 Mental Health Centres at Thiruvananthapuram, Trissur and Kozhikode. An amount of 100 crores have also been allocated for Kozhikode MHC under KIFBY.

IMPLEMENTING PARTNERS

State government and NHM.

SCALABILITY

As this initiative is in line with National Mental Health Policy, initiative could be scalable all over the country along with the NMHP.

KERALA

FAMILY HEALTH CENTRE APPROACH
for universal health coverage

PROBLEM STATEMENT

Kerala often known for its gains in health care sector is now facing its own challenges. The rising number of communicable diseases and the increasing prevalence of non communicable diseases among people ailing per population and people seeking care in the state is largest in the country and most of the services are availed from private sector leading to out of pocket expenditure driving families to impoverishment and poverty.

PROGRAMME DESCRIPTION

Effective Primary care service delivery has proven across the globe to be an effective strategy to improve the morbidity burden of communities. The programme envisions a family based health care approach. The components of the programme are:

- **Increase in the scope of services and ensuring the quality of care:** A set of 52 common conditions that can be managed in a FHC are identified and clinical guidelines are prepared for management.

- **Health centred developmental agenda under leader ship of LSG:** Capacity building for health care staff and LSG members in providing health centred projects in current 13th five year plan. LSG

involvement in every stage to instill ownership and focus on social determinants of health.

- **Community engagement:** Arogyasena health care volunteerism 25 per ward a total of 500 per 30,000 population.

- **Family health plan:** Mapping health needs of FHC area, mapping the services that are being currently provided, identify new services that needs to be integrated, mapping the provider at each level. e- health plat form will be integrated.

- Specific focus projects for tribal and marginalized population in urban and rural areas.

The project will be operational in selected 170 Family Health Centres in the state in first phase.

IMPLEMENTING PARTNERS

NHM, DHS, SHSRC.

FINANCIAL IMPLICATION

Being funded through State Schemes.

SCALABILITY

Will be scaled throughout the State in a phased manner.

TRIALOGUE

PROBLEM STATEMENT

Due to lack of awareness and prevalence of myths, misconceptions, apprehensions and inhibitions in the minds of people, there is low voluntary reporting leading to late detection with disfigurement and disability caused by the disease. These results in making the affected persons suffer stigma and discrimination. There is low support and understanding from the family and community especially in case of women.

PROGRAMME DESCRIPTION

Trialogue aims at changing community attitudes and behavior through role models and active participation of persons affected by the Leprosy, public and health care providers, involving open and honest discussion about fears, concerns, prejudices and problems. There is a shift in approach from dialogue to trialogue to achieve integrated action between the three players – patient, provider and people. The camps conduct between October to March every year wherein 3 blocks in each district named as "Residential care and Concern camps". The activity lasts for 3-6 days. Implementation partners included Panchayati Raj Institutions, State health Directorate, community participation and NGOs like LEPRA.

PROGRAMME OUTCOME

Total 285 camps have been conducted over the last 2 years, in which 6925 leprosy affected people participated. A total of 1376 new leprosy cases detected during the camps and 1188 voluntary reporting.

FINANCIAL IMPLICATION

The only cost involved comprise of TA of service provider, mobility support for Leprosy affected people and refreshment. Approx Rs. 15,000 cost incurred per camp.

IMPLEMENTING PARTNERS

LEPRA, PRI members and NLEP.

SCALABILITY

Could be upscaled at national level where PR<1 to address the issue of stigma, discrimination and to reduce the gap between the patient, health care provider and community.

OPERATIONALIZATION OF MENTAL HEALTH CLINICS
in district hospital

PROBLEM STATEMENT

As per National Mental Health Survey in India 2015-16 states that the prevalence rate of mental health disorders in Madhya Pradesh is 13.9%. One third of this burden is due to depression (37% of the total Disability Adjusted Life Years (DALYs) and it also significantly contributes to the burden attributed to suicide and ischemic heart disease thus making it a critical public health priority for all age groups.

PROGRAMME DESCRIPTION

State has operationalized Mental Health clinic "Mann Kaksha" in all 51 district hospital with trained staff. Capacity building training conducted at AIIMS Bhopal in which 294 Doctors and nurses were trained. IEC materials and mental health screening tools developed with technical support of PHFI. 13 Psychotropic medicines incorporated in EDL of Madhya Pradesh which is available free of cost in all clinics. Various record keeping & reporting formats (Screening Record Register, Case Record Register, Follow up Record, MH GAP Mater Chart, Case Booklet Sheet, Referral Slips, Treatment & Follow up Card &Monthly Reporting formats etc) developed in close coordination with State Government Officials & other technical experts.

PROGRAMME OUTCOME

Total 64 Medical officers, 150 staff Nurses from 51 Districts (1 MO/DH) are trained in Mental Health training (One Month and Two weeks duration). Nearly 40000 cases have been examined in Mann clinic out of which 50% are on pharmacological and psychosocial management.

FINANCIAL IMPLICATIONS

No additional cost incurred.

SCALABILITY

NHM is intended to Scale up mental health clinics – Mann kaksha in all 200 CHCs of 30 DMHP districts of the state along with establishment of 10 more counseling centers in District Hospitals.

IMPLEMENTING PARTNERS

NHM and State government, dmhpmp@gmail.com
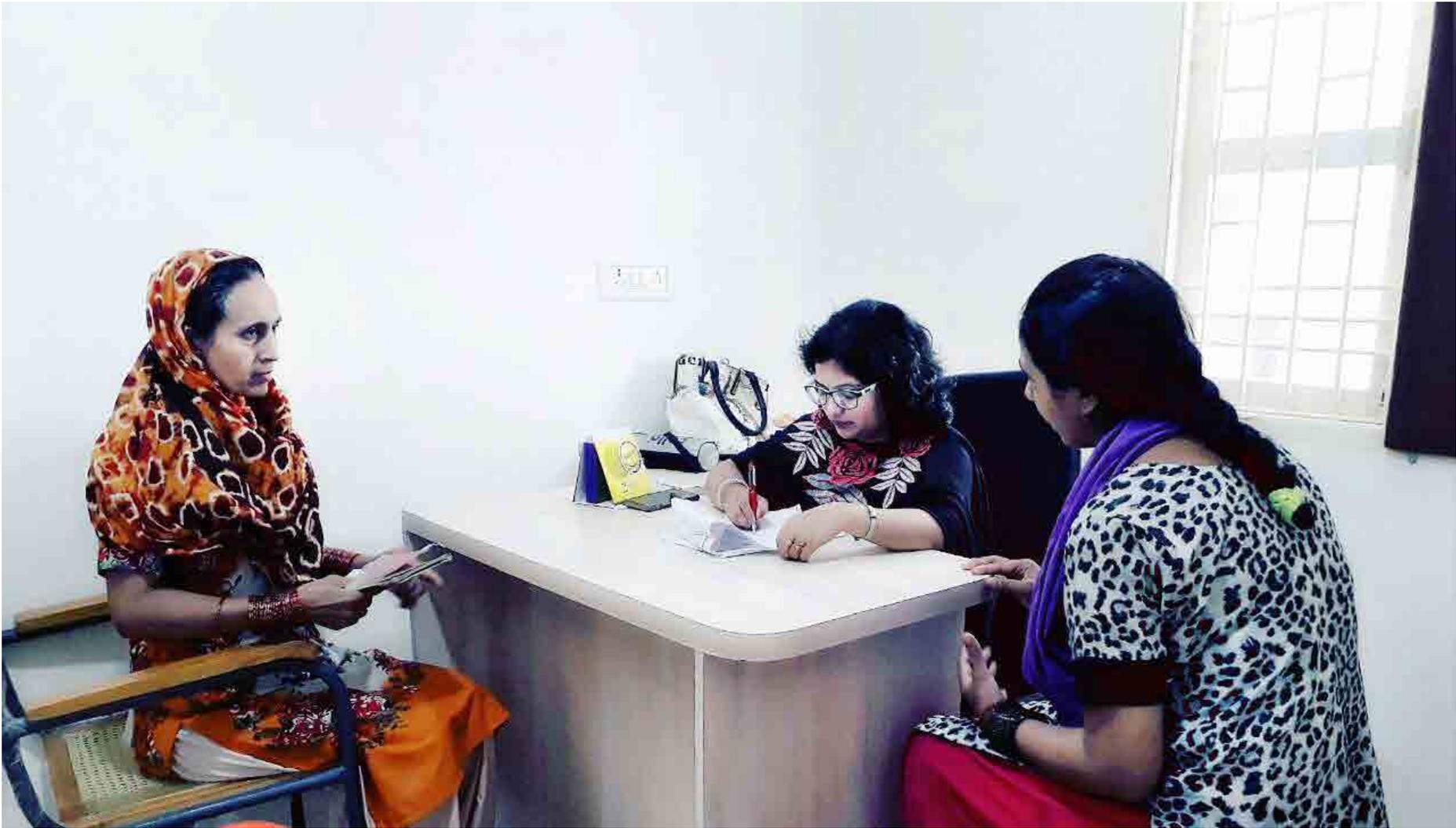
ELIMINATION OF MALARIA & CONTROL OF OTHER VBDs
by Navi Mumbai Municipal Corporation

PROBLEM STATEMENT

Malaria in urban areas was not considered a major problem at the time of launch of the National Malaria Control Programme (NMCP) in 1953, or National Malaria Eradication Programme (NMEP) in 1958. However, in 1970s, incidence of rural malaria came down drastically i.e. 0.1 to 0.15 million cases per year but malaria in urban towns reported a rising trend.

PROGRAMME DESCRIPTION

The municipal corporation is implementing Vector Born Disease control activities since last 2 years. Vector control and IEC/BCC activities are being taken in a very organised manner with number of interventions like - Mapping of hot spots, Diagnosis within 24 hours and Malaria treatment cards, investigation of each case, rapid response teams, Formation of abatement committee, enforcement of civic byelaws, involvement of RWAs with special IEC/BCC Campaigns (Street Plays), outsourcing of anti-larval and anti-adult measures, daily reporting from private practitioners, special surveillance at construction sites and public grievance disposal on mobile apps. Mosquito Abatement Committees (MAC) formed chaired by Commissioner of Municipal Corporations with all heads of departments. The concerned departments take the responsibility for taking immediate action on the vector breeding source created by the department or in their jurisdiction.

PROGRAMME OUTCOME

API has come down to 0.16 (2016) from 11.59 (1998), total of 121 problems solved by several departments of MAC like forest, railways, MTNL, NMMC etc. 12761 construction sites visited from which 399 spots treated with Guppy Fish.

FINANCIAL IMPLICATION

No extra cost involved, it is part of on-going National Malaria control programme.

IMPLEMENTING PARTNERS

State NVBDCP team and State Municipal Corporation.

SCALABILITY

Initiative comes under on-going Urban Malaria Scheme and setting good example of inter-sectoral convergence.

IMPROVING ACCESS TO MALARIA CONTROL SERVICES
at community level through the community volunteers ASHA

PROBLEM STATEMENT

The state of Odisha contains multiple malaria paradigms due to its topographical diversity and tropical climate favouring mosquito breeding. It also witnesses a high proportion (>90%) of falciparum malaria, known to cause complications and death.

Malaria morbidity and mortality is high in hilly and forested areas where there is poor access to health services and poor health seeking behavior of the community. A large proportion of the population in these areas represent tribals.

Additionally, presence of urban malaria (at construction sites), seasonal workers (mine workers, laborer's), travelers and pilgrims in low endemic coastal districts impedes the progress towards malaria control and elimination using 'one-size fits for all' strategy.

focus on pregnant women and young children. Multiple non-government partners (Caritas India, Tata Trust, MMV) are supporting the state's initiative to control and eliminate malaria through strengthening surveillance, social mobilization and capacity building.

Scaling up Early Diagnosis and Complete Treatment (EDCT)

Around 47000 trained ASHAs are being deployed in the village and hamlets of Odisha to provide malaria diagnosis and treatment facility to the rural and tribal population using the bivalent RDT and ACT.

PROGRAMME DESCRIPTION

Community level involvement in malaria control

ASHAs are actively engaged in passive surveillance for malaria at community level, generating community awareness through social mobilization and consequently increased community demand for vector management services.

Tailor-made Malaria Elimination Strategy

For hard-to-reach areas the state has initiated the flagship programme; DAMaN under the umbrella of NHM with specific

Integrated Vector Management

a) Long Lasting Insecticidal Net (LLIN) distribution

b) Indoor Residual Spray (IRS)

PROGRAMME OUTCOME

- Passive surveillance increased substantially in the last 10 years. The Annual Blood Examination Rate (ABER) has increased from 12.24% in 2007 to 16.37% in 2016 due to contribution of ASHA.

- Approximately 60% of the malaria surveillance is contributed by ASHA network.

- Due to early detection by ASHAs at the community level, complication and deaths due to malaria have been reduced by 187% in 2016 compared to 2007.
- Around 40 lakh LLINs have been distributed by the ASHAs during 2010-2012, due to which malaria cases reduced by 73.54% and death reduced by 268.66% in 2013 compared to 2010.

IMPLEMENTING PARTNERS

NVBDCP Odisha under the umbrella of NHM Odisha.

SCALABILITY

1. The state is planning to recruit more number of ASHAs so that EDCT services can be improved in the remote and inaccessible village/hamlets.

2. Intensifying community level engagements by using ASHA for playing a pivotal role by Non- Government organizations, partners and other sectors.

3. Inter-sectoral coordination and inter-ministerial engagement through flagship project DAMaN (Durgama Anchalare Malaria Nirakaran).

TOBACCO FREE VILLAGES

PROBLEM STATEMENT

All the 22 districts of Punjab have been declared as Tobacco Smoke Free (TSF) on the basis of Compliance Studies by School of Public Health PGI Chandigarh. But in Punjab, 62.5% of the total population lives in rural areas. It has been observed that in many of the villages people are not aware of the ill effects of the tobacco. Mostly in all the villages' tobacco is sold at the shops along with the food items.

PROGRAMME DESCRIPTION

State has rolled out 5 activities under this initiative - ban on "Loose Cigarette/tobacco", "Punjab - No Tobacco Day" (1st Nov), Electronic Nicotine Delivery System is illegal, banned Hukkah bars and prohibition on manufacture, storage, sale or distribution of "Gutkha" and "Pan Masala", processed/flavoured/scented chewing tobacco. All these activities rolled out in 22 districts in phasic manner, In the first phase, panchayats were sensitized about the ill effects of the tobacco and motivated to put up a resolution to declare their village as Tobacco free. In the second phase, a village level committee was formed and resolutions were submitted to Deputy Commissioner to declare themselves as Tobacco Free Villages. In the third phase, regular follow of these villages was done by District Level Task Force.

PROGRAMME OUTCOME

Total 305 villages covering a total population of 4.57 lakhs declared themselves Tobacco Free Villages by passing the resolution. There was no sale of tobacco products in the villages. According to NFHS-4 Punjab has lowest prevalence of tobacco use in country, the tobacco use among men in Punjab state declined from 33.8% (NFHS-3) to 19.2% (NFHS-4) and in women from 0.8% to 0.1% during last 10 years.

EVALUATION REPORT

Practice internationally recognized at World Conference on Lung Health (Barcelona, Spain, 2014), South Africa (2015) and at Liverpool, UK (2016). "World No Tobacco Day award 2015" was given to Punjab Govt. for its achievement in Tobacco Control by WHO.

FINANCIAL IMPLICATION

No additional cost incurred (Cost effective).

IMPLEMENTING PARTNERS

State government.

SCALABILITY

It is a good initiative to control the menace of tobacco at grass root level, This will help to create awareness about the ill effects of tobacco and improve the knowledge of people regarding the Anti Tobacco laws.

TRIPURA

CATARACT BACKLOG FREE DISTRICT
moving towards universal eye care services

PROBLEM STATEMENT

A study conducted at Tripura on "Population Based Assessment of Prevalence and Causes of Visual Impairment" during 2016, reveals that prevalence of Blindness in Tripura is 2.8% and Cataract is the leading cause of visual impairment (54.5%) and blindness (81.9%). Estimation on census 2011 population says 28781 numbers of people living with blindness in Tripura.

PROGRAMME DESCRIPTION

From November 2016 under PPP module cataract surgeries were conducted in undivided North Tripura District. District Programme for Control of Blindness (DPCB) Unit was established in North Tripura District hospital in 2016. The advance calendar for eye screening and cataract surgery was developed. Community awareness done by sensitizing PRI and NGO Members, developing training module for ASHA involving AYUSH MOs, conducting advocacy Meeting, disseminating the messages to all VHND etc. Highlights are: screening being done by ASHAs, necessary infrastructure repaired

(Ophthalmic OT), Cashless services have been given to all beneficiaries by utilization of funds from Rashtriya Swasthya Bima Yojna and National Programme for Control of Blindness.

PROGRAMME OUTCOME

Out of estimated blindness suffering population (1281 as per study) 51% Cataract cases (648) identified within one year from 121 villages. Out of identified cataract cases (648) 83% operation successfully done. 907 ASHAs are trained cataract identification and 80,000 homes were visited by trained ASHAs.

FINANCIAL IMPLICATION

ASHAs were given Rs.3/- per household visit and an amount of Rs.2.5 Lakhs were utilized from Mission Flexi pool and Rs.5.00 Lakhs was utilized for maintenance and procurement of essential equipments for Eye OT from RKS Fund.

IMPLEMENTING PARTNERS

NHM, District administration and NGO - Help Me See and P. C. Chatterjee Eye Hospital.

SCALABILITY

North Tripura District has become an inspiration to other Districts in the State to make the entire State Cataract backlog free District.

COMMUNITY PR
EMPOWERMEN

OCESSES,
T & ASHA

HEALTH CHECK-UP OF ASHA FACILITATORS & ASHA
as a form of orientation of ASHAs to NCDs

PROBLEM STATEMENT

Health seeking behavior in communities is low, particularly for screening among healthy individuals. The Burden of NCDs is expected to increase unless substantial efforts are made to undertake early detection and management.

PROGRAMME DESCRIPTION

A District wise screening of all ASHAs for NCDs was planned by the state of J&K with an underlying objective of orienting ASHAs to NCDs. A day long screening was conducted in Pulwama district by a team of doctors from National and State level institutes. In order to enhance the turnout of ASHAs, IEC activities were carried out. Waiting space for ASHAs and screening space for doctors were ensured at the site of screening. The screening included collection of preliminary socio-demographic and anthropometric data through a questionnaire, followed by collection of blood sample for biochemistry and hormonal analysis. After the screening, ASHAs were given oriented to key information on NCDs.

PROGRAMME OUTCOME

A total of 399 ASHAs were screened on that day. Of this, 44.89% were hypo calcemic, 14.3%were obese, 7.89% were diabetic and 5.26% were hypertensive. Apart from this, the programme created a unique sense of mutual trust and bonding between ASHAs and the department.

IMPLEMENTING PARTNERS

NHM, J&K and AIIMS, New Delhi.

SCALABILITY

The model holds a potential to be scaled up in rest of the districts before initiation of population based roll out of NCD screening.

Contact: mdnhmjk@gmail.com

HBNC+ FOR REDUCING DIARRHEA AND PNEUMONIA AND IMPROVING NUTRITION

PROBLEM STATEMENT

Diarrhea and pneumonia are major factors contributing to the high infant mortality in the State of Odisha, compounded by high levels of undernutrition.

PROGRAMME DESCRIPTION

Project HBNC+ is being implemented on pilot basis in 3 districts of Odisha since 2014. The main component of the project is follow up of infants beyond 42 days by ASHAs. It provides an opportunity to reach the infant at 3rd, 6th, 9th and 12th month. It promotes exclusive breastfeeding for first 6 months; improves routine immunization, Early Childhood Care and Development, correct use of ORS at the time of diarrhea, counselling on complementary feeding and administering Iron Folic Acid syrup with the objective to reduce diarrhea, pneumonia and malnutrition. A total of 3,027 ASHAs and 81 ASHA facilitators have been trained in HBNC+.

PROGRAMME OUTCOME

68% of the infants received complete four home visits in 3 districts. Overall 9,303 supportive supervision visits were provided to 3,027 trained ASHAs. 79% of the infants who were undernourished at the age of 3 months improved by the time they reached the age of 12months.

IMPLEMENTING PARTNERS

NHM Odisha and NIPI.

FINANCIAL IMPLICATIONS

One time cost per district was INR 45 lakh (Training of 1400 worker). Recurring cost per year was INR 36.7 lakh (Inclusive of printing and ASHA incentives @ INR 200 per infant)

SCALABILITY

The model has the potential to be scaled up, given the universal availability of ASHA and ASHA facilitators in all High Focus states.

Contact: MD, NHM, Odisha

REDUCING MATERNAL AND NEWBORN DEATHS (REMIND) THROUGH MOBILE APPLICATION

PROBLEM STATEMENT

Currently, Uttar Pradesh has one of the highest IMR (64) and U5MR (78) in India. One of the key interventions to reduce neonatal mortality is HBNC. They play an integral role in improving maternal and newborn health outcomes. A 2011, evaluation of the ASHA programme in Uttar Pradesh found incomplete training and limited supervision as the main barriers to improve ASHAs performance.

PROGRAMME DESCRIPTION

ReMiND aims to strengthen systematic supportive supervision of ASHAs to improve their performance through: i) Improved knowledge and skills of ASHA Sanginis on supportive supervision, ii) Automated reports at different levels, iii) Real-time report for evidence based decision making, iv) An efficient and transparent payment system of ASHA Sanginis. Sanginis use the mobile-phone application which facilitates assessing beneficiary coverage by ASHAs, collecting and compiling data on ASHA functionality, supportive supervision and reporting, redressal of ASHA grievances, reporting maternal and infant deaths and tracking ASHA drug kit status.

PROGRAMME OUTCOME

Sanginis can use the data to provide individualized feedback and guidance for improvement.

Real-time data increases the potential for remote monitoring, targeted follow-up and face-to-face supportive supervision visits with ASHAs. Over the period, the percentage of ASHA Sanginis' visiting households where ASHAs face problem in motivating families to adopt health behavior showed a 48-point percent increase between March-September 2015. This led to 14-point percent fewer ASHAs reporting resistant families in their area in this period.

IMPLEMENTING PARTNERS

UP-NHM, Catholic Relief Services, Vatsalya, Dimagi Inc., Sarathi Development Foundation.

FINANCIAL IMPLICATIONS

Cost effectiveness study by PGIMER, Chandigarh (2016) showed that the use of ReMiND application results in incremental cost saving of INR 6078 per DALY averted and INR 176, 752 per death averted.

SCALABILITY

The mobile application is already developed and can be easily scaled up by other States, as the role of ASHA facilitators across the country is same.

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HEALTH CARE TECHNOLOGY

RE
OGY

AN EFFORT TOWARDS ATOMIC ENERGY REGULATORY BOARD (AERB) COMPLIANCE

PROBLEM STATEMENT

Radiology has been key diagnostic tool for many diseases and having important role in monitoring treatment. Though country has large number of radiology facilities many of them have not been registered with AERB. Compliance by the radiology facilities to the provisions of the Rules with specified safety requirements is important to ensure radiation safety for persons operating these equipment as well as patients who make use of them.

PROGRAMME DESCRIPTION

Project approved in the PIP of 2016-17, for ensuring radiation safety compliance in all Radiological units of the state. It is a statutory requirement to have radiation safety in all the diagnostics radiology facilities, which have radiology/radiation emitting equipment installed. These facilities should be in compliance with regulations specified under the Atomic Energy (Radiation Protection) Rules, 2014. This Project is envisioned to get the real situational analysis of the level of Compliance and Infrastructure conditions of all the State Public Health facilities which have radiology/radiation emitting equipment installed as per the AERB Compliance norms and to obtain "License for Operation" from AERB.

Cluster-1	17 Districts	83 Radiology Equipment
Cluster-2	18 Districts	110 Radiology Equipment
Cluster-3	14 Districts	100 Radiology Equipment
Cluster-4	10 Districts	75 Radiology Equipment
Cluster-5	15 Districts	111 Radiology Equipment

Part 1	Compliance Study	To conduct safety regulations survey across all facilities [DHs & CHCs] in scope of study, to identify gaps from the AERB regulations.
Part 2	Infrastructure Development	To upgrade the non-compliant installation in the facility as per AERB norms.
Part 3	Issuance of License for Operation from AERB	AERB Licensing of Facility

PROGRAMME METHODOLOGY

This project is to be done in three following parts:

The work has to be completed in one year. The project has been distributed in 5 Clusters (74 Districts, 479 Radiology Equipment).

Actual Work Done: The Contact Agreement has been signed by all 3 bidders on 23.01.2017.

The Phase-1 (Compliance study) has been completed by all the three bidders in the end of March 2017.

Phase-2 (Infrastructure Development) has been initiated by the bidders.

FINANCIAL IMPLICATIONS

The funds for the project are routed through NHM state PIP.

IMPLEMENTING PARTNERS

To roll out the programme, the tender process has been completed; the tender has been awarded to the following bidders:

- M/s Roentgen Ray Technologies
- M/s Assurays
- M/s Cyrix Healthcare Pvt. Ltd.

SCALABILITY

The states where AERB compliance is not present, through this tender programme it could be easily scalable and should be replicate all across country.

HEALTH SYSTEMS STRENGTHENING

IMPLEMENTATION OF AADHAR ENABLED CIVIL BIRTH REGISTRATION SYSTEM FOR NEWBORNS AND INFANTS

PROBLEM STATEMENT

Chandigarh decided to undertake the initiative for improving the aadhar enabled registration of mother for JSY entitlements. Aadhar registrations have been started at DH and 2 CHCs with the objective that all mother and their children should have Aadhar enrolment at these health facilities so that Aadhar registrations could be improved and JSY beneficiaries should be followed for opening of bank accounts with linkage of Aadhar IDs.

PROGRAMME DESCRIPTION

From April 2015, special camps were organised at Maternal and Child Hospital with an aim to enrol all the beneficiaries under Janani Suraksha Yojana foR the Direct Benefit Transfers in the bank accounts of beneficiaries. As per the policy of UIDAI, Aadhaar can be provided to infants who are even below the age of 5 years, biometrics of these children are not taken at the time of enrolment and can be added later on once the child attains the age of five. Health Department has made provisions for addition of enrolment ID on the birth certificate. The Aadhar

week was also celebrated with the motive that all mother and their children should have the Aadhar enrolments in 2014-15. Later on the Aadhar counters were made available at all the delivery points for early registration of the JSY mothers.

PROGRAMME OUTCOME

100% births are registers on online Birth & Death Registration though RGI web portal http://crsorgi.gov.in/web/index.php. This initiative has been implemented in UT Chandigarh w.e.f January 2016 through 13 Birth and Death Registrations sites initially.

FINANCIAL IMPLICATION

No additional cost incurred

SCALABILITY

As this initiative is highly cost effective and part of UIDAI, it can be easily scaled up in any state/district of India to improve the Aadhar registration and to improve the rate of direct fund transfer to the beneficiaries.

IMPLEMENTING PARTNERS

UIDAI and NHM.
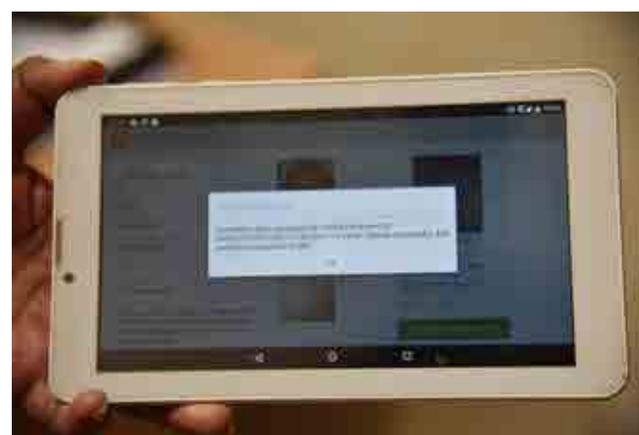
RMNCH+A SUPPORTIVE SUPERVISION MECHANISM

PROBLEM STATEMENT

Supportive supervision mechanism is an effective tool to strengthen and monitor the health system. Committed to strengthen the RMNCH+A program, the SS mechanism aims to provide a critical support for delivery of essential services.

PROGRAMME DESCRIPTION

A strategic approach was identified to do Supportive Supervision visits in scientific manner across different facility levels (L1, L2, and L3). In order to establish a uniform mechanism for collecting relevant information, a standard SS checklist was introduced by GoI in October, 2014. This robust and well-structured facility level checklist is used to assess different categories of delivery points across all the HPDs.

This checklist with 146 indicators captures all the important parameters under each thematic area. Facility level gaps are identified in real time and addressed at sub-district, district, state or national level. The multi-level data generated are analysed on a monthly basis to generate high quality, strategic reports which are shared with ministry, government officials and all the stakeholders at different levels.

PROGRAMME OUTCOME

Supportive Supervision checklist model impacts 8.3 million pregnant women and 7.6 million infants in HPDs.

A total of 2348 facilities (438 L3, 1354 L2, and 556 L1) have been visited 3/more than 3 times for supportive supervision across all the 184 HPDs from January 2015 to December 2016.

FINANCIAL IMPLICATION

As of now, lead development partners are supporting the SS checklist implementation in their respective State and HPDs. State government will have to leverage from their own budget for scale up of SS checklist in the non-HPDs.

SCALABILITY

The RMNCH+A supportive system is a dynamic process. This mechanism can feed into a broader supportive supervision system across all the non HPDs in 29 states.

Following the SS results and the impact generated, NRU has scaled up the use of SS checklist across non HPDs through state government representatives in 3 states (Uttar Pradesh, Punjab and Himachal Pradesh). In addition, SS visits to prioritized health facilities especially in the non-HPDs of these states have also been initiated by the government counterparts.

IMPLEMENTATION PARTNER

Lead development partners are supporting the SS checklist implementation in their respective State and HPDs.

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HEALTH AND FINANCIAL PROTECTION FOR WOMEN
VimoSEWA Insurance Co-operative

PROBLEM STATEMENT

Little or no financial and social protection during crises like hospitalisation. The poorest and most vulnerable women repeatedly face several risks, often at the same time. Unforeseen events like hospitalisation push informal women workers and their families into debt, distress sale and catastrophic poverty. SEWA Bank showed that sickness was the number one cause for taking loans.

PROGRAMME DETAILS

Financial risk cover is provided to informal women workers and their families during sickness and other unforeseen events through their own financially viable co-operative where they themselves are the users, managers and owners. The programme was started in 1992, and the National Insurance VimoSEWA Co-operative was registered in 2009. A total of 10 products including health, life, accident and loss of daily income are covered. Apart from these services such as product development, insurance education, linking with insurers, selling products, claims processing, maintaining data base and linking with other SEWA are provided by the co-operative. An important service offered by the organisation is the Saral Suraksha Yojan designed to provide wage loss cover to RSBY insured and other poor population during hospitalisation. At a low premium (Rs. 350 per annum for family of 4 and Rs. 475 pa for family of 5-6), Rs. 200 per day upto 15 days is offered to the woman and family members during her/his hospitalisation. There is minimal documentation involved, quick response (within 10 days) and a wide range of hospitals are covered. Also sustainability mechanisms like profit sharing with the insured and bundling are also part of the service.

PROGRAMME OUTCOME

The programme has disbursed over Rs. 16 crores in the last 10 years and has users across 7 states. Over 1,00,000 women are covered under this scheme and it has over 12,000 women shareholders from over 13 organisations across 5 states.

IMPLEMENTING PARTNER:

SEWA Gujarat

FINANCIAL VIABILITY

VimoSEWA is financially viable generating profit, giving dividend and growing at the rate of 10% per annum. The SSY programme has surplus of over 4 lakh rupees from a premium collection of 7 lakh rupees.

SUSTAINABILITY

The programme has been incorporated into many government based health insurance schemes.

e-UPCHAAR FOR EFFECTIVE AND EFFICIENT DELIVERY
of quality healthcare at 55 public health facilities

PROBLEM STATEMENT

The patient health records being voluminous and manual are unavailable in case of revisits, referrals & emergencies and are often lost in transit.

PROGRAMME DESCRIPTION

'e-Upchaar' is one of the e-governance initiatives being implemented by the Haryana State Health Systems Resource Centre to improve quality of service delivery in the public sector. The e-Upchaar project is being implemented across 55 health facilities which include 4 Government Medical colleges, all 21 district hospitals, selected Sub-divisional hospitals, CHCs and PHCs.

PROGRAMME OUTCOME

'e-Upchaar' expects to achieve:

- Development of Electronic Health Record (EHR) across 55 selected facilities, to capture records of patients during revisits, referrals etc.

- Streamlined, transparent and efficient operations with improved service delivery.

- Gathering of important health data with accuracy for better planning and resources allocation.

IMPLEMENTING PARTNERS

- Director General Health Services, Haryana.

- Director General AYUSH, Haryana.

- Director Medical Education and Research, Haryana.

- State Health Resource Centre, Haryana.

The system integrator is United Health Group Information Services Private Limited, Data Centre is hosted by BSNL and MPLS connectivity is provided by Reliance Communications Limited.

FINANCIAL IMPLICATIONS

The cost of the project is approximately Rs. 90/- crores, which includes cost of software development, infrastructure set-up, training & change management, operations and maintenance support.

SCALABILITY

The project has the capability for replication at all Sub-Divisional Hospitals, Community Health Centres and Primary Health Centres.

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SUPPLY CHAIN MANAGEMENT

PROBLEM STATEMENT

There were many issues with procurement, supply and distribution of drugs even those on the essential drugs list in the state. This resulted in high out of pocket expenditure for the end users in public health care facilities. The challenges in the supply of drugs included multiple routes of payment to the suppliers. No transparency in the allotment of contracts and quality of suppliers. Stock outs at facilities due to these factors was very common.

PROGRAMME DESCRIPTION

A single platform controlling the e-ordering, supply chain management, quality adherence, and payment across 102 authorities for 947 drugs and consumables from 137 suppliers. Work flow ensures uploading of mandatory documents by mandated users for generation of MRC and TRRC (in case of Quality Assurance of drugs). Online calculation of bills including Gross, VAT/CST, Liquidated Damage (LD) and Net Amount. Drug availability of 2198 health facilities and their drug distribution counter, store wise drug locator for 753 drugs and consumables are on public portal.

Tracking facility on public portal for Purchase Order raised by DDO, NABL report uploaded by supplier and Sanction order for making payments with unique numbers. System generated Sanction order which maps details like PO number, invoice no. bank details of supplier, gross and net amount. Online payment facility using DS for drug procurement and payment through 102 DDO's. No physical documents required for sanctioning payments.

PROGRAMME OUTCOME

The average drug count in CMHO stores and CS stores (220 in 2013 to 280 as on date; 232 in 2013 to 312 drugs as on date). Supplier performance has increased. Instances of delayed supply or no supply is not greater than 5%. Currently average supply period is between 25 to 30 days and average percentage of incomplete supply (36.6% in 2013) is not greater that 5% as on date.

IMPLEMENTING PARTNERS

Health Department, Government of Madhya Pradesh.

FINANCIAL IMPLICATIONS

All payments processed through a single bank account as opposed to 102 bank accounts. 80% of the budget is utilized for central rate contract procurement as mandated in the Drug Policy (380 in 2016 to 827 as on date).

SCALABILITY

The project is already under implementation in many states.

INVOLVEMENT OF JUDICIARY SYSTEM
for effective implementation of the PCPNDT Act

PROBLEM STATEMENT

The Child sex Ratio in Maharashtra declined from 946 girls per 1000 boys (1991) to 894 girls per 1000 boys (2011). Due to Complex web of socio- economic and cultural factors that primarily include the desire to have small families, coupled with a strong preferences for sons, as well as easy availability and access to technology and its misuse.

PROGRAMME DESCRIPTION

State level workshop organized for senior judicial officers under the chairpersonship of Honorable Chief Justice of Bombay High Court in December 2007. The workshop focused on understanding the social implications of the issue and the law through landmark judgments. 28 such sensitization workshops for Judicial Officers were organized covering all 33 districts of Maharashtra. The issue of sex selection

and details of the PCPNDT Act have been included as part of all induction, refresher and specialized programs organized at the Maharashtra Judicial Academy.

PROGRAMME OUTCOME

1192 Judicial officers were oriented over a two year period. (June 2009-March 2011) High Court Judges attended 60% of the workshops organized at the district level. Few highlights of the project:

- Maharashtra got its first conviction with imprisonment in 2010 after the sensitization process with the judiciary, public prosecutors and Act implementers.

- Convictions involved both fine and imprisonment as provided by the law, upholding its seriousness and spirit.

- 92 landmark judgments with convictions have been pronounced far by sensitized judicial officers - for illegal

advertisements, improper maintenance of records, non-registration of facilities and revealing sex to (decoy) clients. In these cases 102 doctors and five relatives have been convicted.

- 60 doctors have been suspended from Maharashtra Medical Council following framing of charges. Similarly three doctors have been suspended from Indian Council of Medicine and six doctors from Council of Homeopathy.

- A total of 1333 prosecutors have been trained thus far in the state of Maharashtra.

FINANCIAL IMPLICATIONS

No additional investment was put to implement this initiative.

SCALABILITY

The programme has been implemented in only state and its success triggers the adoption in other states.

IMPLEMENTING PARTNERS

SHSRC, Maharashtra judicial Academy, Maharashtra state legal services Authority and UNFPA.

JEEVAN VAAHINI
integrated ambulance services

PROBLEM STATEMENT

Delay in reaching to an appropriate health facility is considered to be one of the prime factors contributing to high number of deaths in emergencies. Providing medical aid within Golden Hour, increases chances of saving a life by many folds.

PROGRAMME DESCRIPTION

To improve overall operational efficiency and cost effectiveness of various referral and transport mechanisms in the state Government of Rajasthan took an initiative to integrate the existing separate four patient referral/transport mechanisms (Medical Advice Service (104), Emergency Ambulance Service (108), 104 Janani Express and Base Ambulance paid

service.). The services are now operated through a centralized call center with a common toll free number i.e. 108/104 for

all kind of emergencies (including related to Police department and fire mitigation department).

The platform is supported by web based software and Mobile Application integrated with GPS system. This enables detecting the location of nearest Ambulance from the site of accident and ensures the availability of quick referral along with immediate information or notification of incident/dispatch to the concerned Caller, Ambulance, Police Station, Fire Station and Control Room.

PROJECT OUTCOME

The platform has achieved full integration of emergency services under one roof. The response time to any request generated

has considerably reduced to less than 20 minutes in the last year.

FINANCIAL IMPLICATIONS

One time cost of development of IAP platform was provided by NHM under the mission pool. Existing manpower available with the state were used for the same.

SCALABILITY

The Project has been appreciated at various platforms due cost effectiveness and its impact on minimizing deaths due to emergency. The project is now being scaled in various states.

IMPLEMENTING PARTNERS

National Health Mission, Government of Rajasthan.
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ROUTINE MICROBIOLOGICAL SURVEILLANCE
of 'sterile zones' in level 3 hospitals

PROBLEM STATEMENT

Health Care Associated Infection (HCAI) is a major problem for the patients' safety, leading to considerable morbidity and mortality. During Situational Analysis under the QA Programme, it was observed that culture swab testing from 'Sterile Zones' has not been routinely practiced.

PROGRAMME DESCRIPTION

1. The swabs for microbiological examination are collected from Labour room, OT, SNCU & CCU in poly-propylene test tubes or in test tubes sterilized by hot air oven as directed by Microbiology Department of Medical Colleges.
2. The test reports are sent by e-mail.
3. The Infection Control Committee of every DH/SDH under the NQAP supervises the implementation of the system and discusses the reports in the monthly meetings and undertakes corrective & preventive action as per protocol.
4. The reports are submitted monthly in a specified format called Annexure B and compiled at State level.

PROGRAMME OUTCOME

A total of 38 Hospitals have been taken up under this initiative. Till 15th June' 2016, 22 samples out of 1474 samples sent from OT (1.5%), 7 out of 530 from Labour room (1.3%), 3 out of 552 from CCU (0.5%), 2 out of 478 from SNCU (0.4%) were found to positive for bacteriological growth. Overall positivity rate is 1.1%. After initiation of this intervention, number of samples sent increased gradually within 6 months with peak around May 2016.

IMPLEMENTING PARTNERS

Hospitals under QA in collaboration with Microbiology Department of all Medical Colleges.

FINANCIAL IMPLICATIONS

All hospitals have been allotted a fund of Rs. 10,000/- each as operational cost, thus a total of Rs. 3,80,000/- for 38 Hospitals.

SCALABILITY

The initiative can be replicated in other facilities also.

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RMNCH+A

DISTRICT GAP ANALYSIS

PROBLEM STATEMENT

To realize the goals envisaged under NHM, one of the significant inputs was to undertake a gap analysis of the existing facilities, human resource and service delivery in order to ascertain a baseline and provide factual evidence for strategic implementation.

PROJECT DESCRIPTION

The initiative is a backend technology for smooth and quick data capture and its visualization in many forms. The proposed solution involves data collection with digital forms and its administration through a comprehensive dashboard. Dashboards contain various features such as visualization of data through data tree and reports can be generated as well in the form of pdf and excel files for monitoring purposes. There is also

The process

Data tree for a particular district

Data Tree Sort by Color

Data Tree Sort by Value

Data Tree Sort by Value
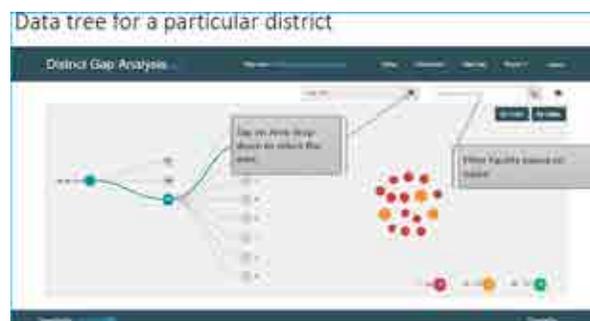
provision for automatic development of Facility Improvement Plan (FIP) for all the facility.

PROJECT OUTCOME

The project enables identification/ analysis of available verses required resources at a facility, thereby narrowing the gap and building a robust health service delivery system in the state. The web tool further helps in preparation of Facility Improvement Plans and follow-up on the suggested actions.

FINANCIAL IMPLICATIONS

The project is supported by UNICEF. Funds for development of web application were mobilized from National Health Mission.

SCALABILITY

The project is based on IPHS standards and is scalable in other parts of the country.

IMPLEMENTING PARTNERS

National Health Mission Chhattisgarh and UNICEF, office.mdnrhm@gmail.com

DELHI

CARE AROUND BIRTH - AN INTEGRATED APPROACH
to improve quality of care during intra and immediate post-partum period

PROBLEM STATEMENT

Though considerable progress has been achieved globally and in India as regards the reduction in maternal and newborn mortality major challenges remain with 289,000 women dying during pregnancy and childbirth and 2.7 million newborn deaths every year. The time of childbirth and the period immediately after birth thus remains critical for maternal and neonatal survival.

PROJECT DESCRIPTION

Aligning with global priorities and national RMNCH+A strategy, Government of Delhi with technical support from USAID - VRIDDHI (Scaling up RMNCH+A Interventions) Project designed a comprehensive "Care around Birth" approach to improve quality of care at

and around time of birth. Guided by WHO's Quality of Care (QoC) framework, the approach aims at encompassing a comprehensive framework to improve the quality of intrapartum and immediate post-partum care by bringing together Evidence Based Technical Interventions, Health System Strengthening (HSS) efforts, Quality Improvement (QI) techniques and Respectful Maternity Care (RMC). Based on a comprehensive baseline assessment encompassing labour room environment, staff competency and practices, the approach aims at improving service delivery for 14 technical interventions. Capacity enhancement of service providers has been integral to the approach. Continuous support and hand-holding is provided through on-site mentoring visits.

PROJECT OUTCOME

The approach was initiated as a pilot across 8 high case load facilities in the two High Priority Districts (HPDs) of North East and North West from January 2016. Improvements have been documented across the interventions strengthened for instance administration of oxytocin within 1 min of delivery has increased from 0% to 98%, administration of Vitamin K1 to newborns has increased from 4% to 91% and Essential Newborn Care (ENC)

practices and Post Natal and at Discharge Monitoring of mothers and newborns have been institutionalized. The use of simulation tools for imparting trainings on ENCR, KMC and feeding of LBW babies and obstetric drills for PPH and PE/E are novel additions during the training with culmination of the training with WHO Safe Childbirth Checklist being another notable feature of the package.

SCALABILITY

The Department of Health and Family Welfare, Government of Delhi has scaled up the intervention to 51 high case load facilities across the 9 non HPDs of the state. The scale up activities have already been initiated in the state with nodal officers identified and nominated for district and facility levels.

FINANCIAL IMPLICATIONS

Though the pilot initiative was supported by the partner agency, the scale up activity is being implemented through government resources which have been budgeted and approved in the state Programme Implementation Plan (PIP).

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CLEFT LIP/PALATE FREE GUJARAT

PROBLEM STATEMENT

In the state about 1300 children are born with Cleft lip/palate every year with prevalence rate of 0.93/1000 live births.

PROGRAMME DESCRIPTION

Health Teams visit delivery points, Schools, Anganwadis and villages as per the Micro planning and carry out basic health check-up of children. Children found positive with this birth defect during the check-up are referred to nearest medical college hospital or centers affiliated with Smile Train organization with whom the state has a MoU. Plastic surgeon and pediatrician examine children for normal health condition eg. Age, weight, Hb level, vaccination etc. and accordingly finalize the date of the surgery. If the child does not fit into the desired criteria of health condition, then child gets adopted by DMHT member till the surgery is completed. Camps are being organized by expert team of Ahmedabad Civil Hospital in distal/tribal areas of Gujarat like Dang, Dahod, Bhuj, Arvalli, Jam khambhaliya, Palanpur etc.

PROGRAMME OUTCOME

More than 2900 children affected by the condition have been treated under this initiative.

FINANCIAL IMPLICATIONS

All the costs are being borne by the State government.

SCALABILITY

The project is a part of Rastriya Bal Swasthya Karyakram and is scalable in other parts of the country.

IMPLEMENTING PARTNERS

Department of Health, Department of Women and Child development, Government of Gujarat, rbsk.health. gujarat@gmail.com

EFFECTIVENESS OF ASHA INCENTIVE SCHEME OF 2013
specific to permanent methods of family planning

PROBLEM STATEMENT

From April 1, 2013 - "ASHA INCENTIVE SCHEME" was introduced for promoting family planning—permanent sterilization methods. It was an incentive of Rs. 1,000 given to an ASHA who motivates and promotes couples having two or less than two children by adopting permanent sterilization. The study was undertaken to assess qualitative or quantitative change in the functioning of ASHA specifically to motivate couples having two or less children to undergo permanent sterilization in Surendranagar district, Gujarat

PROGRAMME DESCRIPTION

All primary health centres (PHCs) of Surendranagar district were selected for the performance data of permanent family planning methods and with the assistance of medical officers of PHC that data was collected for two year before and after the introduction of incentive scheme specific to permanent family planning methods) to assess performance of ASHAs in the specific field (Family Planning) compared with their performance in the previous year and to find out the performance of ASHA against other motivators working in the same field.

PROGRAMME OUTCOME

The comparison in the performance for two years (2012-13 & 2013-14) clearly reports that performance of ASHA was increased; 1.13 times for eligible couples and 1.14 times for couples having two or less children after introduction of an incentive. And in both year performance of ASHA was highest in compare to others.

Focus group discussions explored the perceived impact of "the incentive scheme" on quality of services and performance of the ASHAs in motivation; on an average, each ASHAs visited nearly 10 eligible couples per month, out of them, only one to two couples get motivated. one-third of the ASHAs committed that they were motivating couples only because of incentives.

FINANCIAL IMPLICATIONS

The funds for the scheme are sourced from NHM and routed through state annual Programme Implementation Plans (PIP).

SCALABILITY

The scheme is scaled up across all districts of Gujarat. In RoP 2016-17 a sum of Rs. 793.20 Lakh was approved from GoI as ASHA Incentive under ESB scheme for promoting adoption of limiting method up to two children.

IMPLEMENTING PARTNERS

NHM Gujarat.

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IDENTIFICATION AND MANAGEMENT OF HIGH RISK PREGNANCY CASES

PROBLEM STATEMENT

Haryana has made considerable progress in reducing MMR from 186 (SRS 2004-06) to 127 (SRS 2011-13). Still quality of ANC services, identification and referral of High risk pregnancies for proper and timely management at the time of delivery are the major areas of concerns to further reduction in MMR.

PROGRAMME DESCRIPTION

For tackling the issue High Risk Pregnancy Policy was drafted and implemented in the state in 2014-15. Policy aims for timely identification, referral of High risk pregnancy cases to higher health facilities for preferential, adequate and timely management by Specialists through implementation of following strategies:

- Tuesday and Thursday as fixed antenatal days.
- Special Antenatal weeks ("Surakshit Janani Saptah") for left out cases.
- Maintaining the line listing of identified high risk pregnancy cases.
- HRP cases (with Red MCP card) are given preference at Health Facilities for getting all services (OPD, Lab, Admission, Pharmacy etc.).
- Inj. Iron Sucrose for Anaemia.
- Reverse tracking of Anaemia.

PROGRAMME OUTCOME

- The 1st trimester ANC registration has increased from 57% in 2014-15 to 67% in 2016-17 (HMIS).
- In 2013-14, before the implementation of the HRP policy, only 7% of the HPRs were identified and in 2016-17 HRP identification has increased markedly to 13% (DHIS).
- 80% of these identified HRP cases are being referred to FRUs for management by the Specialists (DHIS).
- The incidence of Anaemia in Pregnant women has come down to 73% in 2016-17 from 85% in 2014-15 (HMIS).
- The incidence of Anaemic Women who came for Delivery at Govt. Health Faculties in the state has reduced to 6% in 2016-17 from 8% in 2013-14 (ATM).

IMPLEMENTING PARTNERS

The programme is solely run by NHM Haryana.

FINANCIAL IMPLICATIONS

No Special Budget.

SCALABILITY

Yes, it can be replicated to improve identification and timely management of HRP cases.

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MIRA CHANNEL
for rural women on maternal and child health using RMNCH+A approach

PROBLEM STATEMENT

India has a high MMR of 167/100,000 live births and IMR of 37/1,000 live births. 51.1% of women opt for traditional method of home-based delivery and only 48.8% of births are assisted by skilled health workers in India, which puts both mother and child health in high risk.

PROGRAMME DESCRIPTION

MIRA is an integrated mobile phone channel which provides health communication and information tools to rural women through mobile phones in low-resource settings. It has multiple components on issues related to Pre-natal care, Child immunization, Newborn care, Family planning and Adolescent health using RMNCH+A approach. Information is delivered through interactive tools by creating awareness on critical health issues, building knowledge & timely connecting with the public health services. MIRA uses iconic language with audio support making it interactive 'Talking toolkit' designed for millions of semi-literate women. A set of dedicated 24 MIRA workers are working in over 24 villages covering almost 24,500 people.

PROGRAMME OUTCOME

In the intervention area, there is an increase in ANC visits by 59%, institutional deliveries by 49% and immunization rates by 41%. 5765 families, 890 pregnant women and 1690 adolescent girls have registered with MIRA.

FINANCIAL IMPLICATIONS

Total Cost of the Programme is Rs. 48 Lakhs, Cost per Indirect beneficiary is Rs. 195 per year and Cost per direct beneficiary is Rs. 823 per year.

SCALABILITY

The programme has been implemented in only state of Haryana and its success triggers the adoption in other states.

IMPLEMENTING PARTNERS

The programme has been implemented in only state of Haryana and its success triggers the adoption in other states.

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RBSK: A CAMP BASED APPROACH TO REACH THE UNREACHED

PROBLEM STATEMENT

Statement: Coverage for screening in schools & AWCs was not uniform and was significantly low in hard to reach areas.

PROGRAMME DESCRIPTION

The main objective of camp approach is to increase coverage of screening in schools & anganwadi situated in hard to reach areas which could not be covered by RBSK Mobile health team and to provide them with free specialist consultation, on spot investigations & treatment.

Other strategies for programme strengthening include:

- Ramdom monitoring of MHTs.
- Simplified referral mechanisms.
- Identification of tertiary care centers & institution wise Nodal Officers.
- Convergence with Education & WCD departments.
- Online monitoring of work done of MHT.
- Installation of Vehicle Tracking and Monitoring System.

PROGRAMME OUTCOME

5.6 lakh children have been identified as being suffering from 4D's under the programme of which 4.17 have been provided with free treatment. Functioning of the RBSK MHTs & the management of the referred cases has significantly improved over last one year.

FINANCIAL IMPLICATIONS

The project cost is covered under NHM and state budget.

SCALABILITY

With better planning and monitoring intensified activities in hard to reach areas can result in better utilization of services. The project is a part of Rashtriya Bal swasthya Karyakram and is scalable in other parts of the country.

IMPLEMENTING PARTNERS

WCD, Education Department and Health department, Government of Jammu and Kashmir.

Contact: mdnhmjk@gmail.com

CONVERGENCE WITH ICDS DEPARTMENT
for Pradhan Mantri Surakshit Matritiv Abhiyan

PROBLEM STATEMENT

It was observed that pregnant woman have to wait almost for a full day to avail ANC service under PMSMA. The pregnant women require timely diet and empty stomach for longer periods are not advisable. This issue was a hurdle for pregnant women coming for far off places to avail the services on PMSMA Day.

PROGRAMME DESCRIPTION

ICDS Department has a mandate of providing supplementary nutrition to all the pregnant women for extra calories and proteins in the form of cooked food or take home rations from their concerned Anganwadi centres. As ANMs, ASHAs and Anganwadi Worker are playing a pivotal role in mobilization of the community and potential beneficiaries in both rural and urban areas for availing of services during the PMSMA, State Health Society approached ICDS Department whereby Mission Director, ICDS Department J&K was requested to provide cooked meals on this special day at all the identified PMSMA clinics. The sensitizations of all the ICDS officers were done by the State Health Society regarding PMSMA and were requested to come forward and make necessary arrangements. The DPOs/CDPOs, of the ICDS department are making arrangements and provide hot cooked food as per local customs to all the Pregnant Women coming for ANC Check up at designated health facilities in their concerned district on 9th of every month i.e. PMSMA Day. This initiative was started on 9th February, 2017 in all the districts of the State.

PROGRAMME OUTCOME

Attendance in PMSMA Clinics has increased. Joint Monitoring by both the departments (Health dept. and ICDS) at facility level ensures quality services. This has provided platform for the effective counselling sessions as well as some health facilities are teaching Yoga Asanas for pregnant Women during the waiting period.

FINANCIAL IMPLICATION

No additional cost incurred, logistic cost incurred by NHM.

IMPLEMENTING PARTNERS

State Health Society, ICDS and NHM.

SCALABILITY

As this is good example of inter-sectoral convergence and integration for the betterment of the people to access the health services.

AHANA-VHND LEVEL HIV SCREENING
among pregnant women as part of EPTCT

PROBLEM STATEMENT

Reaching out to all pregnant women and screening them for HIV is a challenging job. While majority of the ANC registration happens at Village Health Nutrition Days (VHND) but HIV screening is conducted at the health facilities, primarily at PPTCT centres or ICTC located at the district/block level. To bridge the gap, it is essential that the HIV screening services are made available at the VHND along with other ANC services.

PROGRAMME DESCRIPTION

On October 2015, Global Fund awarded Plan India, the role of Principal Recipient (PR) and provided a grant under the New Funding Model GFATM model for implementing a project for increasing the uptake of PPTCT services in 218 selected districts across nine states of India - Assam, Bihar, Chhattisgarh, Jharkhand, Madhya Pradesh, Odisha, Rajasthan, Uttar Pradesh and West Bengal.

These interventions primarily involve:

- Screening of all pregnant women for HIV registered as part antenatal care services.
- Confirmation of the HIV status (at ICTC) of the pregnant women found reactive under screening test.
- Antiretroviral treatment for the HIV Positive Pregnant Women.
- Early Infant Diagnosis among HIV exposed infants.
- Care and support for HIV exposed infants and children.

At each district (within AHANA project) a District Resource Team (DRT) has been constituted consisting of A senior ANM, Block Programme Manager and/or Block community Mobiliser, acting as the master trainers of the concerned district/block. The DRT members train all the ANMs in the block on the use of WBFPT kit with the support from the local Lab Technician.

PROJECT OUTCOME

Till now a total of 766 health personal have been trained in HIV screening in the state. It is estimated that, rate mother to child transmission of HIV can be reduced to below 5% with effective interventions during the periods of pregnancy, labour, delivery and breastfeeding.

SCALABILITY

The project could be incorporated in the national mission. Addressing the issue of sustainability of the resource pool, after completion of DRT training a similar resource pool has been created at the state, State Resource Team (SRT), which comprises of selected member of DRT.

IMPLEMENTING PARTNERS

National Health Mission Government of Jharkhand, Plan India.

Contact: sangita.dasgupta@planindia.org

EXPANDING ACCESS TO MEDICAL METHODS OF ABORTION

PROBLEM STATEMENT

15% of doctors and primarily male doctors of the state were not offering Comprehensive Abortion Care services.

PROGRAMME DESCRIPTION

In 2012, Government of Madhya Pradesh took an innovative step to strengthen women's access to comprehensive abortion care(CAC) services and to orient the low and non-performing doctors on medical methods of abortion to initiate service delivery. Ipas India assisted the state in identifying the low and non-performing doctors and provided a complete package for training, community mobilization, monitoring and supportive supervision.

PROGRAMME OUTCOME

Number of providers offering CAC services increased, along with expansion in technology choices for women. Quality of services provided has improved. Utilization of abortion services in public health facilities after orientation has increased by 24%.

FINANCIAL IMPLICATIONS

One day training on MMA for a select group is significantly less cost intensive than conducting re-training on CAC for all low and non-performers. Bulk procurement of MMA drugs and efficient distribution mechanism has also led to this model being very cost effective.

SCALABILITY

The comprehensive package of interventions designed under the project could easily be replicated in other parts of the country in even in a low resource setting. Commitment from the state leadership and the ownership by the trained providers has contributed to the success of this intervention.

IMPLEMENTING PARTNERS

Ipas INDIA, National Health Mission Govt. of Madhya Pradesh.

Contact: maternalhealthrch@gmail.com

NURSING MENTORS
capacity building and motivation through supportive supervision

PROBLEM STATEMENT

The low professional competencies of the health care providers, the regressive work culture and lack of close monitoring and accountability prevents better output from the service providers. The need for a programme to specifically address the quality of intrapartum and immediate postpartum care has been strongly felt as there has been increase in institutional deliveries but not much decline in MMR and NNMR.

PROGRAMME DESCRIPTION

The Nursing Mentor's Programme (2016-17) aims to build up the professionalism and competencies of the Nurses and ensure supportive supervision. The Mentoring as a professional up-gradation mechanism is a tool which uses the existing HRs and expertise within the system to contribute to further professional enhancement of the other members of the organization, without depending on external resources and interventions. The Nursing Mentors scheme is a focused approach on health outcomes related to the improvement of quality intranatal and immediate postpartum care at delivery points for reduction of MMR and NNMR. Supportive supervision is being ensured through check list by hand holding of delivery point staff - 2 DPs in a month by staying for 2 days (L2 and L3) and 1 day at L1 together with addressing infrastructure and supply issues. The Nursing Mentors Programme ensure identification of important Gap areas, List out the priority areas of improvement, district based provisions and monitoring mechanisms for the selected mentors to play their role in upgrading the practice and performance standards through peer learning methods and involve stakeholders and regular quarterly meetings were held at the state which acts as a platform for Nurse Mentors to share their feedback, gap analysis, and bottlenecks in resource availability.

PROGRAMME OUTCOME

Till March 2017, 700 visits have been completed by nursing mentors in 156 delivery points with 2 to 4 visits of 141 delivery point (high delivery load points).

FINANCIAL IMPLICATION

No additional cost incurred, the only significant budget expenditure in year 2016-17 is 14 lakh @ of Rs. 2000/- per delivery point.

SCALABILITY

The innovation of nursing mentors is promising as it has lead to the motivation of the staff nurses selected as nursing mentors and they have developed their skills and are able to address most of the issues.

IMPLEMENTING PARTNERS

State government, NHMand JHPIEGO.

MOBILE HUMAN MILK COLLECTION UNIT
at B. J. Government Medical College and Sassoon General Hospital, Pune

PROBLEM STATEMENT

The Human Milk Bank at B. J. Government Medical College and Sassoon General Hospital is successfully functioning since November 2013. The requirement of human milk exceeded compared to the consumption by the sick neonates. The newborns in the high dependency unit and pediatric surgery ward could not benefit from the Human Milk Bank due to the shortage. Thus it was decided to increase the collection of milk by making home visits to the donor mothers and nearby hospitals. The idea of Mobile Human Milk Collection Unit was bought in practice and the van was designed.

PROGRAMME DESCRIPTION

The human milk bank van was inaugurated on 1st of august, 2016, on the first day of world breast feeding week. In India, only BJ Government Medical College, Pune has a Mobile Human milk collection unit with objectives to increase human milk donation for sick newborn, to motivate mothers in community to continue EBF till 6 months, to educate and help parents to create baby and mother friendly environment at home, to provide each newborn only human milk the most tailored nutrition from the start of the life irrespective of term/preterm.

The unique feature of this project is the novel concept of collection of human milk from the lactating mothers from the community. This is the first Mobile Human Milk Collection Unit in India. Also the van is customized with facilities for two mothers to comfortably sit and donate milk in an air-conditioned van, availability of electrical points for functioning of electronic breast pumps, a fridge to store the milk, availability of a washbasin and intercom system. Also mother's are given nutritious chikki after milk donation which the Hospital kitchen is specially providing to the donor lactating mothers.

PROGRAMME OUTCOME

Till May 2017 640 lactating mothers have donated milk and 1465 sick neonates benefited.

FINANCIAL IMPLICATION

Each van cost INR 28 lakhs (Mobile van with interiors and equipment).

SCALABILITY

For developing countries where there is lack of sophisticated NICU, human milk is the low cost effective approach to decrease neonatal morbidity and mortality.

IMPLEMENTING PARTNERS

Rotary Club of Puna and NHM.

BRIDGING THE GAP
a PPP with Indian Association of Pediatric Surgeons (IAPS) under RBSK

PROBLEM STATEMENT

Under RBSK programme children with various defects and ailments are being identified and referred further for curative/ operative treatment. However the health system at district level is overburdened and issue becomes grave with paucity of specialist and experts. This leads to increase in waiting time of the RBSK referred children to be operated for defects.

PROJECT DESCRIPTION

Objective

- To provide specialized pediatric services at public health system through PPP.
- To reduce the waiting period for access to treatment.

Public Health Department, Maharashtra in the year 2016-17 implemented a strategy wherein a MOU has been signed with Indian Association of Pediatric Surgeon's (IAPS) for specialized minor and major surgeries to be carried out at Public Health Facilities. This programme caters to those referred children who are either not eligible under another Health Insurance Scheme of the Government or where the procedures are not covered under Health Insurance Scheme. Services being provided under the scheme include orthopedic surgeries, hernia, hydrocele, cleft lip/palate, squint/cataract, dental surgeries, ENT surgeries etc.

PROGRAMME OUTCOME

Public private partnership provides assurance of high quality service availability at public health system through minimal financial provision. It helps to reduce waiting time for treatment and out of pocket expenditure from beneficiaries pocket. During 2016-17, in Maharashtra state, 1025 children were referred to IAPS, out of which 963 surgeries (93%) are completed successfully. Surgeries carried out for ailments include orthopedic, hernia, hydrocele, cleft lip/palate, squint/cataract, dental surgeries, ENT etc.

FINANCIAL IMPLICATIONS

Service providers under the scheme are provided with remuneration of Rs. 5,000/-, Rs. 3,000/- and Rs. 2000/- respectively per case through RBSK funds under NHM. Approx. Rs. 21 lakhs amount utilized under this activity.

POTENTIAL FOR UPSCALE

The project has a potential of scale up as there is limited financial implication and availability of high quality pediatric services from private health care providers.

DISTRICT EARLY INTERVENTION CENTER

PROBLEM STATEMENT

Early identification of health conditions and their linkage to care, support and treatment is essential to ensure equitable access to child health services. Strengthening of District Early Intervention Center is thus needed.

PROJECT DESCRIPTION

The Pune DEIC was established in 2015 and has evolved as a state of art facility within District Hospital, Pune. It includes various units viz. Pediatrician Examination Unit, Psychological Examination Unit, Special Educator Unit, Physiotherapy Treatment Unit, Occupational Therapy Unit, Sensory Integration Unit, Dental Treatment Unit, Club Foot Clinic. The complete DEIC Facility- Pune comprises of 25 Staff with various specialty as unit management.

DEIC is working as a referral center for screened children from all over Pune district. In addition to RBSK team referrals, numbers of referrals are made from district hospital, Nutritional Rehabilitation Center (NRC), SNCU and NGOs/trust hospitals working in and around Pune district. Pediatrician is a first point of contact for each referred patient. After examination by pediatrician, child has been referred to designated unit based on diagnosis and care required. If further referral is required, especially surgical care, patient further gets referred to identified referral unit by DEIC. Regular follow up after discharge is one of the important components.

PROGRAMME OUTCOME

Since establishment, total of 22069 children have been provided specialized services by the DEIC.

FINANCIAL INVESTMENTS FOR IMPLEMENTATION

For establishment & Operationalization of Pune DEIC, following expenditure has been incurred.

- Construction Cost = Rs. 110.00 lakh.
- Equipment cost = Rs. 222.00 lakh.
- Human Resource & Other operational cost per annum =Rs. 92.47 lakh.

SCALABILITY

The project can be replicated at other places in current form to achieve maximum outcome.

SPHURTI
An Adolescent Health and Nutrition Campaign

PROBLEM STATEMENT

The proportion of adolescent population in Rajasthan is nearly 22 percent (Census 2011). Prevalence of anemia among adolescent girls is 46.8% (NHFS 4).

PROGRAMME DESCRIPTION

Project SPHURTI was introduced in December 2016 in Durgapur district. The strategy is to actively involve adolescents in promoting improved health and nutrition practices under the umbrella of RKSK (Rashtriya Kishor Swasthya Karyakram).

Workshops were conducted in the community for adolescents generating awareness about health issues like anaemia and iron deficiency; reasons of its occurrence and how to combat the same. Adolescents were mobilized through Creative discussion and art work. Selected change makers bought their ideas on charts, and finalized the concept to transfer on the most appropriate wall through participation of all.

PROGRAMME OUTCOME

The Sphurti Campaign for Adolescent's Health and Nutrition through Participatory Wall Painting would be an opening to a

drive amongst the tribal adolescents. It can lead students towards building

enabling environment, healthy practices and ensuring positive health and nutrition behavior changes in their respective communities.

FINANCIAL IMPLICATIONS

Approximately Rs. 500 per workshop would be required for items like brushes, buckets etc which can be mobilized from the community/AWC or schools. Other costs include, cost of organization of workshop and incentives for the resource team.

SCALABILITY

Sphurti can be scaled up in high anemia prevalence districts and blocks in coordination with the education department and ICDS. Rather, it can be an opportunity for all three departments to address anemia amongst adolescents in an interesting manner.

IMPLEMENTING PARTNERS

Department of Health and Family Welfare; 2. ICDS, Women and Child Welfare Department; 3. Education Department; 4. District Administration and 5. UNICEF.

Contact: wifs.raj@gmail.com

TAPPING CORPORATE SOCIAL RESPONSIBILITY
under Rashtriya Bal Swasthya Karyakram

PROBLEM STATEMENT

Lack of specialized services in the state was major challenge in providing affordable treatment options, for health conditions identified under Rashtriya Bal Swasthya Karyakram.

PROGRAMME DESCRIPTION

The state health department under corporate social responsibility involved corporate institutions and NGOs to render support in treatment of children screened under the RBSK. Many institutions came forward for support in areas like provision of referral transport, support in terms of bearing entire cost of treatment or partially via providing cost for medicines, consumables etc.

PROGRAMME OUTCOME

A total of 28 private organizations joined the government for the cause in 2015-16. 84091 children were given treatment support under the initiative. 350 sponsored surgeries (CHD, Cleft lip & palate, congenital cataract, hip dysplasia, otitis media, club foot) have been carried out.

FINANCIAL IMPLICATIONS

By minimal investments in the advocacy strategies the state was able to gain high returns in terms of free services and support under the program. Number of lives saved added an additional incentive to the project.

SCALABILITY

The project is an excellent example of pooling of resources within the state. Collaborative efforts with private hospitals & medical colleges have made it possible to provide specialized treatment to children from deprived communities. The cost effectiveness and simple strategies of the programme makes the project scalable and suatainable.

IMPLEMENTING PARTNERS

National Health Mission, Rajasthan.

Contact: md-nrhm-rj@nic.in

FREE SURGERIES UNDER RASHTRIYA BAL SWASTHYA KARYAKRAM

PROBLEM STATEMENT

Some Health conditions covered under Rashtriya Bal Swasthya Karyakram require cost intensive specialized treatments, which are not affordable by majority of people.

PROGRAMME DESCRIPTION

Chief Ministers Comprehensive Health Insurance Scheme, was launched by the Tamil Nadu State Government to provide free medical and surgical treatment in Government and Private hospitals to the members of any family whose annual family income is less than Rs.72,000/-. The Scheme provides coverage for all expenses relating to hospitalization of beneficiary as defined in the Scope of the Scheme. To make the services affordable and accessible under RBSK, conditions requiring surgeries were incorporated under the procedure list of CHIS.

PROGRAMME OUTCOME

The intervention has helped in increasing accessibility to quality health services through empanelment of service providers across the state. Out of pocket expenses in availing specialized services have reduced.

FINANCIAL IMPLICATIONS

So far around Rs. 300 crore has been spent for surgical corrections of the identified children through the CMCHIS scheme.

SCALABILITY

The intervention is cost effective; it not only helps in reducing the OOPE but also reduces the programme cost for empanelment of private providers under various vertical programs. The scheme may be replicated in other states with customization as per state specific requirements.

IMPLEMENTING PARTNERS

National Health Mission, Government of Tamilnadu.

Contact: rchpcni@tn.nic.in
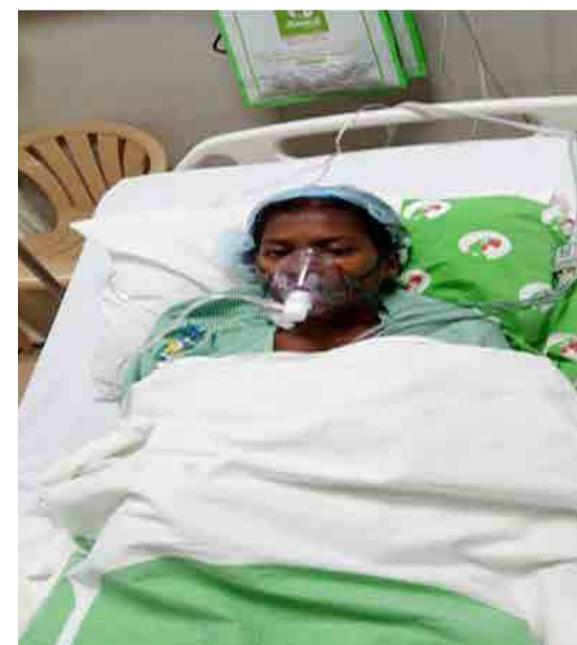
STANDARDIZATION OF BIRTHING UNITS
as per Government of India guidelines

PROBLEM STATEMENT

Standardisation of labour rooms to improve the coverage and quality of maternal health services across levels of health care.

PROGRAMME DETAILS

Assessment of high load delivery points with reference to infrastructure, equipment and furniture of labor room was carried out by multidisciplinary team against GoI "Standardization of Model Labor Room Guidelines". The data was collected through mobile application that could be operated from any android phone. Action plans and budgetary requirements for addressing the gaps were made. Actions suggested for gap closure were executed by concerned District authorities under the supervision of state team.

PROJECT OUTCOME

Provision of quality health services for women seeking maternal care in government health facilities leading to higher patient satisfaction and increased utilization of services.

FINANCIAL IMPLICATIONS

Total budget: 11 crore rupees. Source: NHM and State and District untied funds.

SCALABILITY

The standardisation of birthing units is a highly replicable model across all geographic areas in the country with different scenarios of health indicators and health system.

IMPLEMENTING PARTNERS

National Health Mission Government of Telangana.

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TEEKA BANDI

PROBLEM STATEMENT

Poor immunization coverage and high rate of drop out among urban slums, temporary settlements, high risk areas Construction sites and migratory population.

PROGRAMME DESCRIPTION

This new initiative was piloted in the Greater Hyderabad Municipal Corporation areas initially with an aim to achieve universal immunization in vulnerable urban slum population. Two wheelers were purchased and fitted with vaccine carriers which could store and transport vaccine at appropriate temperatures. A predesigned/planned route was designed for the ANM to be taken each day with a target of 12 routes per month (4 weeks). Revisit to each route once in a month was done to ensure all doses.

PROGRAMME OUTCOME

Increased accessibility of immunization services in temporary/migratory/ Nomadic/High Risk population has helped in reducing dropouts and increasing coverage of services in these areas.

FINANCIAL IMPLICATIONS

Total investments.

SCALABILITY

Due to low resource requirements the project could easily be scaled and may benefit service delivery in urban as well as inaccessible and hard to reach areas.

IMPLEMENTING PARTNERS

Department of Health, Government of Telangana.

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MOTHERS' PICNIC
an innovative intervention to promote safe motherhood and institutional delivery

PROBLEM STATEMENT

Safe motherhood is an important component in the continuum of care under RMNCH+A Strategy. Safe motherhood literally begins from the adolescent period and through the antenatal and intra natal period it ends 42 days after successful pregnancy outcome. Even with more than 90% institutional delivery rate in the State, there are at least 40 identified blocks with high incidence of home delivery.

PROGRAMME DESCRIPTION

To promote safe motherhood and improve institutional delivery, an innovative intervention popularly nomenclature as "Mother's Picnic" is carried out in select blocks of all the districts of West Bengal. The "would be" mothers from selected sub-centers having high incidence of home delivery are brought to the nearest delivery point for a tour to see for themselves the labour room with its facilities and where they can safely deliver their baby. It is a one day programme where the pregnant mothers also have Antenatal check-up, necessary investigations done and health talks given on birth preparedness, danger signs of pregnancy, importance of institutional delivery and entitlements under JSY & JSSK etc. IEC materials and "my safe motherhood" booklets are given to them. To and fro transport is also

provided on the occasion. Refreshments are also provided to these pregnant women as it is a daylong activity.

PROGRAMME OUTCOME

To promote safe motherhood through institutional delivery and minimize maternal deaths due to delay 1 and delay 2.

IMPLEMENTING PARTNERS

District and Block level health service providers.

FINANCIAL IMPLICATIONS

Rs.3000.00 per mothers' picnic.

SCALABILITY

Mothers' picnic is being organized at select blocks in all the 28 districts of the state.

Contact: adhsmhwb@gmail.com

EMERGING INITIATIVES

NUHM

MODEL IMMUNIZATION CENTRE

PROBLEM STATEMENT

As per NFHS-4 data almost 40% of urban poor children miss total immunization before completing 1 year. Bihar ranks top in urban poverty among all states of India, having 43.7% urban poverty. Bihar has around 54 cities/towns reporting slums. Around 14% of urban population resides in slum area.

PROGRAMME DESCRIPTION

Model Immunizations centres have been created after the launch of NUHM (2013) in 14 districts of Bihar to Maximizing the reach of children to quality vaccine. Objectives of this intervention is to improve functioning of supply and cold chain system, mobilizing people to generate demand through community and caretaker, also creating a bunch of satisfied clients to do advocacy for vaccination in community, To provide vaccination services to working people who are not available in day time and Enhancing community's faith in government vaccination services by providing quality Services. These centers are well furnished, neat and clean with air-conditioned facility, Child friendly paintings on the wall to create enabling environment, advocacy videos are displayed all the time and provides early morning and late evening vaccination services.

PROGRAMME OUTCOME

Within 3 months of launch, the average children immunized per day increased from 27 to 68 in these centers. Service quality checks being done with200 parents to improve quality of services at Model Immunization Center parents were interviewed to know their perceptions about immunization services. 177 parents responded to all questions out of which 74% people said behavior of the care givers is excellent, and 84% parents said they are satisfied with the quality of services being provided by these centres.

SCALABILITY

Immunization service being one of the flagship programs of the healthcare delivery system which should be robust enough to reach the last child unvaccinated. Strengthening immunization services in urban area is the key to increase the immunization coverage. It could be scaled up in other cities of all other districts so as to build faith in government centers.

IMPLEMENTING PARTNERS

NHM and state government.

PROJECT UDHAAR FOR URBAN SLUMS

PROBLEM STATEMENT

Weak monitoring of maternal and Child health services and poor indicators.

PROGRAMME DESCRIPTION

- The programme aimed to create a focused and targeted approach for effective monitoring and implementation of Maternal and Child Health services in slums.

- 5 teams were constituted for 5 major slums. The teams constitution was 2 ANMs, 2 MPHW (male) and a LHV to supervise them.

- Teams were made responsible for achieving RCH indicators and immunize each and every child in the area and provide assured ANC registration and check ups.

- Teams provide free health services at door step and bring the dropouts back in the system.

- Teams monitored by district immunization officer.

- After the success of the teams for RCH, 4 additional teams were created to extend the

services for RNTCP and NVBDCP to include population from small migrant pockets, nomads and vulnerable localities.

PROGRAMME OUTCOME

- Increased vaccination rate as per the annexures attached.

- Increased ANC coverage.

- Increased OPD attendance.

IMPLEMENTATION PARTNERS

NHM Chandigarh.

SCALABILITY

Can be extended for catching the dropout population across the state and in different States.

USING FOLKLORE FOR IEC/BCC IN DENGUE RATHA
Nidhi Mausa Campaign in urban areas

PROBLEM STATEMENT

Urban area in general and slums in particular are vulnerable for outbreak of diseases like Dengue, Jaundice and Diarrhoea. Although a number of steps are being taken by H&FW and H&UD Dept. every year, there is an outbreak.

PROGRAMME DESCRIPTION

i. One Dengue Ratha popularly named as Nidhi Mausa Ratha was engaged by CHS, NUHM, Cuttack to create awareness among the Slum Dwellers and general public regarding the safety measures for Dengue prevention.

ii. Rath conducts various dengue awareness programs and Padayatra, which were at different ward level in both rural and urban areas, with active support of WKS & MAS members, Local NGOs etc.

iii. The objective of the campaign is threefold-Community awareness, Cleanliness and convergence between stakeholders. Specific guidelines were issued for MDD campaign. The ward Kalyan Samiti has been active in monitoring of the programme.

iv. Emphasis was on Interpersonal communication through ASHA or NGO/NSS volunteers.

PROGRAMME OUTCOME

- This Nidhi Mausa campaign had a great impact on the general public and due to this the administration had been greatly benefited in controlling the epidemic & spreading the message.

- The incidence of diarrhoea and jaundice reduced.

- There is a marked improvement in awareness due to involvement of women through mobilization of MAS members.

IMPLEMENTATION PARTNERS

Ward Kalyan Samiti and Mahila Arogya Samiti.

FINANCIAL IMPLICATIONS

- The budget allocated under MDD Campaign is used.

- Cost allocated for high focus 19 cities under IEC/BCC head of NUHM is used.

SCALABILITY

Since Dengue is a regular phenomenon in many cities and the challenge can be eradicated through intensive IEC and BCC these type of campaigns shall be useful in controlling the Dengue.

PERFORMANCE MONITORING OF MAS
through grading system

PROBLEM STATEMENT

Low functionality of certain MAS leading to poor convergence and low use of untied funds. In 2016, out of 3079 MAS which received untied funds, 265 MAS had utilized less than 50% fund, while 95 MAS had utilized 0% funds.

PROGRAMME DESCRIPTION

In order to assess the performance of individual members and MAS as a whole, a ranking based on set of 10 parameters is done. The parameters are given in the table below-

Similar set of indicators are used for assessment of individual members of MAS. The eligibility criteria for assessment of MAS and its individual members is

completion of one year. The assessment is done by ASHA (U)/President of MAS. The ASHAs in urban area collect the assessment report and submit it to concerned ANM. This report is validated by ANM/Public Health Manager. Based on this report, MAS prepares their quarterly plan of action.

PROGRAMME OUTCOME

Grading has already been implemented in Bhubaneswar City. Out of the 55 MAS in ten monitored wards, 15 are in red in zone,21 in green zone and 19 in yellow zone.

IMPLEMENTATION PARTNERS

RKS, NGOs and ASHA.

FINANCIAL IMPLICATIONS

The contingency fund of CPMU/DPMU/UPHC is used for printing cost of the formats and awards to MAS.

SCALABILITY

This is a scalable model requiring training and orientation.

Contact: nuhmcellodisha@gmail.com

Sr. No.	Indicators for MAS
1	Monthly meeting organized
2	Pregnant women received ANC
3	No home delivery in MAS operational area
4	All beneficiaries attended UHND
5	All children under 5 attended immunization sessions
6	Organize monthly cleanliness drive
7	Resources mobilized from other resources
8	Utilization of untied funds
9	Conducted awareness sessions on seasonal diseases
10	Use of toilets by individual households

EMERGING INITIATIVES

$\mathcal{D}$CP & NCDs

DOCTOR'S CALL
Random calls to Drug Resistant TB patients to Monitor and Improve Treatment Adherence

PROBLEM STATEMENT

Drug-resistant tuberculosis (DR-TB) is difficult to treat and is associated with frequent adverse drug reactions and high mortality. As many as 50% of DR-TB patients in Andhra Pradesh are either loss to follow up, do not complete treatment or die during the treatment. There are also challenges related to regular clinical examinations, treatment of co-morbidities, counselling support, and prompt recognition and treatment of drug side effects/adverse events.

PROGRAMME DESCRIPTION

There are four stages in implementation. In the first stage a DR-TB patient is initiated on treatment. The TB Unit-MO, further provides details to respective PHC-MOs. In second stage the Senior Medical Officer of the District TB Centre calls to the concerned PHC-MO to seek information on patient as well as discusses the conditions/co-morbidities that need to be follow-up by the PHC. In third stage the PHC-MO directs respective Treatment supervisor (STS) to ensure that all DR-TB patients undergo scheduled investigations. Free diagnostic tests are performed for all patients in Primary Health Centers. The STS also maintains a referral register of DR-TB patients. Stage four involves patient

calls by Senior MO-DR TB Centre who randomly picks up three patients every day (5 days a week) and seeks information. If the patient is unavailable, the next DR-TB patient in the list is picked to make a call. A Call register is maintained at the District TB Centre which records the answers to the standardized questions.

PROGRAMME OUTCOME

1. The number of patients seeking care for co-morbidities, side effects and complications (while being treated) have substantially increased at DR TB Centre (as shown in the table below).

2. Patients are missing fewer doses and are tolerating drugs better since all their minor complaints are being attended promptly.

3. An informal qualitative patient satisfaction survey showed that more than 95% of them were extremely

contented with the 'Doctor's Call 'and the counselling services offered.

SCALABILITY

This can be scaled up effortlessly since data shows that no additional expenses are incurred and can contribute towards favorable treatment outcomes. The existing health system and programme staff can implement this.

DR-TB WARD	BEFORE CALL REGISTER	AFTER CALL REGISTER
OP	10-15 cases per month	25-30 cases per month
IP	03-05 cases per month	10-15 cases per month
Major complication	Hearing impairment Joint pains	Skin rashes Discoloration, blurring of vision, Psychiatric problem
Action taken	Referred to respective departments for expectant management and hearing aids	
Treatment Sucess of MDR-TB	2011-40% 2012-41% 2013-40%	2014- 50%

COMMUNITY HEALTH OFFICERS
a step ahead to reach the unreached

PROBLEM STATEMENT

Healthcare remains a critical challenge in difficult-to-access areas mainly due to unavailability of doctors, nurses and paramedics. The Government of Assam's initiative to create a cadre of Community Health Officers (CHO) earlier known as 'Rural Health Practitioners' (RHPs) aims to address this.

PROGRAMME DESCRIPTION

In 2004, the Legislative Assembly passed the Assam Rural Health Regulatory Act with the objective of opening Medical Institutes for imparting training for a Diploma in Rural Health Care and Medicine (DMRHC). This was initiated at Jorhat Rural Medical Institute.

The legislation notified (a) Services/ Procedures to be provided (b) illnesses to be treated and (c) medicines to be prescribed by these diploma holders.

There are currently 559 CHOs posted at Sub Centers (under National Health Mission), mostly in high focus districts.

PROGRAMME OUTCOME

- Increased caseload and institutional deliveries.

- Changed the community's perceptions towards sub centers.

- Increased range of service delivery - diagnosis & treatment of NCDs and management of emergency cases included.

FINANCIAL IMPLICATIONS

- The course is funded from the Directorate of Medical Education.

- NHM provides salary of CHOs, drugs, equipment & consumables.

SCALABILITY

By putting in a supporting institutional mechanism and training institute, Assam has developed a cost effective and efficient way to provide comprehensive primary care in remote and rural areas. All 562 sub centers with CHO positions can be strengthened as Health and Wellness Centres (H&WC) and the model scaled up for the remaining centers in the State.

This is also a good model for states to adopt/adapt as they strengthen their sub centers to HWCs.

POLICY OF NUTRITION SUPPLEMENTATION TO ALL TB PATIENTS

PROBLEM STATEMENT

There is a close relationship between TB, malnutrition and food security. TB disease itself reduces the appetite and the ability of body to absorb nutrients. At the same time it increases nutritional needs of the patients due to metabolic changes while reducing access to livelihood/income due to morbidity/low productivity. Malnutrition and food insecurity also leads to a higher likelihood of progression from latent infection to active disease. Systematic reviews have demonstrated that TB incidence increases exponentially as the Body Mass Index (BMI) decreases and the risk of TB increases by about 14% for each unit reduction in body mass index (BMI). Catastrophic health expenditure is a common consequence of TB diagnosis, treatment and care, which can lead to a worsening of food security for TB patients and their families during the course of the disease.

PROGRAMME DESCRIPTION

Government of Chhattisgarh has decided to provide nutritional supplementation to all the tuberculosis patients including drug-resistant cases throughout the course of their treatment. The supplementary nutrition is to be provided in the form of monthly food basket (Table 1). Decision on commodities to be provided to the beneficiaries was taken by the State Technical Committee for Nutrition based on pilot study in 2 districts of the state. The ration being provided has following features:

1. calorie dense with high protein content.
2. locally acceptable and palatable.
3. easy to use.
4. long shelf life.
5. easy to transport and store.

Table 1: Contents of Monthly Food Basket

Commodity	Quantity/month
Soya bean Oil	1 L
Groundnut	1.5 Kg
Milk Powder	1 Kg

Procurement of the commodities is being done by Chhattisgarh Medical Services Corporation (CGMSC). The order for the same is placed and is expected to be delivered by June 2017 for its state-wide implementation.

PROGRAMME OUTCOME

Following are some of the expected outcomes -

- Better food and nutrition security of TB patients.
- Reduced catastrophic expenditure.
- Improved treatment adherence.
- Improved BMI (indirect).
- Better treatment outcome.
- Increase in Case Detection (indirect).

FINANCIAL IMPLICATIONS

12 Crores per annum

SCALABILITY

State has planned to scale it up to all its districts. Other States can consider it for implementation too.

CHHATTISGARH

INTER-SECTORAL COORDINATION
for intensifying tuberculosis case finding

PROBLEM STATEMENT

Tuberculosis is one of the major public health challenges in the country where still millions of people are not getting tuberculosis care they need. Reason for not getting TB care can be attributed primarily to accessibility of health care services or they remain undiagnosed. These missing millions have to be identified by the national programme in order to control the spread of tuberculosis.

PROGRAMME DESCRIPTION

Concerted Intersectoral efforts were made to identify the missing cases in the community through organizing special screening campaigns in the population at high risk for TB such as Jail inmates, health care workers and those working in mines. This special screening campaign was done in three phases in coordination with other non-health departments in the state.

PHASE I: JAIL TB CAMPAIGN

Partners in Action: Department of Prisons & Department of Health & FW

PHASE II: HEALTH CARE WORKERS TB CAMPAIGN

Partners in Action: RNTCP division, NPCDCS division, Medical Colleges.

PHASE III: MINES TB CAMPAIGN

Partners in Action: Department of Health & Mineral Resources Department.

OUTCOMES

Amongst 19,985 jail inmates in all the 30 Jails in Chhattisgarh, 81% (n=16163) jail inmates were screened for symptoms of TB. Of those screened, 5% (n=848) inmates were found to have symptoms of TB and 15 were newly diagnosed as TB. Also 52 inmates were already on TB treatment during the campaign thereby a total of 67 TB patients were suffering from TB in the Jails.

SCALABILITY

State-wide implementation is possible.

SUPPLEMENTARY NUTRITION SUPPORT SCHEME
for drug resistant-TB patients

PROBLEM STATEMENT

Malnutrition is both an important risk factor for, and a common consequence of tuberculosis. It is therefore a common comorbid condition for people with active TB and is associated with increased risk of mortality and poor treatment outcomes. Both, protein-energy malnutrition and micronutrients deficiencies increase the risk of tuberculosis. Malnutrition can lead to secondary immunodeficiency that increases the host's susceptibility to infection. In patients with tuberculosis, it leads to reduction in appetite, nutrient malabsorption, micronutrient malabsorption, and altered metabolism leading to wasting. It has been found that malnourished tuberculosis patients have delayed recovery and higher mortality rates than well-nourished patients.

PROGRAMME DESCRIPTION

Milkfed- one of the State government undertakings, was engaged to prepare a food supplement called "Him Nutrimix". This ready to eat supplement contains roasted wheat, sugar, soyabean, black gram, refined oil, whole milk powder and ground nut. The daily dose for a MDR-TB patient is 100 gm of this mix which provides 419

calories meeting 1/5th of daily calorie and 1/4th of protein requirement. However, this mix is a nutritional supplement rather than a nutritional replacement. For ease of use this mix is provided in a packet of 1Kg –which has 10 packets of 100g each- and will last 10 days. Supplement nutrition to MDR-TB patient will be provided for the whole duration of MDR-TB treatment (i.e. 24-27 months). District TB Cells ensure the stringent

monitoring of the proper utilization of Him Nutrimix by MDR patients. Serial BMI measurements of all MDR patients taking nutritional supplements are taken by the health officials at monthly intervals and records are maintained on a specified format. Nutritional supplement scheme is linked to drug adherence. Near 600 DR-TB patients has been given Nutrimix so far. There is high level of acceptance of Nutrimix among the patients.

PROGRAMME OUTCOME

An obvious improvement has been noticed so far in most patients. It is envisaged that an improved health and nutritional status will result better treatment adherence and treatment outcomes for M/XDR TB cases in the state. There will be decline in deaths due to M/XDR TB in Himachal Pradesh.

FINANCIAL IMPLICATIONS

Cost of 1 Kg of Nutrimix is Rs. 70 (5% VAT extra). State has spent Rs. 10.80 lakh for the supply of 1st tranche of Nutrimix.

SCALABILITY

Other states can consider provision of nutritional support to X/MDR-TB pateints.

CERTIFICATE COURSE IN EVIDENCE BASED DIABETES MANAGEMENT (CCEBDM) AND CERTIFICATE COURSE IN MANAGEMENT OF HYPERTENSION (CCMH)

PROBLEM STATEMENT

Increasing burden of Non Communicable Diseases and need for capacity building of physicians in NCD management.

PROGRAMME DESCRIPTION

These courses are developed with an objective of enhancing the skills of Primary Care Physicians in case management, counselling, referral and prevention of diabetes and hypertension. The course consists of contact based interactive modular training programme which is a judicious mix of knowledge, case studies, videos, group exercises, assignments with a pre-test and post-test in each module. The trainings are conducted at seven Regional Training Centers of Government of Madhya Pradesh. The Primary Care Physicians, being designated as NCD Nodal Officers, who have volunteered for the course are deputed to undergo training once/twice a month, by a local Faculty.

PROGRAMME OUTCOME

210 MOs from across the 51 districts (mostly sub district level) have been nominated for the courses and trainings are being conducted in 2017.

IMPLEMENTING PARTNERS

PHFI and Department of Health & Family Welfare, Government of Madhya Pradesh.

FINANCIAL IMPLICATIONS

The cost per participant for this training has been brought down specifically for the Government sector to approximately INR 13,360/- which includes a strong monitoring and post training evaluation component.

SCALABILITY

These models have already been adopted by the governments of Gujarat, Kerala, Tripura, Meghalaya, Mizoram and Kolkata Municipal Corporation for training their Medical Officers. The project is essential given the population based roll out of NCD screening.

Contact: MD, NHM, Madhya Pradesh.

EVENT BASED SURVEILLANCE UNDER IDSP
media scanning and verification cell

PROBLEM STATEMENT

Strengthening Disease Surveillance System for early detection of outbreaks for better response and control measures.

Keeping in view the trend of identifying most of the outbreaks through media reports, a media scanning cell was established in the state surveillance unit of Odisha on 2nd April 2016. As a part of the activity, 6 regional newspapers & two English newspapers published in the state along with local news channels are regularly monitored for any report of any disease outbreaks across various part of the state.

The alters thus reported by media are sent to the concerned District Rapid Response Teams or Block Rapid Response Teams districts for verification and further control measures.

PROJECT OUTCOME

553 news either published in print media or reported in electronic media were verified since April 2016, out of which 310 outbreaks were confirmed. Immediate containment measures were undertaken in all these outbreaks to minimize morbidity, mortality and the spread as well. The intervention has thus helped in strengthening the surveillance in the State and has considerably reduced the response time to any outbreak.

FINANCIAL IMPLICATIONS

Existing Human resources are being utilized for the development of cell. Requirements like LED TV set with DTH, and subscription of news papers is covered under admin expenses/IEC.

SCALABILITY

The intervention is low cost, efficient and has a considerable impact. The strategy is scalable.

IMPLEMENTING PARTNER

State surveillance unit, Odisha, Government of Odisha.

Contact: ssuodisha@gmail.com

MUKH MANTRI PUNJAB CANCER RAAHAT KOSH SCHEME

PROBLEM STATEMENT

Increasing burden of cancer and resulting high out of pocket expenditure on cancer treatment.

PROGRAMME DESCRIPTION

Under this scheme, financial assistance of up to Rs.1.50 lakhs is provided to cancer patients of Punjab State, who undergo diagnosis and treatment at Government/MoU empaneled hospitals and referred to other institutions, if needed. Government employees, ESI employees and their dependents, those with Health Insurance by Insurance companies are not eligible for the scheme. The funds are utilized only for the treatment of cancer patients including diagnostic tests and medicines, and not for other miscellaneous expenses (eg. diet, ambulance etc). For financial assistance to government hospitals, rates are as per Government hospital rates, while for private empaneled hospitals, assistance is as per CGHS rates. The listed low cost cancer medicines are provided to patients by Government/

empaneled hospitals as per rate contract. If drugs beyond the list of rate contract is used, then the original amount is reimbursed to patients. Patients are also eligible for additional incremental sanctions up to a cap of Rs. 1.50 lakhs in total, in case of disease progression or recurrence and if their initial sanction is less than Rs. 1.50 lakhs.

PROGRAMME OUTCOME

Financial assistance of Rs. 463 crores have been sanctioned to 36897 cancer patients from July 2011 to 6th January 2017.

IMPLEMENTING PARTNERS

Government of Punjab.

SCALABILITY

Project has potential to scale up in other states with high cancer prevalence.

Contact:
cancercontrolcellpunjab@yahoo.com

USE OF INFORMATION TECHNOLOGY
in continuum of care for non-communicable diseases

PROBLEM STATEMENT

Majority of patients referred to higher centre for treatment of NCDs by primary health care facilities are often lost or are untraceable and end up with complications leading to increased morbidity and mortality.

PROGRAMME DESCRIPTION

- ICT based technology was developed to facilitate tracing of patients screened and identified with Non communicable diseases.

- NCD mobile app is currently being piloted in Ariyalur, Dindigul and Coimbatore since 08.04.17.

- The steps involved in registration and follow up using the app are as follows:
  - Each person to be screened are first registered in the app after entering the details such as name, age, sex, address, family history, past medical history etc.
  - On registration a unique number is designated to the person which is used for tracing details of the patients like diagnostic test, results, referral, treatment, management and follow up.

PROGRAMME OUTCOME

- To the Health Care staff:
  - easy operability.
  - Can follow the patient's status of referral and follow.
  - easy to transfer knowledge.

- To Policy makers: Practical to implement and helps in planning further improvements based on the indicators.

IMPLEMENTING PARTNERS

NHM-TN and National Informatics Centre.

FINANCIAL IMPLICATIONS

- Procuring tablets for pilot (15 tabs & 2 fingerprint scanners) - 2.55 lakhs.

- Manpower cost for 2 persons for one year @ 30000 per month = 7.2 lakhs.

- Miscellaneous cost (Laptops for Programmers).

- Total (approx) - 10.55 lakhs.

SCALABILITY

Up-scaling is planned in the entire state including UPHCs. Hands on training to 2750 NCD staff nurses is also planned.

Contact: ncdtnhsp@gmail.com

RETRIEVAL OF DATA FROM THE 'CLOUDS'

PROBLEM STATEMENT

Tamilnadu was deluged with rain since Nov 7th 2015. The highest rainfall in a single day in this century for Chennai city was received on Dec 1st. Continued rain for two days, coupled with blocked drainage canals and release of water from lakes resulted in unprecedented flooding of most parts of the city from Dec 1st on wards. The worst affected districts are Central Chennai, North Chennai, South Chennai, Cuddalore, Kancheepuram, Thiruvallur, Nagapattinam and coastal districts of South Tamilnadu.

PROGRAMME DESCRIPTION

STO, DTOs and RNTCP staff were in the process of tracing patients who have been displaced from their homes and to ensure that their treatment continued uninterrupted. 16 teams under the leadership of one DTO were constituted with the technical support from WHO. The DTOs of the affected Districts were directed to identify the most affected TB Units in the District. There were 4945 running cases getting treatment in these affected TUs. 4516 (92%) of them continued the treatment. 429 patients discontinued treatment after floods and 357 of them were retrieved. 20 patients migrated and could not be contacted and there was no information about 14 patients. Totally 357 patients were retrieved by the staff. Patients were given 2 weeks drugs in many centres so that their treatment were not interrupted. None of the patient died even though 8 were hospitalised due to illness/injuries.

The team assessed 524 DOT Centres out of which 5 were fully damaged and 39 were partially damaged. 90 DMCs (Microscopy centres) were assessed by the team and out of which 3 were fully damaged & all the treatment records were also washed off. 6 Dots were partially damaged most of the treatment cards were also washed off.

PROGRAMME OUTCOME

Treatment details in 3 Dot centres were totally washed away & were retrieved from the Nikshay web site with the support of CTD, where the patient's details had been registered. Fresh records & registers were made depending on the data received from Nikshay. This undoubtedly proved the importance of the web based reporting system, the 'Nikshay'

Timely action by the Govt & Administrators prevented a major setback for the Programme & this experience helped us and prepared for compacting the impact.

IMPLEMENTING PARTNERS

Government of Tamil Nadu with the support of State & District Health Societies & Programme officials & field staff.

SCALABILITY

State level action was taken and all the affected Districts were covered **Contact:** rajav@rntcp.org

POPULATION BASED SCREENING PROGRAMME
For control of non-communicable diseases

PROBLEM STATEMENT

India has high burden of non-communicable disease, in line with WHO's Global action plan for the prevention and control of NCDs 2013-2020, India is the first country to develop specific national targets and indicators aimed at reducing the number of global premature deaths from NCDs by 25% by 2025.

PROGRAMME DESCRIPTION

State implemented this programme through a primary health-care approach with early detection and timely treatment and follow up of patients with objective to reduce morbidity, mortality and economic burden of NCDs. Simple, cost effective tools have been used as screening tools to identify common NCDs including cancers in an opportunistic mode at health facilities. This initiative has 2 components one is all the health facilities (Primary, Secondary and Tertiary) are provided the necessary logistics to carry out the opportunistic screening & treatment and another component includes door to door approach for oral screening by dental assistants.

Holistic approach has been used wherein Inter department coordination with departments of School education, Labour welfare, Rural development and Tamil Nadu Corporation for Development of Women for creating awareness about NCDs.

PROGRAMME OUTCOME

From July 2012 to December 2016, 3610865 people detected positive for Hypertension out of 38599517 people screened, 1293951 people detected positive diabetes out of 30995509 people screened, 418469 women detected positive for cervix cancer out of 13138813 women screened, 185961 women detected positive for breast cancer out of 16107890 women screened (age above 30 years) and 147 people confirmed diagnosis for oral cancer out of 901213 people screened (age above 18 years).

SCALABILITY

Primary health care approach makes this programme unique and same could be adopted by other state of India.

IMPLEMENTING PARTNERS

NHM and state government, World Bank.

Contact: mo2shstn@gmail.com

FINANCIAL SUPPORT TO TB PATIENT FOR NUTRITION

PROBLEM STATEMENT

Treatment adherence pose a continuous challenge during the long term TB treatment and Tripura was not an exception considering the low socio-economic status of most of the patients suffering from TB. To combat this and improve on treatment adherence Govt of Tripura took this noble initiative.

PROGRAMME DESCRIPTION

Once notified, TB Patients are registered under the respective District Health & Family Welfare Society. The Patient is followed up till the end of treatment as per RNTCP guideline in their respective PHIs and on completion of treatment the patient is paid Rs.900/- from the CMO office, District Health Society. Quarterly funds are allocated from Directorate of Health Services, to concerned CMOs of all districts.

APPLICATION FORM

Successful completion of treatment by patient, necessitates filling of application form bearing recommendation of STO/DTO/MOTC/MO in-charge for financial assistance and Permanent Residential Certificate of local areas given by Village Pradhan/Municipality counsellor/Corporation/Nagar Panchayat etc. for authentication and submitting along-with photocopy of RNTCP Identity card and an attested recent passport size photograph.

STATUS OF TREATMENT

Up to 31st March, 2017 the payment was made by Account Payee Cheque. And since 1st April, 2017 is being paid through e-payment as per GoI instruction.

PROGRAMME OUTCOME

This programme of providing financial assistance for nutritional support programme has been continuing since pre-RNTCP era in the state of Tripura. Success rate among all new TB cases initiated on treatment has consistently been 89%-90% with a default rate of <5% since inception of the programme.

IMPLEMENTING PARTNER

Govt of Tripura

FINANCIAL IMPLICATIONS

Fund for this activity is budgeted by State Govt under Head of Account: 2210-01-110-16-12-31 (TB) Demand no-16 (Non Plan) OR 2210-01-001-98-16-31 Grant in Aid (TB) Demand No-16 (Non plan).

SCALABILITY

Already implemented for all drug sensitive and Drug Resistant TB patients of the state.

Contact: stotr@rntcp.org

COMMUNITY PROCESSES, EMPOWERMENT & ASHA

INTENSIFIED HOME BASED NEWBORN CARE

PROBLEM STATEMENT

The major proportion of infant mortality is contributed by neonatal mortality.

PROGRAMME DESCRIPTION

The programme is being implemented in 78 tribal blocks since January, 2016. ASHAs are conducting home visits on alternate days till 6 months of age and thereafter every 15 days till 1 year of age and are provided with a follow-up card. ASHAs from tribal areas along with Block Facilitator, Mobilizer and State, District and PHC level officers are trained in the Intensified HBNC protocols. Following components are highlighted in training of ASHAs: measuring respiratory rate, temperature and weight of baby, keeping baby warm, hand washing technique and counseling skills with special reference to diet of the child.

PROGRAMME OUTCOME

In 17 blocks, visits were made to 80% (0 to 6 months) and 75% (7months to 1 year) children, from April 2016 to January 2017. Out of the sick children found, 86% (0 to 6 months) and 75% (7months to 1 year) children were referred. In 61 blocks, only low weight children were visited. Out of total low weight children, visits were given to 84% (0-6months) and 79% (7months to 1 year) in the same period. Percentage of sick children referred was 81% (0 to 6 months) and 90% (7months to 1 year).

IMPLEMENTING PARTNERS

State Health Systems Resource Centre, Maharashtra.

FINANCIAL IMPLICATIONS

The initiative involves only the training cost and incentives for ASHAs for referral of infants to higher health facilities in emergencies.

SCALABILITY

The project has potential to scale up, given the less cost and current findings, especially in other tribal and hard to reach areas.

Contact: shsrc.gom@gmail.com

mSAKHI PROJECT

PROBLEM STATEMENT

The lack of access to health care information, refresher training, supportive supervision, and user-friendly job aids for ASHAs and AWWs, reduces their ability to contribute to improved maternal and newborn health outcomes.

PROGRAMME DESCRIPTION

mSakhi is an android based, simple-to-use mobile application that uses interactive audios/videos, providing support to ASHAs in conducting their routine activities. In addition, it serves as a tool to enhance ASHAs' interaction with women and community. Key functions include beneficiary registration and tracking, decision support for management of newborns, voice guided messages for self-learning. It is open to customization and supports ANM and ASHA facilitators to monitor and improve ASHA's performance by use of readily available performance reports in their mobile phones. It also supports programme managers (Medical Officer) in decision making by a web-based dashboard with key RMNCH indicators, that can be used to monitor both programme and workers' performance.

PROGRAMME OUTCOME

The use of mSakhi has led to significant improvement in quality of counseling for behavior change. Enhanced self-learning through mSakhi has increased knowledge of FLWs, leading to more beneficiary contact and home visits.

IMPLEMENTING PARTNERS

NHM, Uttarakhand and IntraHealth International.

FINANCIAL IMPLICATIONS

The cost per ASHA and ANM for the first year is INR 10,171 and INR 14,171 respectively. The recurring cost is INR 3,305 and INR 3,169 per ASHA and ANM respectively. (Hardware and other activity costs are included).

SCALABILITY

Owing to customization, mSakhi has the potential to be scaled up in other states.

Contact: mdnhmuk@gmail.com

HEALTH CARE TECHNOLOGY

HEALTH ATLAS AND WEB GIS SOFTWARE

PROBLEM STATEMENT

State had initiated the GIS based mapping of heath institutions for better planning and monitoring of the health services across districts. To strengthen this, it was felt need to develop a consolidated State and Districts Health Atlas and a GIS Web portal for online visualization of the health facilities and other allied health facilities.

PROGRAMME DESCRIPTION

The project involves the development of Health Atlas for the state and districts and Web GIS based planning & facility management software. The objective is creating and plotting of spatial databases for entities like: District Hospitals, Community Health Centers, Primary Health Centers and Sub-health Center etc. Users will be able to browse/query the database through the proposed interface and would be able to download outputs in desired manner. Two types of Health atlas have been prepared in 7 months – State and 27 District Health Atlas. Each health atlas covers Maps of DH, CMHO office, PHCs, Private Hospitals, Blood Banks, Delivery Points, FRU Locations, Site of ambulances (108-Ambulance) and Cold Chain points.

PROGRAMME OUTCOME

District Gap Analysis of 692 Health facilities on IPHS Standards has been completed, on the basis of this re-appropriation of Distribution of HR using the atlas and HMIS data and Rationalization of setting up new health facilities have done.

FINANCIAL IMPLICATION

Project cost was 22 lakhs.

SCALABILITY

GIS maps can provide information on many issues and support correctly the decision making process. Health professionals can easily identify the difficulties and disparities regarding the accessibility to health services; and so, they are able to cope with the current situation.

IMPLEMENTING PARTNERS

NHM Chhattisgarh and UNICEF.

Contact: office.mdnrhm@gmail.co
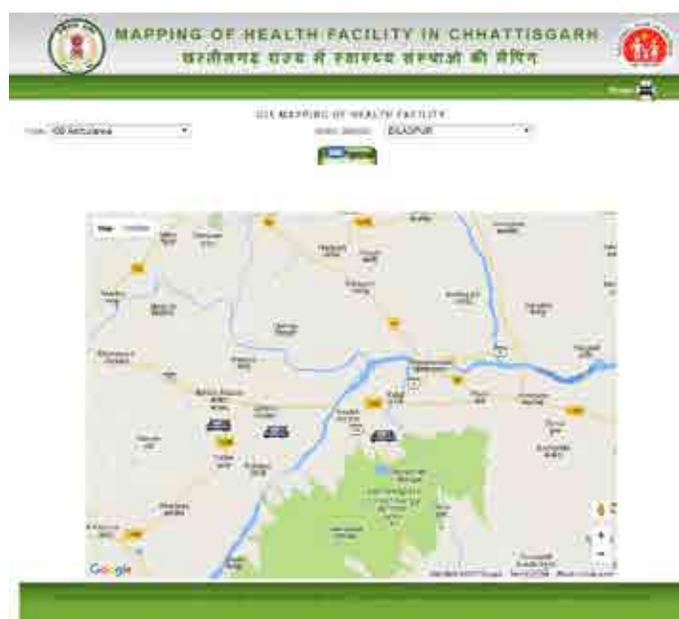
LABIKE MOBILE LAB
portable laboratory diagnosis

PROBLEM STATEMENT

In most of the time, People do not have access to quality diagnostics and the reason is that conventional technology has not been designed to function effectively in the Indian scenario. This product can deliver portable and affordable economical diagnostic in remote locations.

TECHNOLOGY DESCRIPTION

This technology has a suitcase version as well as a version with bike. It is compact portable clinical laboratory having solar power backup, bio chemistry analyzer, centrifuge, incubator, data recorder/mini laptop with patient data management software, micropipettes and other accessories to perform 36 tests, operate on battery as well as solar power and

transfers data through satellite in real time. This system is open system and we can use other company reagents for performing tests.

POPULATION COVERED

People who are requiring access to In vitro diagnostics.

OUTCOME

The product has been installed in at 350 locations with the Indian army and other locations in partnership with NGOs.

STRENGTHS

1. Portable device to carry and deliver diagnostic in remote locations and avoid sample flow in long distance.

2. Instead of lamps and filters, it uses LED source of light inside the blood analyzer. Other analyzers require frequent repairing due to appliance of delicate lamps & filter which in turn restricts their portability. So the technology is Rugged and Maintenance Free.

3. The mobile lab is helping their clients deliver quality health services, in remote and hard to reach locations with limited resources.

4. This device required fewer reagents for performing a test.

5. Low Power Consumer.

WEAKNESS

Most of hematology tests can be done in calculative method.

COSTING

Cost of this innovation is INR 3.80 lakhs and Total running cost of chemicals for 22 tests is Rs.101.09.

SCALABILITY

This technology can be used in following national programs:

a) Health and Wellness center.

b) Mobile Medical Units.

c) National Free Diagnostics Initiative Programs (we can perform 37 tests out of 52 tests which are listed as per our free diagnostics initiative guidelines).

d) CHCs and PHCs located in remote areas.

e) Community level service stations.

f) Rural health research units.

Contact: Accuster technologies Pvt Ltd, New Dehi.

TRUE HB: A DIGITAL HEAMOGLOBINO METER

PROBLEM STATEMENT

Improving and maintaining the level of hemoglobin in antenatal and postnatal women is one of the most important measures required to reduce anemia levels, which is an important cause of MMR.

TECHNOLOGY DESCRIPTION

TrueHb Hemoglobinometer is a digital hemoglobin meter that works on the principle of reflectance photometry. TrueHb technology has been customized so as to be integrated into Public Health Delivery systems. TrueHb Hemoglobinometer device and its strips are manufactured indigenously on automated production lines that have minimum manual intervention.

AREA OF APPLICATION

Diagnostic

POPULATION COVERED

Pregnant women

EXISTING TECHNOLOGY

Following are the devices available to measure Hemoglobin.

TECHNOLOGY OUTCOME

A pilot was done by Department of Hematology, AIIMS, at 4 sites: Puducherry, Kolkata, Rohtak and Chandigarh. Products were evaluated for effectiveness (Sensitivity & Specificity).

RESULTS AS PER AIIMS PILOT STUDY

Gold Standard: Lab Hematological Auto-Analyzer, which works on the principal of Flow Cytometer.

TECHNOLOGY READINESS LEVEL

Commercially available.

MANUFACTURING UNIT

Wrig Nanosystems private limited, New Delhi.

Evaluation report including findings.

STRENGTHS

It is easy to use and portable.

Provides digitalized reading that eliminates subjective error.

Can store readings in memory.

Works like a conventional glucometer where only 1-2 drops of blood is required by finger prick.

WEAKNESS

The device provided for the study is ineffective in direct sunlight.

Patient finger prick is required to draw capillary sample of 1-2 drops of blood.

Personal conducting test needs to be trained to collect blood sample.

The device hangs frequently; improvement in operational efficiency and battery life is needed. The company has provided an improved version which will be tried in the field study.

COSTING

It cost rupees 4000-5000 and 15-25 rupees per test.

SCALABILITY

It could be use in Primary health centers and Health & Wellness center.

It could be used by ASHA and ANM in remote areas.