



SHARE INDIA

Society for Health Allied Research and Education India

SHARE INDIA-MediCiti of Medical Sciences (SHARE INDIA-MIMS) was founded with the vision of fostering a vibrant environment to promote research by medical students and the faculty. As a first step toward achieving this goal, SHARE INDIA-MIMS initiated the annual research methodology courses for students and faculty of MIMS in collaboration with graduate school of public health at University of Pittsburgh. Till 2019, eight editions of the course were conducted with enthusiastic participation of students and faculty from MIMS. Over the past several years, this course significantly contributed to transforming MIMS faculty into independent researchers and trainers. Projects such as TETRA (Technology Enabled Community Health Workers Delivering Telemedicine to Rural Homes at Affordable costs), LIFE (Longitudinal Indian Family Health Study), HELP (Healthy Pregnancy Study) are all lead by faculty from various departments at MIMS. In addition, several other large scale projects on HIV AIDS, Tuberculosis, COVID-19, Dengue and Chikungunya are on-going.

SHARE INDIA, with its rich resources comprising a wide range of projects spanning across the lifespan, and a team of professional researchers offers a unique opportunity for the faculty, postgraduate residents and undergraduate students at MIMS to engage in high quality research. The scope for such participation could be in the form of short term rotations, hands-on experience in data analysis and interpretation, writing research grants and papers for publication, and designing, developing and implementation of research projects efficiently.

An overview of the on-going projects at SHARE is given below with an overarching goal of orienting the faculty, postgraduate residents and the undergraduate students at MIMS to the exciting opportunities for engaging in research projects led by a multidisciplinary team of professional researchers from SHARE INDIA and MediCiti Institute of Medical Sciences. The faculty, postgraduate residents and undergraduate students are strongly encouraged to take full advantage of the resourceful environment existing at SHARE INDIA-MIMS for professional advancement. Requests for further information may please be sent via email to shailendra@shareindia.org.

REACH (Rural Effective Affordable Comprehensive Health) Database: Medchal mandal in Ranga Reddy district has about 49000 population residing in 10,176 households spread across 40 villages. SHARE India has updated demographics entire population through its flagship community outreach program called the Rural effective Affordable Comprehensive Healthcare (REACH). We have a robust database of all households' in the entire Medchal mandal called the REACH database, which was developed using GPS mapping and is updated regularly with vital data provided by the community health workers deployed in each

of the villages in the ratio of 1 CHW for 1000 population. The REACH database has a listing of each resident in all the households in the by name, date of birth, and gender. In addition, extensive data are available for each individual on a wide range of parameters on the lines of the national family health survey of India. The REACH database serves as the motherboard for all research activities.

1. LONGITUDINAL INDIAN FAMILY HEALTH (LIFE) STUDY

Investigators

- ▶ Dr. Guru Rajesh Jammy, Director Research, SHARE INDIA
- ▶ Dr. Kalpana Betha, Professor and Head, Department of Obstetrics and Gynecology, MIMS

Objectives:

The LIFE study is being conducted in villages of Medchal Mandal, Medchal District of Telangana, India. This is a long-term cohort study that will examine socio-economic and environmental influences on children's health and development in India

Aims: Understand the links between the environmental conditions in which Indian women conceive, become pregnant, give birth, the physical and mental health along with development of their children.

Methods: The LIFE Pilot is a prospective cohort study of Indian women followed through conception, pregnancy, and delivery, and the physical and mental health and development of their children. Since 2009, 1227 women aged between 15 and 35 years were recruited before conception or within 14 weeks of gestation. Women were followed through pregnancy, delivery, and postpartum. Follow-up of children is on-going. Baseline data were collected from husbands of 642 women. Anthropometric measurements, biological samples and detailed questionnaire data were collected during registration, the first and third trimesters, delivery and at 1 month postpartum. Anthropometric measurements and health questionnaire data are obtained for each child, including developmental assessment at periodic intervals.

Status of Work: Till 31st March 2020, 1227 women have been recruited from 40 villages in Medchal Mandal; 924 deliveries were done at MediCiti Hospital (MIMS) while 351 deliveries were done outside MIMS. 1139 PNC- 1 month follow up are completed. Project specific questionnaires completed by age of the child include 06 months- 990, 12 months-964, 18 months-1020, 24 months-999, 36 months-989, 48 months-939, 60 months-933. Children screened for mental health problems include 1029 in the age group for 3-4 years; 817 in age group 6-7 years. Couples follow up visits for 5-6 years include 977 women and 883 men. The project also completed 96-98 months follow up for 360 children, 108-110 months follow-up visit for 360 children; WISC-IV scale (8-11years) for 198 children and SMR scale for 198 children.

2. Mycoplasma genitalium, differentiated Ureaplasma species, and pregnancy outcomes

Investigators

- ▶ Dr. Kalpana Betha, Professor and Head, Department of Obstetrics and Gynecology, MIMS
- ▶ Dr. Catherine L. Haggerty, Associate Professor, Department of Epidemiology, GSPH, University of Pittsburgh, PA, USA

Aims: To identify the burden of poor pregnancy outcomes due to reproductive tract infections in India.

Objectives: Determine the role of pre-pregnancy and prenatal vaginal infections with mollicutes including fastidious *Mycoplasma genitalium* and the newly differentiated *Ureaplasma* spp. termed *U. urealyticum* (UU) and *U. parvum* (UP) in Pre-Term Birth (PTB) and Spontaneous abortion (SAB). It also examines chorioamnionitis as an associated factor between *Mycoplasma genitalium* or *Ureaplasma* infection and spontaneous preterm birth.

Methods: The project is studying 188 women who delivered preterm, 218 women who experienced spontaneous abortion and 436 control women who delivered at term in the LIFE Study.

Status of the project: DNA was isolated from 2000 and odd vaginal scrapings collected from the women at registration, 1st Trimester, 3rd Trimester, Delivery and 30 days after delivery by QIAamp cadof Pathogen mini kit (QIAGEN), following manufacturers protocol. Probes and Primers were designed by Dr. Jorgen Skov Jensen (Statens Serum Institute, Denmark) for the following organisms: *Mycoplasma genitalium* (MG): FAM (organism) and HEX (Internal control), *Chlamydia trachomatis* (Ctr): FAM (organism) and Cy5 (Internal Control), *Mycoplasma hominis* (Mh): FAM (organism) and HEX (Internal control), *Trichomonas vaginalis* (Tv): FAM (organism) and HEX (Internal control), *Neisseria gonorrhoeae* (Ng): FAM (organism) and HEX (Internal control), *Ureaplasma urealyticum* (UU), *Ureaplasma parvum* (UP) All the probes were standardized under specific cycling conditions; reamplified for Mh, Mg, Ng and Tv; As next steps approximately 600 and odd DNA samples should be amplified with the Mh, Mg, Ng and Tv probes provided. 2000 samples should be amplified with remaining Three probes.

3. The role of pre pregnancy and prenatal danger associated molecular patterns in pregnancy complications (DAMP) – LIFE Study Samples

Investigators

- ▶ Dr. Kalpana Betha, Professor and Head, Department of Obstetrics and Gynaecology, MIMS
- ▶ Dr. Brandie N. Taylor, Associate Professor, School of Public Health, The Texas A&M University System, Texas, USA
- ▶ Dr. Catherine L. Haggerty, Associate Professor, Department of Epidemiology, GSPH, University of Pittsburgh, PA, USA

Aims:

1. Determine if circulating pre-pregnancy and first trimester biomarkers of placental dysfunction (EGFL7, PIGF, sFLT-1, PP-13) are associated with SAB
2. Determine if circulating pre-pregnancy and early pregnancy DAMPs (HGBM-1, HSP70) and innate immune signaling biomarkers (Pentraxin-3) are associated with SAB
3. Determine if pre-pregnancy and early pregnancy circulating markers of oxidative stress (MDA, GDH) are associated with SAB

Objectives: Examine the relationship between early pregnancy serum markers of cellular damage, innate immune signaling, angiogenesis and preeclampsia subtypes.

Methods: The project is studying 50 cases of women who had spontaneous miscarriage and 100 control women who delivered at term. First pregnancies with singleton pregnancies that have stored plasma samples available from preconception and first trimester in the LIFE study were taken.

Status of the Project: Eleven markers from different groups of immune response were analyzed with 320 samples from women who are controls, registered preconception and at 1st trimester. Data entry is completed. Statistical analysis to be done.

4. Technology Enabled health workers to deliver Telemedicine to Rural Homes at Affordable costs (TETRA)

Investigators

- ▶ Dr. D. Shailendra, Professor & HOD, Department of Pharmacology, Medici Institute of Medical Sciences
- ▶ Dr. Guru Rajesh Jammy, Director Research, SHARE INDIA

Aims: To demonstrate feasibility, effectiveness and sustainability of a low cost telemedicine strategy for detection, treatment and monitoring of blood pressure and blood sugar in remote and underserved locations

Methods: 'TETRA' uses a novel strategy anchored on non-physician health workers (NPHWs) networked in real time with doctors via telemedicine to proactively detect, treat and follow-up individuals with hypertension and diabetes at the convenience of their homes, across six villages in

Telangana. The NPHWs equipped with a tablet computer with embedded decision prompt systems (mHealth tool) linked to point-of-care devices for blood pressure and blood sugar measurement and guided remotely by a physician via Skype, screen individuals for hypertension and diabetes, facilitate a telemedicine consult, print a physician ordered e-prescription and distribute medication at the doorsteps of beneficiaries. Further, the NPHWs follow-up individuals with hypertension and diabetes once in three months and provide a continuum of care.

Status of the project: Currently, 1600 individuals with hypertension and over 600 individuals with diabetes are being followed up once in a quarter; of them, more than three-fourths with hypertension and about one fourths with diabetes have their blood pressure and blood sugar under control, respectively.

Next steps/way forward: An expanded version of TETRA, embracing a life course approach to screen, treat and follow-up all members of a household for widely prevalent diseases is poised for launch later this year. The overarching goal of the expanded version of TETRA is to develop a model for affordable community level healthcare, and lay the foundation for personalised medicine by generating FHIR compatible electronic health record of each individual at the community level.

5. HEaLthy Pregnancy (HELP) Study

Investigators

- ▶ Dr. Sapna Vyakaranam, Professor and Head, Department of Biochemistry, MIMS
- ▶ Dr. Kalpana Betha, Professor and Head, Department of Obstetrics & Gynecology, MIMS
- ▶ Dr. Aparna Varma, Professor and Head, Department of Biochemistry, AIIMS, Bibinagar
- ▶ Dr. Rashmi Pant, Chief Bio-statistician and M&E Specialist, SHARE INDIA
- ▶ Dr. Padma Yalmati, Consultant Biochemist, CARE Hospitals

Introduction: Hypertensive disorders of the pregnancy cover a spectrum of conditions including preeclampsia, eclampsia, chronic hypertension and preeclampsia superimposed on chronic hypertension. Preeclampsia is a major cause of maternal and perinatal mortality (number of still births and deaths of newborns in first week of life). Hypertensive disorders of the pregnancy occur in about 10% of all pregnant women around the world. Preeclampsia affects 3–5% of pregnancies. SHARE INDIA earlier conducted and published studies on hypertensive disorders of pregnancy.

Aim: To identify whether the early rise in blood pressure or serum creatinine or serum uric acid or serum cystatin C or urine protein creatinine ratio compared to the 1st trimester (baseline) value predicts the later onset of hypertensive disorders. It also aims to study the association between these markers and maternal and fetal out-comes.

Methods: HEaLthy Pregnancy (HELP) Study is a cohort study of pregnant women. The study initially enrolled 1000 pregnant women and followed them throughout the pregnancy till delivery, while these women visits the department of Obstetrics and Gynaecology at MIMS.

Objectives: Measure blood pressure, serum uric acid, serum creatinine and serum cystatin C (stored at -80 o C) and urine protein creatinine ratio every month during the course of pregnancy and examine the tracking of these markers to identify which marker, individually or in combination helps in the prediction of hypertensive disorders at the earliest.

Current status of the project: Till March 2020, 1274 women were enrolled in the studies.

Details	Nos
Deliveries at MIMS	926
Outside deliveries	218
Abortion at MIMS	17
Abortion outside	14
Live birth at MIMS	885
Live birth outside	190
Still birth at MIMS	4
Still birth outside	0
IUD at MIMS	10
IUD outside MIMS	12

Gestational Hypertension	63
Pre-eclampsia without severe features	34
Pre-eclampsia with severe features	9
Eclampsia	1
Hypothyroidism	137
Hyperthyroidism	10
Subclinical hypothyroidism	61

6. Develop and test 3D printing technology to produce innovative limbs at affordable cost for the disabled in India

Investigators

- ▶ Dr. Srinivasa Prakash Regalla, Professor and Head, Department of Mechanical Engineering, BITS Pilani, Hyderabad
- ▶ Dr. Prakash N. Shrivastava, Professor Emeritus, University of Southern California, USA; Member, SHARE INDIA
- ▶ Dr. D. Sudheer Reddy, Professor, Orthopedics, MIMS
- ▶ Dr. Kaushik Kalyan, Associate Professor, Orthopedics, MIMS
- ▶ P. Nikethan Reddy, M. Tech, Research fellow
- ▶ K. Uday Kiran, M. Tech, Research fellow

Introduction:

SHARE INDIA/MIMS and BITS Pilani (HYD) have collaborated in the last 4 years to develop individually tailored, light weight and comfortable sockets for below knee prosthesis. Our product called “Sukh·t” has been used by over 20 patients for over 2 years. We are now in the process of using patient feedback to improve our designs. These improvements include:

1. Increase of strength to make it longer lasting;
2. Increase of comfort level by redesigning the liner and
3. Decrease of the cost of production by reusing waste materials, computer automation and reduced labour.

Aims:

1. Increase the strength of the prosthesis and make it more effective and longer lasting.
2. Improve our digital Imaging process to remotely collect patient’s anatomical data.
3. Provide the prosthesis for as many patients as possible and make it attractive for both prosthetists and patients in the near future.
4. To provide better comfort, and maximum security for all patients at low cost.

Current status of the project: The team has successfully doubled the strength of the prosthesis by using strategically placed reinforcement ribs around the area where higher

stresses and loads are acting. Further, 5 new patients were given the new model with the latest changes and patient feedback is being obtained to continue further improvements.

7. IndEpi: A platform for systematic integration of Indian Epidemiology datasets to enable health analytics and disease modelling

Investigators

- ▶ Dr. Rashmi Pant, Chief Bio-statistician and M&E Specialist, SHARE INDIA
- ▶ Dr. Guru Rajesh Jammy, Director Research, SHARE INDIA

Funding Source: Department of Science and Technology, Government of India

Aim: To create a national resource that integrates epidemiological evidence from existing sources on the health and well-being of the Indian population and make it available with tools of modelling and analysis to aid evidence based policy making.

Methods: This project will conduct secondary data analysis of the REACH, LIFE, MILES and HELP databases. The data science methods used will include: Growth curve modelling, Social Network analysis and machine learning

Status of the project: Year 1 activities completed and dashboard presented at DST partners meet at Pune on February 7, 2020. As next steps we design an app to display results from machine learning methods.

8. Lab on Wheels: an innovative point-of-care test to diagnose Chlamydiales in an OneHealth setting InPoChlam

Investigators

- ▶ SHARE INDIA: Dr. Guru Rajesh Jammy, Dr. Vijay V. Yeldandi, Dr. Rashmi Pant
- ▶ Sam Higginbottom, University of Agriculture Technology and Sciences: [SHUATS], Allahabad, Uttar Pradesh: Dr. Jonathan A. Lai, – Dr. Rajiv Kant, Dr. Neeraj, Dr. Sarvjeet Herbert, Dr. Bipasha David
- ▶ NTR College of Veterinary Sciences, Vijayawada, Andhra Pradesh: Dr. T. Srinivasa Rao, Dr. D. Narendra Nath, Dr. Ch. Bindu Kiranmayi
- ▶ The Netherlands Microbe: Prof. Dr. Servaas MoV.re, Anne Ammerdorffer, Sander Ouburg, Pierre Thomas; BiosparQ: Dr. Gerold de Valk Belgium; UGent: Dr. Daisy Vanrompay, Dr. Ir. Sven Arnouts

Objectives: The main objective is the collection of a clinical cohort of human patient samples, chicken broiler samples and poultry worker samples in India. Samples will be used for identification of Chlamydiales in a variety of biological and environmental samples in order to fully validate the Lab on Wheels and show its market potential in India, and possible other less developed countries.

Methods: Samples will be collected according to previously established strategies for epidemiological studies on Chlamydiales in both humans, chickens and the environment. If we know that women infected with *C. trachomatis* and additional 'veterinary' Chlamydiales have a higher risk on reproductive health failures than women with *C. trachomatis* only, treatment of these women can be adjusted accordingly. As next steps work will begin on designing measurement instruments for the surveys and data collection.

9. Harnessing a population-based cohort for an epidemiological study on Dengue and Chikungunya and drive capacities to conduct clinical trials

Investigators

Dr. Guru Rajesh Jammy, Director Research, SHARE INDIA

Dr Shikha Dhawan, Director Programs, SHARE INDIA

Dr D. Shailendra, Professor and HOD, Dept. of Pharmacology, MIMS

Objectives:

1. Preparation towards initiation of longitudinal incidence study
2. To operationalize longitudinal incidence study at the site
3. To establish GCP compliant field site for conduct of vaccine trials

Methods: SHARE INDIA will implement the common protocol for study and initiation of sample collection for studying seroprevalence of Dengue and Chikungunya. The participants will be followed for 24 months for acute febrile episodes and tested for incident dengue and chikungunya cases. A total of 1500 participants aged 2–50 years in the Medchal area will be recruited for the study. In the year 3 of the study, SHARE INDIA will work towards developing a clinical trial site and by the end of third year should be ready for clinical trial for any vaccine candidates for the diseases.

Status of the project:

- ▶ Clinical Development Services Agency (CDSA) visit was conducted on 19th November 2019 wherein facilities, SOPs and other related documents and processes were reviewed
- ▶ Pre-sanction technical and financial due delegation was conducted on 16th January 2020
- ▶ The study has been launched on February 01, 2020.

10. SERA (Sexual and Reproductive Health Assessment) A study on sexually transmitted infections (STI) among general population and key Populations group in Hyderabad, India.

Investigators

- ▶ Dr. Ramesh Reddy Allam, Deputy Project Director, SHARE INDIA
- ▶ Prof. Servaas Morre, Maastricht University, The Netherland
- ▶ Dr. Kuldeep Singh Sachdeva, DDG, Basic Services Division, NACO
- ▶ Dr. Asha Hegde, National consultant PPTCT and STI, NACO
- ▶ Dr. Vijay V Yeldandi, Clinical Professor of Medicine and Surgery, University of Illinois at Chicago, USA.
- ▶ Dr. M. Dinaker, GYD Clinics and Diagnostics, Member, SHARE INDIA
- ▶ Dr. Ganesh Oruganti, Executive Director, SHARE INDIA
- ▶ Dr. Kalpana Betha, Prof and Head, Department of OBGY, MIMS.
- ▶ Dr. Rashmi Pant, Chief Bio–statistician and M&E Specialist, SHARE INDIA
- ▶ Dr. Pierre Paul Michel Thomas, Institute of Public Health Genomics, Maastricht University, The Netherlands

Aims: To determine the utility and feasibility of NAAT-based screening for sexually transmitted infections in India.

Objectives:

1. To estimate the prevalence of common STIs in the general and key population of Hyderabad using NAAT (Nucleic Acid Amplification testing)
2. To estimate the IgG sero-prevalence of *C. trachomatis* in the general and key population in Hyderabad
3. To determine factors associated with the prevalence of common STIs

Key Activities: The project staff completed the data collection from MSM (150) group and from Pregnant women 100 Asymptomatic & 50 Symptomatic. PCR amplification was carried out using samples from MSM (143), Asymptomatic Pregnant woman (102), Symptomatic Pregnant woman (20), Total positive: 17; Kit Used: Presto plus Combined real time CT/NG/TV assay (Gof-n Molecular Technologies); Results obtained include:

Name of the Target	Positive
Chlamydia trachomatis (CT)	9 (8 MSM sample, 1 asymptomatic pregnant woman)
Trichomonas vaginalis (TV)	8 (7 asymptomatic pregnant women, 1 symptomatic pregnant woman)
Neisseria gonorrhoea (NG)	0

IgG ELISA done for Chlamydia trachomatis gave the following results:

Study population	Sample tested	Positive
MSM	143	39
Asymptomatic pregnant women	26	0
Symptomatic pregnant women	5	0

Technical Assistance to Government of India – “CDC funded Projects”

SHARE INDIA has gained substantial experience in providing TA to promote health systems strengthening by establishing a model of Private Public Partnerships for HIV prevention and treatment, Strategic Information and human capacity development through capacity building, supportive supervision and mentoring, and provided training on operations research. Currently, CDC cooperative agreements such as National Initiative to Strengthen and Coordinate HIV/TB Response (NISCHIT), Laboratory Quality Systems in HIV (LaQSH) and Strengthening TB Action and Response (STAR) are being handled by SHARE INDIA .

01. National Initiative to Strengthen and Coordinate HIV/TB Response in India – NISCHIT

Investigators

- ▶ Dr. Vijay V. Yeldandi, Clinical Professor of Medicine and Surgery, University of Illinois at Chicago, USA; & Head, Infectious Diseases and Public Health–SHARE INDIA
- ▶ Dr. Parthasarathy, Associate Project Director, SHARE INDIA

Funding Source: Centers for Disease Control and Prevention (CDC), Atlanta.

Introduction: NISCHIT aims to build institutional capacity of health care system in India for improving the quality of ART services and HIV–TB care and treatment services for people living with HIV (PLHIV). This project supports the National AIDS Control Program (NACP) implemented by National AIDS Control Organization (NACO) of Government of India. The Technical Assistance (TA) is focused to support NACO, State AIDS Control Societies (SACS), Antiretroviral Treatment (ART) centres, and other HIV Testing and Counseling (HTC) sites, and District level units of HIV/AIDS.

Key Activities: In state of Andhra Pradesh, to ensure access to quality ART treatment, along with package of services for enhanced ART coverage and improved retention and viral suppression, several differentiated care models like Multi–Month Scripting (MMS), Multi Month dispensation at peripheral health centers (LAC /LAC plus centers) are scaled up. In addition to the differential care models being implemented in the state, mainstreaming of HIV/AIDS services in tribal hospitals and prisons, ART dispensation at testing sites project has been successfully initiated. ART dispensation through the community based Organisation (CBO)–Nari Saksham Rajahmundry, East Godavari established a link ART center that caters to the female sex workers (FSW). To ensure access for ART service delivery in the hard to reach

areas, with technical assistance of SHARE INDIA –APSACS has supported Integrated Tribal Development Agency (ITDA), East Godavari by establishing link ART centres in two hospitals at Community Health Center, Chitoor and Area Hospital, Kunavaram for the care continuum of tribal PLHIV. To initiate ART dispensation services to prison inmates, APSACS has established Link ART centers at four central prisons i.e. Rajahmundry, Nellore, Kadapa and Vishakhapatnam (with ~4400 inmates) between July – August 2019 with technical assistance from NISCHIT project. Technology enabled Adherence Monitoring tool (TeAM), a mobile app supporting monitoring adherence to ART treatment among PLHIV was piloted. Sustained efforts of the project team and support from SACS and NTEP resulted in improved IPT coverage in the ART centers prioritized for IPT saturation in Andhra Pradesh and Maharashtra. Two sessions are conducted monthly on HIV–TB management for the ART center staff for the states of Andhra Pradesh, Tamil Nadu, Delhi and Uttar Pradesh through National Initiative to Strengthen & Collaboration between HIV–TB through e Learning (e-NISCHIT).

02. Strengthening TB Action and Response – STAR

Investigators

- ▶ Dr. Vijay V. Yeldandi, Clinical Professor of Medicine and Surgery, University of Illinois at Chicago, USA & Head, Infectious Diseases and Public Health–SHARE INDIA
- ▶ Dr. Satish Kaipilyawar, Associate Project Director, SHARE INDIA

Funding Source: Centers for Disease Control and Prevention (CDC), Atlanta.

Key activities: The AIC unit conducted baseline assessments and provided recommendations to 143 health institutes in 10 wards of Mumbai in the last 3 years. The institutes showed an overall improved compliance from 46% to 61% from baseline to fourth follow up. The AIC support was also extended to Chennai. For End TB Dharavi Project, the team performed transect walk through the Dharavi area to understand the boundaries of the area, the type of houses, workplaces and community and developed an area map. As part of HAaLT TB in Nagpur (Household contacts active and latent TB intervention), the project prepared ASHA Margadarshika to guide ASHA workers for implementation of project activities. In addition, informed consent form, Information Education and Communication materials, project area map, data flow algorithm and pre and post-test questionnaire for all cadres of NTEP staff training is under preparation. The team conducted a webinar session on the e-NISCHIT platform across India on Airborne Infection Control in ART settings at the HIV–TB ECHO clinic for the ARTCs of Andhra Pradesh, Tamil Nadu, Delhi and Uttar Pradesh on 4th April and 16th May 2019. “Sensitization for all MCGM engineers and architects of the Health Infrastructure Cell (HIC)” were conducted by SHARE INDIA, MCGM–AIC unit. The project under Engaging local experts in validating and analysing TB–data to End TB (ELEVATE)

provided training on data analysis and to capacitate the local NTEP staff to analyse and utilize TB programmatic data for program implementation and management.

03. Laboratory Quality Systems in HIV – LaQSH

Investigators

- ▶ Dr. Vijay V. Yeldandi, Clinical Professor of Medicine and Surgery, University of Illinois at Chicago, USA & Head, Infectious Diseases and Public Health–SHARE INDIA Dr. Anu George, Associate Project Director, SHARE INDIA

Funding Source: Centers for Disease Control and Prevention (CDC), Atlanta; 2015–2020

Introduction: SHARE INDIA is providing Technical Assistance (TA) for implementing the Quality Management Systems (QMS) in India’s National AIDS Control Program (NACP) laboratories, strengthening its laboratory testing network for HIV and related diseases under the President’s Emergency Plan for AIDS Relief (PEPFAR). To have an accelerated and impact driven HIV response to reverse the epidemic, the project is focused in the three high prevalent clusters (Andhra Pradesh, Maharashtra and North Eastern states in India) and the efforts focus on achieving the third 90 of UNAIDS fast track goals.

Key Activities: The project provided TA and operationalized VL laboratories across the country, from 10 to 41. The “Training on Laboratory–Clinical Interface for HIV–1 Viral Load Testing” were organized in New Delhi, Mumbai and Hyderabad in May & September 2019 which oriented and equipped the 240 laboratory technologists and clinical staff to support increased VL testing coverage and result utilisation in the public sector VL laboratories. With support from the Apex VL laboratory at NARI Pune, PT panels were dispatched to the 41 VL Labs. The e–Learning sessions were organized by the project from April to September, 2019 to train the HIV–1 VL laboratories on molecular biology of HIV VL testing. Till March 2020, 44767 / 72183 (62%) VL samples have been tested with 34888 / 44767 (78%) Viral Suppression. KEM, Mumbai VL laboratory was selected as the Pilot site for implementation of Integrated Management Systems (IMS). Fast–tracking of Key Population (KP) in 3 Cluster states of North East continued to increase VL coverage through PPP model. NACO approved the Routine Viral Load testing in Mizoram through PPP model and through project efforts, the annual VL coverage increased from 14% in September to 55% in March 2020. Increasing frequency of VL sample collection under PPP model & innovative methods to increase VL coverage through camps in Noklak, Nagaland and LAC plus were also prominent decisions made by NACO. The VL laboratory at RIMS, Manipur applied for NABL accreditation in September 2019 and approved for accreditation in February 2020. The project provided TA to NACO and developed various formats and tools to mentor, review VL test coverage and utilisation on a real time basis. The project trained the outreach team on results utilization to ensure VL suppression. Under NACOPRAYOGSHALA, online QMS Data Management tool

was developed by the project in collaboration with ICMR-NARI and NACO. The Nacoprayogshala tool was inaugurated by Dr Samiran Panda, Director ICMR-NARI, Pune and Dr. Sunil Gupta, ADG Laboratory Services, NACO on 6th February 2020. This supports the "External Quality Assessment Scheme (EQAS)" for HIV serology that includes Pro-ciency testing (PT), Re-checking and monitoring. The projects also propelled National scale-up and transition of continuous quality improvement (CQI) model at HIV Counselling and Testing Services (HCTS) laboratories. The project has also designed a road map for the National level plan for CQI implementation across 5000 HCTS in the country. The project provided TA to prepare the user-specific requirements for integrated information management for Laboratory services which were developed for HCTS, VL and CD4 testing.