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Chapter-1

INTRODUCTION

Lords Education & Health Society (LEHS) through its flagship initiative Wadhwani Initiative for Sustainable Healthcare (WISH) has rolled out State Consortium to Accelerate Leverage and Economize (SCALE) platform to demonstrate and scale up high impact innovations to transform primary healthcare delivery in the state of Rajasthan, Madhya Pradesh, Delhi/NCR, Assam and Uttar Pradesh. The focus is high priority districts which have low performing health indicators. SCALE acts as the facilitating platform between the government, private sector organizations, innovators and social enterprises and healthcare ecosystem partners in bringing together financial and technical resources in catalyzing integration of promising health innovations into the state public health system. To achieve its mission and vision the LEHS build partnership with State Governments, funding agencies like USAID, BIRAC, Aditya Birla Foundation Limited and many innovators in field of primary healthcare. These partnerships have enabled LEHS to strengthen, expand and optimize existing interventions of the state governments by addressing its priority healthcare needs using evidence based, equitable, innovation led, low cost healthcare delivery strategies.

Mission

To improve the health of poor families across the world by building a demand driven ecosystem that can deliver scaled up approaches to healthcare.

Vision

By 2020 we want to facilitate a demand-led ecosystem for healthcare innovations, reach 10 million underserved people with quality healthcare services and scale up 20 high impact healthcare innovations.
Key strategy

LEHS is implementing rural and urban healthcare models through public-private-partnerships with state governments, international agencies, and private entities since 2015-16, wherein successfully deploying promising healthcare innovations in the public health system. LEHS has been able to curate and pilot improved primary healthcare models in low-resource settings achieving notable success. LEHS lays special emphasis on Reproductive, Maternal, Child, Newborn and Adolescent Health (RMNCH+A), Non-Communicable Diseases, Communicable Diseases and other state-specified priority health indicators.

LEHS current program landscape includes:

a. Rural Model in partnerships with Government in the State of Rajasthan, running primary healthcare facilities at 194 locations across 12 districts, of varying geographic and socio-cultural background.

b. Urban Model in partnership with Government of Delhi across 106 clinics in 11 districts. The model is very much strengthening the health of urban poor, as envisaged under National Urban Health Mission.

c. Private sector/Corporate Social Responsibility (CSR) partnerships: a) demonstrating a user-paid (urban) primary healthcare model in Gurgaon, Haryana; and, b) strengthening primary health centres in the tea garden estates in Upper Assam (rural).

d. Advanced stages of discussion with the Government of Madhya Pradesh and Government of Rajasthan for working in select urban cities.

Key programs and Interventions

The LEHS program compass extends across partnerships with public and private health delivering systems. LEHS is working under Memorandums of Understanding (MoU) with the Government of Rajasthan (GoR) and the Government of National Capital Territory of Delhi (GNCTD). LEHS is also in discussion with the Government of Madhya Pradesh to introduce its program in the State. In the private sector space, LEHS is leveraging CSR funds to demonstrate a network of primary health clinics in partnership with CSR partners in Haryana, and under a MoU with the APPL Foundation is also working to strengthen healthcare delivery at primary health centers of tea garden estates in Upper Assam.
DELHI

As the Knowledge & Management Partner to the Directorate General of Health Service, Government of National Capital Territory of Delhi (DGHS|GNCTD) for the Reference Implementation of the AAMC100, a network of neighborhood clinics in slums and resettlement colonies of Delhi has been established. LEHS has been supporting the Government of NCT of Delhi for functioning of Aam Aadmi Mohalla Clinics, a uniquely designed urban clinic situated within the community. 101 such clinics have been supported by LEHS as Knowledge Management Partner to the Government which ensures quality primary healthcare facilities along with diagnostics services within easy reach of the population. It is one of its kind in the country which has been able to yield positive outcomes by assuring the growing need of the urban population especially urban poor and in a short span of time from its inception, it has provided primary healthcare services to more than six million patients and the model has been praised at national and international forums especially prioritizing the primary healthcare needs of the urban population.

RAJASTHAN

The Rajasthan program is running in partnership with Government of Rajasthan since July 2015. In 2017-18, there were total 31 Primary Health Centres (PHCs) in Rajasthan which are being managed by LEHS in the urban (#7) and rural (#24) areas under Public Private Partnership (PPP) in 14 districts of Rajasthan. In addition, the State LEHS team also extends need based technical support to the State Health Directorate/ National Health Mission, Rajasthan. The 24 Rural Primary Health Centres (RPHCs) in Rajasthan which are being managed by LEHS under Public Private Partnership (PPP) with Government of Rajasthan and Aditya Birla Finance Limited (ABFL).

ASSAM

LEHS signed a MoU with the Amalgamated Plantations Pvt. Ltd (APPL) Foundation to strengthen delivery of healthcare at primary health centers (PHCs) situated in the tea garden estates of Assam, improve maternal and child health outcomes in the area and build PPPs with the State Government by leveraging the available infrastructure of the Foundation. APPL Foundation has a network of 25 to 40-bedded PHCs and a 75-bedded Referral Hospital providing secondary care at Chubwa. Through the MoU with APPL Foundation, LEHS has aimed to convert 5-6 garden primary health centers into model clinics through introduction of innovations and changes in processes. The partnership has received the USAID Grant for introduction and demonstration of innovations at the PHCs.
**Haryana**

‘Pehal Community Development project’ is a community development initiative of United Technologies Corporation (UTC) in partnership with The United Way Delhi. The project targets an estimated population of 11,000, mostly from West Bengal, Bihar, Uttar Pradesh, Bangladesh and Nepal spread across 20 resettlement/urban slum clusters in Chakarpur village of Gurugram. The project is aimed at holistic development of the targeted community in terms of education, health and livelihood through an integrated structure of service delivery, community sensitization and mobilization. The project is being implemented in a phased manner. In the first Phase (2013-2015), the project was managed by Humana People To People India (HPPI). In the second phase (2016-2018), UWD partnered with three NGOs; HPPI, LEHS and The Skills Academy to carry out various interventions to achieve the larger goal of integrated community development. HPPI continues to work on education, girl child empowerment, etc; LEHS provides health services through its clinic and The Skills Academy is helping the youth in the community toward a better future by improving their skills and providing them employment opportunities.

**Strengthening HR & Organizational Culture**

- **Recruitment:** In order to strengthen the functioning of Head Office and State office the program team was expanded along with recruitment of crucial vacant positions in year 2017-18. There were recruitment of Head of Finance and Administration, Development Specialist, IT Consultant, Program Specialist, HTA Specialist, Manager HR and Admin at at Delhi office, whereas the RME and Finance team were at Rajasthan were expanded with the recruitment of MIS Officer and Accounts staff. A short-term Consultant was engaged to support draft various policies to be incorporated in the Operational Manual at Delhi Office.

- **Policy on Sexual Harassment:** To create more standard and policy driven system of the organisation, the HR team worked on a draft Sexual Harassment policy. The policy will help to create a safe and secured environment for the staff.

- **Staff retreat:** A three days staff retreat was organized at Nainital, where Mr. Santhosh Babu from OD Alternatives conducted a session on Organization Development, Coordination, Leadership, Organizational Culture, Internal and External Alignment. To develop a future strategy for LEHS, Ms. Pavithra and Ms. Manasvini from Decimal Advisors walked the staff through a process to arrive at some strategic decisions.
Chapter-2

STATE WISE INTERVENTION 2017-18

1. DELHI AAMC

The Mohalla Clinics have got completely engrained in the community ecosystem. Both supply side (providers) and demand side (patients) have realised the value of these clinics. The clinics are now well accepted in the community as the patients have adjusted to the present settings including shortage of waiting space, lack of basic amenities etc., and less/no tussles among the patients or between the Doctor and patients is a testimony to this. The key role of LEHS in management of AAMC is divided in the sphere of IT, implementation support, technology assessment and evidence generation.

**IT Support**

- Provision of IT infrastructure, Internet connectivity
- Clinic Application Management, Data hosting and Analytics

**Implementation Support**

- On ground management and monitoring support through Clinic Monitors
- Training, Trouble Shooting and Technical support to the Doctors
- Verification of the OPD numbers to streamline the invoicing system

**Health Technology Assessment**

- Introduction and Demonstration of IT enabled, low cost, POC devices and innovations, like ToucHb, iBreast Exam, Picolabs, MVM
Evidence based Planning, Learning, Monitoring and Evaluation

• Dashboards
• Baseline and Endline Study

Consultations of AAMC clinics

A total number of 3492612 patients visited in 2017-18. Out of it 2.2% (257483) were prescribed the tests. Data on age and sex distribution suggests the population most benefitted is women in the age bracket of 19 to 49 (65%) and 50 to 60 years (63%). Nearly 7% of people coming to the clinics are recommended a test (meets the general trend). The most common tests written are CBC, Thyroid profile, TSH, Liver function test, Sugar and Kidney function test establishing AAMCs as truly the first tier of healthcare. Similarly, identification of Cough, Viral Fever, Body ache, AURI, General weakness as most common diagnosis strengthens the same. Diabetes and Hypertensive diseases fall in the top 20 common diagnosis. Service uptake was higher in women as the ratio of women and men patients was 56:44. The clinics recorded a follow up rate of 30% and 10% of the total patients were referred for diagnostic services.

Table-1:

<table>
<thead>
<tr>
<th>Indicators</th>
<th>FY ’17- ’18</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total patients visited AAMC</td>
<td>3,492,612</td>
</tr>
<tr>
<td>Total Tests Prescribed</td>
<td>553,824</td>
</tr>
<tr>
<td>Total Patients Prescribed Test</td>
<td>257,483</td>
</tr>
<tr>
<td>Average Test / Patient</td>
<td>2.2</td>
</tr>
<tr>
<td>% of AAMC patients given tests</td>
<td>7.37%</td>
</tr>
</tbody>
</table>

The key challenges during faced by AAMC during the year were like shortage of space to set up the porta cabins due to which only 60 new AAMCs could be opened in porta cabins during the extension period. The total number of Clinics could not increase beyond 160 because of delays in processes due to various reasons.
Program extension

LEHS in 2017-18, consolidated its role in the scale up phase of the Project. Various options like LEHS setting up a TSU, DSHM giving a number of clinics to LEHS on a turnkey basis, bidding as a part of a consortium, etc. were explored. The discussions were held with the Government of NCT Delhi to extend the existing support to Aam Aadmi Mohalla Clinics (AAMCs) as well as expansion of this support to more clinics in Delhi. As a result of constant advocacy, the Government of NCT of Delhi has shown interest in an extended role of LEHS as knowledge management partner for additional AAMCs to be run through portacabins along with support to efficiently implement patient record keeping and validation using biometric data and eHealth records. The LEHS team submitted proposal for 58 AAMCs on which the government officials suggested modification. The proposal will be discussed in next financial year.

2. RAJASTHAN

The major activities undertaken in the year 2017-18 at Rajasthan were around strengthening of PHC interventions in terms of service delivery, management processes, infrastructure strengthening through direct intervention as per the deliverables agreed with the Government of Rajasthan. Rajasthan program has made various key achievements and initiatives related to assessment, NABH certification, capacity building on service delivery and data quality, MoU on UPHC etc., which are shared as under:

A. MoU for NABH of LEHS managed PHCs: Under the management by LEHS, the operation of rural PHCs has been improved a lot in terms of quality of services, availability of HR, staff retention, regularity of services, supply chain management, infrastructure strengthening, and client satisfaction. In order to get accreditation of good performance and management of PHCs, LEHS has planned to get National Accreditation Board for Hospitals & Healthcare Providers (NABH) accreditation. In this regard, the NABH agreed for conducting the program on implementation of NABH Accreditation Standards for Primary Health Centres (PHCs). Memorandum of Understanding (MoU) was also signed between NABH and LEHS. Five PHCs, namely, Odda, Padampura, Bhadoti, Khandwa Patta and Barod have been identified.

B. NABH Processes: Upon getting trained on the NABH standards, the process to accredit selected five Rural Primary Health Centres (RPHCs) have been started. Quality guideline and Standard Operational Procedures were developed with
the help of PHC staff. The SOPs took care of all the issues which need to be addressed. The developed SOPs were circulated among staff so that each can understand his or her task and how to complete it. Internal assessment of PHCs were done repeatedly by District Coordinator to know the status of preparations. Based upon SOPS, the PHC team has also been trained and motivated to achieve the desired score for getting accreditation. The team also leveraged government funds for improving infrastructural and equipment gaps. It is expected to invite NABH team in June 2018 for first assessment at their levels as part of the NABH accreditation process.

C. Restructuring the allocation of resources: In order to use the resources more strategically, LEHS has taken a strategic decision to reduce the operation in terms of number of PHCs.

In this regard an analysis of PHCs in context to budget, output of services, staff retention, political interferences and HR issues was done. Also, the decision of LEHS to hand-over some non-RFP PHCs was communicated to the PHS and Director, PH at the Secretariat at Jaipur in December.

D. PHC Assessment Tool: A PHC assessment tool was developed to identify gaps and barriers in quality operations of PHCs. Capacity of all the District Coordinators of the PHCs was built over the tool and guidelines to use them effectively. The objective was to bring about systemic changes in the functioning of PHCs to bring quality in services on the basis of assessment. It will further help all PHCs to score more than 95% on the various quality indicators.

E. Planning and Review meeting: A two-day planning & review meeting for MOICs & LHV's was organised in Jaipur on 28th & 29th of April 2017 at Jaipur. The objective of the meeting was to review the performance of PHCs in the year 2016-17, share best practices/key initiatives taken at PHC level, revisit performance indicators of tender PHCs and to develop quarterly action plans. The meeting helped to enhance the roll of MOIC in monitoring, supervision and guidance of PHC staff and that of LHV's in monitoring at their levels (ANMs & ASHAs). In the meeting all MOICs & LHV's of 24 PHCs participated.

F. Revision of Targets: The performance of the LEHS PHCs is assessed against the target achieved by them every on monthly, quarterly and annual basis. These targets are developed and shared by the state. In order to bring more consistency and rationality in the targets, LEHS shared its concern the department in context to identified PHCs at Jhunjhunu, Churu and Kota where the targets were high in proportion to existing population. A request to revise the targets was sent to the Chief Medical & Health Officer and District Collectors of the respective district.
G. Swasthya Chetna Shivir: NCD Screening and Awareness Camp “Swasthya Chetna Shivir” was organized in the rural areas of Sawai Madhopur district with the purpose to improve health seeking behavior amongst the villagers. Screening was performed through POC devices and MPL in remote villages of Rajasthan with the help of POC diagnostics and MPL. 112 people got benefited from the camp.

H. Capacity building

- **Training on NABH:** To accomplish the NABH processes and to fill the gaps as per standard NABH guideline, the PHC staff (MO, LHV, Pharmacist, LT) and district coordinators were given a two days’ training on NABH accreditation standards for primary health centre at Jaipur on 17-18 November 2017.

- **Training on Skill Birth Attendant:** Institutional delivery at the facility level has been significantly improved during LEHS management time period, but not at all the PHCs. Also, quality has been a key focused area in the overall management of PHCs by LEHS. So management decided to have at least one Skilled birth attendant at all the PHCs to improve the quality of intra-natal and neonatal care. Therefore, 21 days Skill Birth Attendant (SBA) training of 32 ANMs of LEHS managed PHCs was organised in batches at Udaipur and Rajsamand. First batch 21 ANMs was imparted training during 9-29 November, 2017 at ANM training center of Udaipur while another batch of 16 ANMs was trained at Rajsamand District hospital by leveraging the support of Department of Medical Health & Family Welfare, Govt. of Rajasthan.

- **Training on data quality:** The data quality is a major area of concern in improving the quality of reporting at PHCs. As there is a constant recruitment of staff against the frequent attrition, the data quality trainings are important to build capacity of the new staff. Moreover, there were changes in reporting formats, so all the staff need to be updated with new formats. Hence, the trainings of all LHVs, ANMs and DEOs was conducted at PHC level on record keeping, reporting and data quality improvement.

- **Training of Lab Technicians:** Three days’ residential capacity building training was organized for lab technicians. A total number of 24 lab technicians took part in the training which was organized in two batches at Santokba Hospital, Jaipur.
Urban PHCs MoU

After having good response in operation of Rural PHCs on PPP mode, the Government of Rajasthan tendered some of the Urban PHCs to NGO partners. After applying as one of the competent bidder LEHS received seven urban primary health centre (UPHC) in four districts of Rajasthan. These seven UPHCs are distributed as two UPHCs each in Jaipur-I & Jaipur II and Beawar city and one UPHC in Tonk city. LEHS started operating in UPHCs from Oct’2017 onwards and all become functional during Oct-Dec’17. There were several processes and challenges in rolling out different activities to make the UPHCs functional, like taking hand over from the local authorities, recruitment of medical, para-medical and support staff in a short span of time, non-availability of office fixtures and equipment at UPHCs, adequate supply of medicines by the district etc.

Technical support activities

1. **Assessment of District Hospitals:** LEHS has been part of the team constituted at State level by Directorate of Medical Health, Government of Rajasthan. Rajasthan government undertake assessment of district hospitals towards their upgradation. State Program and Technical Health, Rajasthan, LEHS, supported facility assessment at Rajsamand, Sikar and Chittorgarh district hospitals along with other team members. In these assessments the focus was to assess infrastructure gap, labour room and SNCU requirements and like.

2. **Support in Kayakalp:** LEHS team supported the Government of Rajasthan to assess District Hospital, Beawer at Ajmer, on the different parameters envisaged under Kayakalp Initiative of the Government of India. This assessment has enabled the hospital to comply with the eligibility criteria and getting rewarded for demonstrating high level of cleanliness, hygiene and infection control facilities.

Performance of PHCs

Progress on different key indicators has been satisfactory against the set target. The achievement of financial year 2017-18 has been found improved on all the parameters except OPD. There has been major improvement in early ANC, followed by full immunization. The ANC registration and delivery at PHC has shown marginal improvement. The OPD has shown decline of around 9% over the last year. As majority of the LEHS PHCs are located in the far-flung areas, the staff attrition
happens mainly due to the reason of their absorption in the government managed system against the vacancies in the public health system from time to time which attributes to the low improvement in performance.

**Table-2: Performance of key indicators in year 2017-18**

<table>
<thead>
<tr>
<th>Key Indicators</th>
<th>Total Target</th>
<th>Total Achievement</th>
<th>2017-18</th>
<th>2016-17</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC Registration</td>
<td>11044</td>
<td>9879</td>
<td>89.3</td>
<td>87.5</td>
</tr>
<tr>
<td>Early ANC</td>
<td>11044</td>
<td>6941</td>
<td>62.8</td>
<td>53.7</td>
</tr>
<tr>
<td>3 ANC</td>
<td>11044</td>
<td>7149</td>
<td>64.7</td>
<td>61.5</td>
</tr>
<tr>
<td>Institutional delivery</td>
<td>10166</td>
<td>3549</td>
<td>33.5</td>
<td>31.1</td>
</tr>
<tr>
<td>Full immunization</td>
<td>9510</td>
<td>8044</td>
<td>83.8</td>
<td>78.1</td>
</tr>
<tr>
<td>OPD</td>
<td>551882</td>
<td>569528</td>
<td>113.8</td>
<td>103.2</td>
</tr>
</tbody>
</table>

- **Performance of OPD:** In the year 2017-18 the total OPD number of 24 LEHS PHCs is 571099. The average OPD has been improved from 1219 per PHC per month in 2015-16 to 1983 per PHC per month in 2017-18, showing an improvement of 63%.

- **Performance of IPD:** In the year 2017-18 the total IPD number of 24 LEHS PHCs is 21321. The average OPD has been improved from 21 per PHC per month in 2015-16 to 74 per PHC per month in 2017-18, showing an improvement of 247%.

- **Comparison of LEHS PHCs performance over the years of LEHS intervention:** The data analysis shows that in year 2017-18, all the key RMNCH indicators have been improved in terms of the achievement of the target. In comparison to the year 2016-17, the improvement is in the range of 2 percent (in ANC registration) to 9 percent (in Early ANC). Full immunization is improved by 5.4% followed by 4% in Institutional delivery at PHC. When comparison is made in context to year 2015-16, the improvement is in the range of 5 percent (in ANC registration) to 14% in institutional delivery. Early ANC is improved by 10% followed by 8% in 3ANC and 7% in Full immunization. The data analysis shows slow and steady growth in the performance of indicators.
Table-3: Comparison of LEHS PHCs target achievement over the LEHS management years

<table>
<thead>
<tr>
<th>Key Indicators</th>
<th>2015-16</th>
<th>2016-17</th>
<th>2017-18</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC Registration</td>
<td>84.4</td>
<td>87.5</td>
<td>89.3</td>
</tr>
<tr>
<td>Early ANC</td>
<td>52.6</td>
<td>53.7</td>
<td>62.8</td>
</tr>
<tr>
<td>3 ANC</td>
<td>56.7</td>
<td>61.5</td>
<td>64.9</td>
</tr>
<tr>
<td>Institutional delivery at PHC</td>
<td>21.4</td>
<td>31.1</td>
<td>35.1</td>
</tr>
<tr>
<td>Full immunization</td>
<td>76.2</td>
<td>78.1</td>
<td>83.4</td>
</tr>
</tbody>
</table>

Challenges in Rajasthan Program

1. Delay in filling the staff position will affect the overall data quality. Data quality also affected due to gaps in infrastructure (computer(scanner)) and staff vacancy at some PHCs.

2. Selection of ANMs in government vacancy will create the necessity to build capacity of new staff which will affect the data quality.

3. Multiple engagements may lead to delay in taking up the new research initiatives as planned for the quarter.

4. Delay in completion of IMS survey due to delay in tool finalization, IRB and quality of data collection.

5. Delay in initiating the baseline of UPHCs because multiple priorities in hand.

3. ASSAM

1. **Pilot on Nutrition:** A pilot nutritional support program for the pregnant women (pw) was started in collaboration with APPL foundation. This study promotes safe motherhood and will cover 700 Pregnant Women and assess the outcomes of the project. The beneficiaries under this project is divided into control (350pw) and experimental groups (350pw) where all the pregnant women will receive counseling on IFA, diet, rest, danger sign, breastfeeding within an hour and exclusive breastfeeding. In addition, experiment group will receive additional food supplement during the pregnancy and lactation period. Situational analysis, training of the service provider and recruitment of a local coordinator were undertaken to initiate the program smoothly.
The measuring indicators of the pilot to assess the study are:

<table>
<thead>
<tr>
<th>Sl. No</th>
<th>Indicator</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Proportion of women registered for pregnancy out of total estimated pregnant women in the community</td>
</tr>
<tr>
<td>2.</td>
<td>Proportion of pregnant women registered in the first trimester (within 12 week) out of total new ANC registered</td>
</tr>
<tr>
<td>3.</td>
<td>Proportion of pregnant women who Hb Checked, documented and received 100 IFA tablets</td>
</tr>
<tr>
<td>4.</td>
<td>Proportion of pregnant women whose haemoglobin increased by ≥ 2 gms between initial &amp; last antenatal haemoglobin check</td>
</tr>
<tr>
<td>5.</td>
<td>Proportion of new-born breastfed within 1 hr. in the facility</td>
</tr>
<tr>
<td>6.</td>
<td>Proportion of new-born weighing less than 2.5 kg</td>
</tr>
<tr>
<td>7.</td>
<td>Kangaroo Mother Care (KMC)</td>
</tr>
</tbody>
</table>

2. **Technical Assistance:** LEHS supported the State Government, Assam to build up Public Private Partnerships for providing primary healthcare services. The team shared its expertise and experiences of rolling out primary healthcare intervention in Rajasthan under PPP. Support was also extended to finalize physical and financial planning by state government. Discussions held with APPL to undertake pilot project on improving nutrition status amongst pregnant women of selected 7 tea estates. LEHS shared its learning from Rajasthan with Government of Assam. During the reporting period LEHS provided technical support to Govt. of Assam for developing guidelines for public private partnership (PPP) for strengthening primary healthcare services in the state. Technical Expert from LEHS was positioned in the office of Principal Secretary (Health), Government of Assam for developing technical and financial guidelines. This support enables the government to do intra-governmental advocacy for calling private partners through PPP mode for providing quality healthcare services to the BoP population in the state. It is expected that Government of Assam may invite private players in the last quarter of FY 2017-18 or early 2018-19 for providing quality primary healthcare services in different locations of the state.

3. **Partnership was formalized with APPL Foundation, Assam for promoting nutritional support to pregnant women of the tea estates for safe motherhood during the quarter Oct-Dec 2017.**
4. MADHYA PRADESH

1. Discussion on MoU for TSU: LEHS has been in discussion with GoMP regarding (a) development of a technical bid (RFP) document for contracting out urban PHC (UPHCs) in M.P. and (b) a technical support unit (TSU) for specific support on M&E, data analytics, using data for program monitoring and data driven decision making for policy support, PPP and innovations. In this sequence, a high-level meeting of the LEHS delegation was held on 6th December 2017 with the senior officials of Department of Health and Family Welfare, Government of Madhya Pradesh, under the chairmanship of Principal Secretary (H&FW), Government of Madhya Pradesh. The proposal was already submitted by LEHS to the Government of Madhya Pradesh for the establishment of Technical Support Unit (TSU) in the state has been under consideration for quite some time.

2. MoU with GoMP: The National Health Mission, Government of Madhya Pradesh approved the technical partnership between LEHS and Government of Madhya Pradesh for strengthening urban health specifically for establishment and demonstration of model UPHC, quality assurance, formulation of SOPs/treatment protocol for up scaling and performance monitoring. The state is ready to adapt and replicate LEHS model of introduction of health technology/innovation for improving service uptake, quality of services and health outcomes in the rural and urban settings. For serving this purpose, a Technical Support Unit (TSU) will be set up in state capital with requisite infrastructure and technical experts. LEHS will also support in strengthening M&E and data analytics system in order to have robust data driven performance monitoring and decision-making system which ultimately will help in policy and programme management corrections at state, district and sub-district level facilities.

National Health Mission, Government of Madhya Pradesh approved the technical partnership between LEHS and Government of Madhya Pradesh for urban health programme under following broad areas:

- Establishment of model UPHCs in Bhopal city
- Technical consultant for supporting quality assurance processes of UPHCs in different cities
- Standardization of SOP/treatment protocol upon successful operation of model UPHC for upscale in the state
• Strengthening community process for outreach activities including support for updation of ASHA database, performance monitoring through data analysis and monitoring of Mahila Arogya Samitee (MAS)

• Formulation of city profile on urban health for various UPHCs in the state on key indicators envisaged by National Health Mission.

3. Urban Health: In meeting with the PS (Health) on 7th and 8th June 2017 the modalities of urban health program and its rolling out process was outlined. LEHS team made a presentation on designing a service package that should be offered by UPHCs as part of urban health program by modifying the GoI guidelines for urban PHCs as per the state priorities and needs. The key urban health activities include mapping of all UPHCs with slum areas, ward wise with details of households covered to be done as an exercise for Bhopal city. The data will be digitized so that identification of specific area by ANM under the UPHC can be demarcated to know ANM's exact area and workload. All the Civil Dispensaries in urban areas in the state will also be covered including any urban health facility run by Govt. or private medical college/Gas Rahat Hospital, etc. The gap filling in all these UPHCs will be done by NUHM. After mapping of UPHC, the data will be uploaded in the RCH Portal (MIS software from GoI) which has provision of integrating such data. It might require some customization since the data collected by ASHA/ANM will be in digital form using Tablets so that all the household related information of each UPHC catchment area is digitized. If required, software for monitoring and supervision of UPHC may be developed.

4. Formation of Urban Health Coordination Committee (UHCC): State NUHM and District NUHM Body of Divisional Headquarters were given technical support (by LEHS) for the formation of DUHCC in terms of planning & designing, selection of members, defining roles & responsibilities of the members etc. Three DJHCC were also supported to hold first joint working committee meeting where LEHS team took part in Rewa and Bhopal. This committee aims to provide inter & intra-sectoral coordination, facilitate linkages with urban local bodies (ULBs), smart city activities, NULLM to strengthen NUHM with focus on hygiene, sanitation and livelihood options with focus on urban poor, preparation and implementation of urban city health plan, technical insights for baseline/situational analysis and rapid assessments and integration of MAS, SHG and area level federations.

5. Gap analysis of UPHCs: The team undertook gap analysis of UPHCs and other urban public health facilities in Bhopal Jabalpur and Rewa were supported with readiness assessment. These assessments helped the high officials at the level of Principal Secretary (Health) and Mission Director (NHM) in restructuring the action plan.
6. Support in Kayakalp: The TSU team facilitated assessment for Kayakalp Initiative in Bhopal and Jabalpur districts. This will enable the health centres to comply with the eligibility criteria and getting rewarded for demonstrating high level of cleanliness, hygiene and infection control facilities.

5. PEHAL PROJECT

LEHS has been implementing a Pehal Clinic on this model at Chakkarpur Village in Gurugram region of Delhi-NCR. The community comprises of population belonging to the lower socio-economic strata, engaged as household helps, guards, factory workers, rickshaw pullers and daily wage earners. The service mix offered are medical consultation, medicines and lab and diagnostics.

Following are the key activities accomplished under Pehal Project in 2017-18

A. ANC Day on every Wednesday: Fixed ANC days are observed at Pehal clinic on every Wednesday. 58 pregnant women were educated on benefits of routine ante natal check-ups, nutrition, danger signs during Pregnancy. They were encouraged to avail specialist (Obs & Gyne) consultation and ANC package at Pehal clinic.

B. Observation of Menstruation Hygiene Management (MHM) Day: An awareness session with 20 adolescent girls and their mothers was held at Pehal Clinic to observe Menstruation Hygiene Management (MHM) Day on May 29, 2017. Sessions on puberty, process on menstruation and hygiene management were conducted using innovative IEC tools. The activity was conducted to support the state initiative of Beti Bachhao Beti Padao Scheme.

C. Meeting on Family Planning: Six meetings were held with eligible women on Family Planning methods (IUCD, DMPA, Condoms, and Oral Contraceptive Pills) at Community Centre, Chakkarpur. Separate counselling sessions were provided to the interested participants on the basket of choice available at Pehal Clinic. The team identified 4 potential clients for IUCD.

D. Haat Stall: Pehal branded canopy was used at pre decided strategic locations to screen Hypertension and Diabetes. A total of 540 people were screened, out of these 208 were found to be high risk (135 – Hypertensive and 73–High blood sugar). These people were referred to the Pehal clinic for further confirmatory investigation and doctor’s consultation.

E. World Hypertension Day: An event was organized in the community for awareness on Hypertension on May 20, 2017 to observe World Hypertension
Day. 108 people were screened for Hypertension out of which 18 were found to be in high risk category.

F. Awareness Session on Vector Borne Diseases: The Community Health Workers regularly visited slums to educate people on how to reduce the source of mosquito breeding sites in their household and neighborhood. Out of 334 households, 92 sites were found positive for mosquito breeding sites. The residents were asked to clean these sites. They were asked to use kerosene oil at such sites where water gets accumulated. Besides that, school sessions were conducted on preventive measures related to VBD and diarrhea management. 470 students from Sr. Secondary High School, HPPI and Sunhill School, Chakkarpur were educated on prevention from VBD. They were also trained on identification and reduction of breeding sites.

G. Networking and Advocacy: Pehal team engaged proactively with district administration team to support the state initiative to eradicate vector borne diseases in the Chakkarpur area. A meeting was held on April 19, 2017 with Dr. S.S. Saroha, District Malaria Officer, Dr. Ram Prakash Rai, Epidemiologist, Ms. Saroj Bala Deshwal, Biologist, to jointly launch awareness program on World Malaria Day and spread awareness among community members on VBDs. A community event was organised on April 25, 2017 to observe World Malaria Day by Pehal Clinic with support from District Malaria team, HPPI and DLF Foundation. The district health team made presentation on Urban Malaria Scheme and also trained the Pehal and DLF team on daily source reduction during home visits.

H. Capacity Building of Pehal Team: Working with urban community including migrants, poor and backwards has made us understand that merely providing healthcare services or improving the demand for healthcare services is not sufficient. It is important to enhance the quality of interaction between the providers and the clients to achieve the goals of preventive healthcare and outreach activities. Thus, LEHS designed a 3-day training program with the objectives of skill enhancement on Inter Personal Communication (IPC), orientation to the program deliverables for 2017-18 and increasing the knowledge base on topics like family planning, STIs, SRH, etc. Following are the details of the training sessions conducted:
<table>
<thead>
<tr>
<th>Date and Place</th>
<th>Topics</th>
<th>Methodology</th>
<th>Resource</th>
</tr>
</thead>
<tbody>
<tr>
<td>April 07, 2017 Naz Foundation, East of Kailash</td>
<td>Life cycle Approach under RMNCH+A, IPC- (Aisa kyun? And Story Telling - Techniques to engage community in problem solving), Growing up: session on changes in different stages of life</td>
<td>Story telling - Story of Durga, Group work</td>
<td>Irfan and Ruchi</td>
</tr>
<tr>
<td>April 20, 2017 Pehal Clinic, Chakkarpur</td>
<td>Maternal Health and Integrated Childhood diseases, Vector Borne diseases</td>
<td>Group work, Presentation, Role-play</td>
<td>Irfan, Komal and Ruchi</td>
</tr>
<tr>
<td>April 28, 2017 GHS Office</td>
<td>Family Planning, RTIs &amp; STIs</td>
<td>Presentation</td>
<td>Irfan and Ruchi</td>
</tr>
</tbody>
</table>

**Behaviour Change Communication and Outreach Activities**

1. **Health Camps:** Pehal Project organised a Health Camp on 22nd April 2017 at HPPI Office Chakkarpur. The Camp offered General Health Check-up, Gynaecology, Eye test and medicines. 74 participants were screened and provided medical consultation (34 eye check-up, 10 Blood Sugar and 30 for Gyne and general aliments). The camp was organised in partnership with Kamla Charitable Trust, Delhi and HPPI.

2. **Mini Health Camp:** Pehal team organized a mini health camp in Chakkarpur near Radha Krishna Mandir on May 19, 2017. A total of 58 people were screened on the basis of vital sign (BP, height, weight, temperature) followed by a general health check-up.

3. **Skin Health Check-up Camp:** A special skin health camp was organized with support from Kamla Charitable Trust on May 09, 2017 at the Government Sr. Secondary High School, Chakkarpur. 58 students were screened and provided consultation on skin diseases.

4. **School Sessions:** School sessions were conducted on preventive measures related to VBD and diarrhea management, puberty and Menstrual Hygiene Management. 580 students from Sr. Secondary High School, HPPI and Sunhill
School, Chakkarpur were educated on prevention from VBD. They were also trained on identification and reduction of breeding sites.

5. **Population based screening:** Population based screening through visual inspection with acetic acid (VIA) - A special camp on cervical cancer screening through VIA was organized by Pehal team on 16.12.2017. A team of six doctors from All India Institute of Medical Sciences (AIIMS), New Delhi provided screening through VIA. 16 out of total 102 women, screened through VIA were found positive. A second round of screening through pap smear and colposcopy is being planned on 02.01.2018. Another mega screening camp was held on February 10, 2018 for NCD screening (BP, BS, and Cervical Cancer) in collaboration with AIIMS, New Delhi. Out of total 410 screenings, 165 clients were normal and high risks cases for BP and BS were 110 and 85 respectively. Out of 50 women screened for cervical cancer, 5 of them were identified as VIA positive. They will further be examined at AIIMS, New Delhi.

7. **Matritwa Utsav:** Pehal team organized Matritwa Utsav with 45 participants on 27 Dec, 2017 at the Community center at Chakkarpur. The objective was to celebrate healthy motherhood by educating expectant mothers and new mothers on importance of compliances of IFA, diet, rest and regular ANC for a healthy outcome of pregnancy.

8. **IEC:** For effective IPC, a Flipbook, Safe Motherhood booklet, leaflets on ANC, Family Planning and Mother and Child Care were developed. Several community meetings/sessions were organized on Ante Natal Care, Newborn care, Diabetes, Hypertension, Institutional delivery, Family planning, Health care for under 5 children and VBD. Followings are the details:

**Brief of the output of the various services**

<table>
<thead>
<tr>
<th>No</th>
<th>Service</th>
<th>Number</th>
<th>Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>OPD Services</td>
<td>4299</td>
<td>Improved health indicators by providing quality health care</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved health seeking behaviour by minimising visits to quacks</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Improved Quality of life by reducing loss of wages to illness and</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>OoP expenditure on healthcare</td>
</tr>
<tr>
<td>2</td>
<td>Diagnostic Services</td>
<td>1865</td>
<td>Improved health seeking behaviour by minimising visits to unauthorised private labs</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reducing loss of wages to waiting and travelling time and OoP expenditure on tests.</td>
</tr>
<tr>
<td>No</td>
<td>Service</td>
<td>Number</td>
<td>Impact</td>
</tr>
<tr>
<td>----</td>
<td>--------------------------------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>NCD Services</td>
<td>1752</td>
<td>Improved level of awareness around prevention and management of NCDs esp Hypertension and Diabetes</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Systematic treatment of chronic cases by providing follow up consultations and diagnostic facility</td>
</tr>
<tr>
<td>4</td>
<td>NCD Haat Camps</td>
<td>36 camps</td>
<td>Improved level of awareness around prevention and management of NCDs esp Hypertension and Diabetes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>80/1752</td>
<td>Promoting preventive testing for Hypertension and Diabetes by referring people with abnormal readings to the Clinic from market places (referral completed)</td>
</tr>
<tr>
<td>5</td>
<td>Antenatal Services</td>
<td>660</td>
<td>Improved level of awareness around pregnancy, balanced diet, breast feeding, risk factors, institutional delivery, etc</td>
</tr>
<tr>
<td>6</td>
<td>ANC Package</td>
<td>112</td>
<td>Better management of pregnancy by completing all 4 ANCs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>63</td>
<td>Minimised changes of complications by ensuring all tests mandated and USG as per GoI guidelines</td>
</tr>
<tr>
<td></td>
<td></td>
<td>57</td>
<td>Minimised high risk pregnancies, miscarriages, etc by intervening at the right time with corrective and preventive measures</td>
</tr>
<tr>
<td></td>
<td></td>
<td>82</td>
<td>Averted still births, PPH and other complications by ensuring institutional deliveries</td>
</tr>
<tr>
<td>7</td>
<td>Cervical Cancer Screening and Referral Services</td>
<td>180</td>
<td>Improved level of awareness around CxCa, its screening and disease progression</td>
</tr>
<tr>
<td></td>
<td></td>
<td>08</td>
<td>Averted disease progression by detecting HPV infection in time and referring them for further investigations and treatment if needed</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Forged partnership with AIIMS and an NGO to provide screening services and follow up investigations and treatment services</td>
</tr>
<tr>
<td>No</td>
<td>Service</td>
<td>Number</td>
<td>Impact</td>
</tr>
<tr>
<td>----</td>
<td>----------------------------------------------</td>
<td>--------</td>
<td>------------------------------------------------------------------------</td>
</tr>
<tr>
<td>8</td>
<td>Family Planning Services</td>
<td>338</td>
<td>Improved level of awareness around Family Planning and available contraceptive methods</td>
</tr>
<tr>
<td></td>
<td></td>
<td>85</td>
<td>Averted unwanted pregnancies by providing a basket of contraceptive products including condoms, pills, IUD and DMPA</td>
</tr>
<tr>
<td>9</td>
<td>School Health Intervention, esp with Adolescent Girls</td>
<td>1950</td>
<td>Improved level of awareness around hygiene, balanced diet, menstrual hygiene and management, diarrhoea, anaemia, etc</td>
</tr>
<tr>
<td></td>
<td></td>
<td>425</td>
<td>Involvement of school children in community awareness initiatives like rallies, messages to parents, etc</td>
</tr>
<tr>
<td>10</td>
<td>Vector borne disease control interventions</td>
<td>1273</td>
<td>Reduction in mosquito breeding spots by virtue of regular source reduction activities in the community</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Reduction in reported cases of fever at Pehal clinic as compared to last year in the season</td>
</tr>
</tbody>
</table>

An overview of Pehal Project design
Chapter-3

INNOVATIONS

Healthcare technologies and solutions are transforming the delivery of preventive and curative health services, strategies & approaches of service delivery, systems & informatics with a dizzying array of digital health solutions and products. SCALE model of LEHS focuses on PPP partnerships with state government for demonstrating best practices in primary healthcare has the unique feature of introducing and piloting healthcare innovations. LEHS facilities act as test beds to the innovator where pilots can be done to demonstrate the feasibility of innovation in primary healthcare in order to improve the quality of services and reduce the out of pocket expenditure. Over a period of last three years, LEHS has been able to demonstrate a range of innovations in the intervention states with the purpose to reach out to the underserved rural & urban populations with innovative healthcare technologies to enable them to access quality healthcare services.

These technologies have helped to come out with the solutions to existing problems in terms of improvements in early identification of the diseases/ ailments, quality and/or access to essential basic healthcare services which are different from the existing approaches of the public healthcare systems. The progress and achievement of innovation are briefly shared as under:

Health & Wellness Center: A healthy infrastructure is a key determinant of health and wellbeing of an individual. Primary health management, begins from Sub Centre (SC) level. But the centers are usually manned by an ANM whose focus is promotive and preventive healthcare services, and referral to the Primary Healthcare Center (PHC) for curative services. But due to various factors, including lack of oversight and upgradation, poor maintenance, lack of capacity of ANM, remoteness, absence of transport facilities and lack of awareness, the Sub- Centers remain under-utilized. Therefore, Lords Education and Health Society (LEHS) under its flagship program LEHS has made a landmark initiative to transform Sub Centres into
Health and Wellness Centres, which also tune with the one of the thrust area of National Health Policy 2017 (NHP 2017). NHP 2017, define ‘Health and Wellness Centre’ as ‘the facilities which start providing the larger package of comprehensive primary health care’. LEHS has already been pioneering in demonstration of Health & Wellness Centers in Rajasthan. The LEHS concept of Health & Wellness Centre is developed based upon IPHS. In operative terms, it means that the Health & Wellness Centre should address the basic preventive, promotive, curative and rehabilitative healthcare needs of the population in its catchment area.

**List of Services to be provided at Health & Wellness Centre**

- Pregnancy care and maternal health services
- Neonatal and infant health services
- Child health
- Chronic communicable diseases
- Non-communicable diseases
- Management of mental illness
- Dental care
- Eye care
- Geriatric care
- Emergency medicine

LEHS has started H&W Centre at Subcentre Kundali Nadi of Bhadoti PHC at Sawaimadhopur and Subcentre Bhajneri at Dugari PHC of Bundi district. During the quarter Oct- Dec’17, Four new Health & Wellness Centres (HWCs) were started in Rajasthan. Now there are total six HWCs where four centres are supported by SwasthyaATM (KundaliNadi, Bhajneri, Salotiya and Myala) and two centres by telemedicine platform (Khanpura and Gambheera).

These SCs were selected after analysing the OPD upload at these SCs on the key parameters like physical condition of SC, feasibility of high-speed internet connection, patient load, investment requirement etc. The identified SCs building was strengthened to ensure safety of Swasthya ATM. The competent GNM was recruited to manage the H&W centre. In emergency the GNM also support ANM in community mobilization and service delivery activities. During the operations, there were some teething problems like power outages, technical issues in the hardware, etc, which were successfully addressed. For manning the machine, a trained nurse operator was hired and rigorously trained to operate the machine and also do basic trouble-shooting. In the year 2017-18, total 2806, beneficiaries were benefitted from the four established HWCs out.
Expansion of HWC model: Technology enabled HWC has been considered as one of the strategic areas for the LEHS intervention along with delivering quality primary healthcare services under PPP mode. Therefore the organisation is also planning to scale up the HWC model to other LEHS intervention states as well. After rigorous discussion the proposal for multi-location pilot of technology enabled HWCs in five states got finalized. Technical proposal was developed under guidance of Dr. R. K. Srivastava, Senior Advisor, Public Health and the proposal was submitted to the Founding Donor in January 2018 and subsequently to the Board.

Point of Care Devices: With the launch of Rajasthan Program, LEHS also added a value-added service of Point of Care (POC) devices to strengthen primary healthcare in the rural areas through healthcare innovations. Two years back during 2015-16, four POC devices namely ToucHb, SuCheck and UCheck and Mobile Pathology Lab (MPL) were introduced in at PHC and SC levels. Some of the POC devices were also supplied to Assam and PEHAL Clinic in Delhi-NCR. However, as the Rajasthan program has largest geographical coverage and field operations, among all programs of LEHS, more than 90 per cent of all the devices were supplied to Rajasthan. ToucHb, SuCheck, and UCheck has enabled frontline workers to provide quality diagnostic services for detection of anemia, diabetes and other diseases at the last mile.

Mobile Path Lab: Mobile Portable Labs (MPL), a unique innovation to provide laboratory facilities in remote rural areas, has been uptaken and upscaled by LEHS in 10 PHCs. In addition to the basic 15 diagnostic tests conducted at the PHC, MPL can conduct Lipid profile testing, Liver Function Tests, Kidney Function Tests and electrolyte testing. This has helped us transform PHCs into Smart Clinics. MPL now comes with a portal which collects data from each device through satellite, which means we will be able to see the data and track functionality of MPL devices even in areas with no internet connectivity. Mobile Lab (certified by ISO, CE, US FDA) is a Compact Portable Clinical Laboratory in a suitcase having Power Back-Up which contains all essential instruments like Biochemistry Analyzer, Centrifuge, Incubator, Data Recorder/Mini Laptop with Patient Data Management Software, Micropipettes and other accessories and performs 37 tests – Lipid, LFT, KFT, Electrolytes, Hb and Glucose. One MPL was donated to Ajeevika Bureau PHC Nithaun Gamri for Amrit Clinics. The MPL has been used to provide diagnostic services only at the PHCs. LEHS intends to organize NCD Screening camps at PHCs and SCs using the MPL. A Rate Contract agreement has been developed for Accuster for centralised procurement of MPL Lab Reagents; this will ensure efficient inventory management of MPL reagents at PHCs with zero stock outs. Additionally, a 4-day refresher training of the lab technicians was conducted to enhance the utilization. On the basis of learning and experiences shared by LEHS on usage of MPL at PHC level, Rajasthan State Government has procured 200 MPLs for PHCs, CHCs and MMUs.
The progress achieved so far is as follows:

<table>
<thead>
<tr>
<th>Healthcare Innovation</th>
<th>Progress (2016-17)</th>
<th>Progress (2017-18)</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>ToucHb</td>
<td>72316</td>
<td>20243</td>
<td>72</td>
</tr>
<tr>
<td>SuCheck</td>
<td>55580</td>
<td>24200</td>
<td>56</td>
</tr>
<tr>
<td>UCheck</td>
<td>29940</td>
<td>9831</td>
<td>67</td>
</tr>
<tr>
<td>Mobile Portable Lab</td>
<td>29612</td>
<td>20233</td>
<td>32</td>
</tr>
</tbody>
</table>

Note: There has been significant reduction in the performance of the healthcare innovations especially ToucHb, SuCheck and UCheck. Internal monitoring visits suggest diversion of focus from these devices to the other priorities and abnormality in the reported data so far.

Demonstrating new innovations for improved RMNCH+A indicators

In the year 2017-18, LEHS initiated discussions with various innovators to increase the umbrella size of healthcare delivery in the organization:

- **Sanket Life (Agatsa):** This is the world’s smallest ECG recorder which brings in best of the world from the cutting-edge developments in the field of electronic and sensors, mobile technologies and IOT, bringing affordable and timely cardiac care and enhancing wellness of the masses. Discussions with Agatsa for 12 lead m-ECG is under way.

- **DAKSH** is a Mobile tablet based intelligent labor monitoring tool which not only allows the staff nurse to register and enter vital signs of a pregnant woman but also reminds to monitor the labor vitals, as per the standard intra partum protocol. It is promoted by BIRAC. Staff has been imparted training by the innovator and a trained gynecologist. The pilot of the app will be started at four PHCs in Sawai Madhopur and Udaipur in 2018-19.

- **Accurate Tele-ECG On Mobile (ATOM):** LEHS from its leveraged resources launched Accurate Tele-ECG on Mobile (ATOM) which generates 12 lead ECG and vector cardiogram through bluetooth connected smartphone. The launching was made at Rajasthan program. Staff nurses received training on 22nd December 2017 and the screening using ATOM started. ATOM is a mobile based ECG technology developed by Cardea Labs. ATOM has been clinically validated at top research labs and hospitals to give a clinical grade output signal with many useful features at a fraction of the cost.
• **Pathoshod:** Initial discussions held with Pathshodh Healthcare to launch AnuPath which is a point-of-care device capable of performing tests on for multiple analytes on a single platform such as HbA1c (Glycated Hemoglobin), Glycated Albumin, Blood Glucose, Hemoglobin, Serum Albumin, Microalbuminuria, Urine Creatinine and Urine ACR. There is a plan to do pilot using this device with a sample size of 3500.

• **Discussions initiated with Mobile ODT:** It is a cervical cancer screening tool which is an FDA approved, smart connected colposcope that provides a comprehensive screening solution for cervical cancer with an imaging scope, mobile application and online portal. The EVA System allows for confidential data capture, quality control, real-time monitoring and evaluation, and remote consultation with other medical providers.

• **TruNat:** Tuberculosis is an important area in primary health where early diagnosis is very important. LEHS initiated discussion with the innovator of Trunat. Trunat® MTB which is a new molecular test for detection of Mycobacterium tuberculosis (MTB) and refampcin resistance at peripheral setting. It is a disposable microchip with pre-loaded PCR reagents – enabling the user to just add nucleic acid sample and start the test. It allows accurate detection of MTB in < 1 hour in near-patient settings.

• **SOHUM:** It’s neonatal hearing screening device and discussions held with the State National Health Mission, Rajasthan at the level of Mission Director for conducting 3 months’ pilot in a government tertiary care hospital in Jaipur. Subsequent meetings were also held with the innovator and related officials in the State NHM for documentation and research methodology and the same is proposed to be reviewed by a committee constituted by State NHM. The Pilot is expected to started during 2018-19.

**Immunity Charm:** It is a device-based innovation which is unlike harnessing the traditional custom of wearing bracelet ‘Nazaria’ in wrist of newborn. LEHS and Immunity Charm Foundation together will start piloting ‘Immunity Charm’ campaign in Kota and Dungarpur district of Rajasthan. This uses the traditional habit of many countries where parents ensure their newborn wears a bracelet to protect from evil forces. Similarly a bracelet is tied on the infant’s wrist which comprises of coloured beads, with each bead being a code for specific vaccine and the service provider adds corresponding bead to the bracelet after every immunization. Study protocols have been developed for pilot. It’s expected to kick off the pilot in July 2018.

**BEMPU Pilot:** Low-weight and premature babies often die or are injured due to hypothermia and late-treated infection. National Health Mission (NHM) Rajasthan identified the BEMPU Hypothermia Bracelet as an intervention to combat these deaths and illnesses. LEHS facilitated the pilot in LEHS managed PHCs and the other facilities identified for the pilot. The BEMPU Bracelet is one of the few devices which can be used in home setting to
lower NMR; the bracelet works for the entire neonatal period (28 days) and alerts parents when their newborn becomes hypothermic. To demonstrate the effectiveness, LEHS with BEMPU conducted a pilot with 386 low-weight babies in 10 facilities, 3 Sick Newborn Care Units (SNCUs) and 7 Primary Health Centers (PHCs) in Udaipur, Sagwara, and Dungarpur, with due permission and support of Government of Rajasthan. The pilot was done in control as well as intervention facilities. 250 newborns were enrolled wearing the BEMPU bracelet and their families received standard discharge instructions and training on KMC. 136 newborns were enrolled in the control group and their families received the same standard of care discharge instructions and KMC training. Quantitative and qualitative data was collected during this study to determine the effectiveness of the BEMPU Bracelet in catching hypothermia, reducing infections in the home, and increase parent health-seeking behavior. The pilot results prove that the innovation is suitable for newborn care management in home-based settings. Feedback from mothers in the BEMPU group suggests that they performed more Kangaroo Care as a result of wearing the bracelet and had few difficulties complying. Feedback from doctors and nurses also suggest the device was acceptable for use in their clinics and would be further complemented with programs for KMC. The mortality rate in the BEMPU group was 6% compared with a mortality rate of 14% in the control group; this could be from increased KMC or early detection of infection in the homes.

**Specialist consultation:** LEHS started piloting specialist consultation (gynecology) through telemedicine at PHC Bhadoti of Sawai Mahdopur district by leveraging the resources of Aditya Birla Finance Limited (ABFL). This is one of the distinct innovations in the field of public health to provide such services through telemedicine. The pilot is initially planned for two and half months and based upon the learning; it would be upscaled at other PHCs.
Chapter-4

RESEARCH MONITORING & EVALUATION

Research, Monitoring and Evaluation in LEHS has basic role to provide quantitative and qualitative data for program planning, management and tracking the performance so as to respond to the emerging needs of primary healthcare. For the year 2017-18, the focus was on strengthening the MIS data quality, establishing concurrent monitoring system to improve program level monitoring and supervision, assess beneficiary satisfaction and response on quality of healthcare services through stringent monitoring mechanism. The key RMEL activities initiated and completed in year 2017-18 in different intervention states are briefed as under:

Evaluation of Rural PHCs: An independent agency IMS, Delhi was engaged to undertake evaluation of the rural model of primary healthcare centres (PHCs) in Rajasthan. This evaluation aims to generate evidences for the effectiveness of primary healthcare model running on public private partnership, assessment of quality of services being provided by the PHCs, clients’ & community satisfaction etc. The survey was completed and the draft report was developed. In the present setting, impact of the program is assessed through baseline, mid-term and end-line study whereas the regular progress is measured on monthly and quarterly basis through achievements made in key performance indicators. The reporting quarter has been quite productive to measure the impact of the program, as the rural program was undergone through external evaluation. The evaluation revealed improved service utilization across the LEHS managed PHCs. This evaluation also used OECD criteria for systematic and objective assessment of the rural model which included PPP program design, its implementation and results achieved so far. The aim behind carrying out OECD evaluation was to determine the relevance, effectiveness, impact, efficiency and sustainability. Findings on the basis of OECD criteria are:
Baseline survey of UPHCs in Rajasthan: The proposals for baseline survey of UPHC were invited and agency selection is done. Agency Firmware has been hired for conducting baseline of UPHCs in Rajasthan. Tools and questionnaires have been developed internally by the team and finalized. Research protocol prepared and submitted to IRB Ethical Committee for ethical clearance. After approval of IRB, baseline survey will be initiated.

Endline of AAMC: LEHS in partnership with Govt. of NCT of Delhi developed assessment plan to document the impact of AAMC100 through end-line study. Institutional Review Board has approved the end-line survey design and tools for survey. This survey was entrusted to GfK (research agency) and the data collection work completed in September 2017. Assessment report was submitted in January 2018. The findings of the end-line evaluation of the AAMC Program revealed considerable increase in the awareness level and the service utilization amongst the communities since its inception in 2016. However, a fair proportion of study populations also reported unhappiness on account of 'long waiting time'. Out of pocket expenditure (OOPE) on various items such as expenses on treating common ailments, basic diagnostics, and consultation fee got reduced but in comparison to baseline data overall OOPE by the study population suggests marginal or no reductions due to cost incurred for hospitalization, transportation and diagnostics. No such evaluation has been taken place for PEHAL Program.
Rapid household survey at MP: LEHS undertook in-house Rapid Assessment of seven UPHCs in Jabalpur with the purpose to identify gaps and effectively utilize various tools and measures to improve the service delivery in their catchment areas. The report was submitted to NUHM, Government of Madhya Pradesh in December 2017. On the basis of the study findings, the decision took place to have complete facility preparedness survey and mapping of all UPHCs so as to plan the appropriate intervention package for the urban population and improve the overall services at UPHCs.

Evaluation of ABFL funded PHCs: ABFL is supporting the three PHCs of Sawaimadhopur, namely, Bhadoti and Malarna station at Bonli block, and Bahrawdakalan at Khandar since August 2016. At these PHCs the quality of services has been improved and the progress is regularly reported to ABFL at monthly, quarterly and annually. The ABFL has evaluated the performance of these PHCs through Samhita in the month of March 2017. The evaluator of Samhita visited the Bhadoti PHC and H&WC at Kundali Nadi. He was facilitated by Rajasthan team. The evaluator interacted with the staff at PHC Bhadoti and SC Kundali Nadi and interviewed them through structured questionnaire. He also carried out the assessment of the facilities. The report will be shared by Samhita with ABFL in the month of April 2018.

Training on Data Quality: Training on data quality was done on 16th & 17th Feb 2018 at Jaipur. In the training the LHVs of all 24 rural PHCs and DEOs of all 31 (24 rural + 7 Urban) and all District Coordinators participated. The purpose of the training was to build the capacity on data quality issues and apprise with the preparations of upcoming visit of DQA team. Adding No. of participants, some of the salient outcomes of the training etc. will help for good reporting. Was there any external or internal resource person involved outside the local office etc.

DQA by USAID: Data Quality Assurance is an important exercise conducted by USAID with its partners. As LEHS is also a partner of USAID in strengthening primary health care, therefore USAID conducted the data quality assurance of SCALE Rajasthan program in March 2018. USAID undertakes Data Quality Assessment (DQA) of all indicators that are reported to Washington. The purpose of a DQA is to ensure that the USAID Mission/Office and Implementing Partners are aware of the strengths and weaknesses of the data-management/analysis process, as determined by applying the five data quality standards as well as documenting the findings and follow-up actions to rectify any noted data problems. Data Quality Assurance of Rajasthan program by USAID is completed during 7th to 9th March 2018. On sample basis the PHCs of Sawaimadhopur were selected for DQA. In this regard the data of Bhadoti PHC and its SC Kundali Nadi and PHC Bahrawdakalan and its SC Singor Kala was verified by the DQA team. The PHC Bahrawdakalan was visited on 7th and Bhadoti was visited on 8th March 2018. In the DQA team of USAID there were Dr. Subrato Kumar Mondal, Project Monitoring & Evaluation Specialist and Mr. Chandan Samal, Project Development Specialist. The DQA team interacted with the staff
at facilities to understand the processes and challenges in collecting and submitting data in different formats and registers. The team also interacted with the Rajasthan state team to know the data related issues and share the suggestions to improve the data management processes at state and central level.

**Development of EHR:** LEHS is in process of digitizing the PHCs. In this regard the preliminary visits were made at health facilities where different agencies are doing similar type of work. The Reliance model was visited at Mumbai, Neurosynaptic model was visited at Jalgaon, Medongo facility was visited at Banglore, and IKP facility was visited at Tiruchirapalli, to understand automation of health facilities. The Innovation is leading the task and RME is sharing the responsibility of developing data collection tools, data field and indicators for reporting and dashboard.

**Internal assessment:** An internal assessment was undertaken by the LEHS team for assessing client satisfaction and out of pocket expenditure towards availing services at the LEHS managed PHCs. During interviews almost 100 per cent clients reported their happiness/satisfaction with the services provided by staff at the facilities. However, there were some cases who reported payment at facilities in cash or kind for institutional delivery. Internal team comprising of Mr. Anand Kumar Panjiyar, Ms. Ruchi Jha and Ms. Ranjana Pandey facilitated this task and submitted report to the Rajasthan team for examining this issue and taking appropriate action for improvement. Based on the inputs from the external team, all the PHCs have been instructed to display notice that in this facility, no money is charged for any treatment/medicine or conducting delivery
Chapter-5
PROMOTION & BUSINESS DEVELOPMENT

LEHS in a short span of time has demonstrated the achievements in primary health care through public private partnership. Different models have been developed in different states to leverage the resources in form infrastructure, expertise, funds and community participation. Focus on technology-based innovations has placed us strategically higher among the sector giants. The LEHS has used various platforms of public engagement and interaction with different stakeholders to demonstrate its initiatives for learning and scaling up. The year 2017-18 has seen some visits by high level international delegations.

1. **Partnership with BIRAC:** The existing partnership between BIRAC and LEHS for accelerating innovation and enterprise scale up for sustainable healthcare delivery systems in primary health care got revitalized by entering into financial agreement for scaling four new innovations over a period of next one year. This partnership leverages US$ 273,406 to roll out State Consortium to Accelerate Leverage and Economize (SCALE) platform for demonstrating and scaling up high impact innovations to transform primary healthcare delivery.

2. **Partnership with ICMR:** Indian Council of Medical Research (ICMR) and LEHS both entered into three years’ partnership towards development of sustainable healthcare solutions in India. This will identify and leverage most promising innovations in primary healthcare and demonstrating the impact of relevant innovations by utilizing the LEHS operated public health centres as test beds and simultaneously providing ICMR validation support to LEHS for different innovations which are taken up for pilot in its test beds.

3. **IHAT:** A site visit to Sitapur was conducted in May to understand the ground realities to enable LEHS bid for a RFP for converting Sitapur into a Model district. LEHS is exploring partnering with United Healthcare to bid for this project as a consortium.

4. **ABFL:** A proposal for Year-2 has been submitted seeking a substantial increase in CSR support. We have also sought support from ABFL on eHealth Card project for one PHC and two SwasthyaATMs in addition to funding support for PHC operations. The proposal is under consideration and is likely to get confirmed by August’17.
5. Hindustan Zinc Limited: CSR support proposal was submitted to HZL for two PHCs in Udaipur district.

Important visits in 2017-18

1. Visit of the SA Delegation: A delegation from South Africa, led by Ms. Jeanette Hunter-Dy. Director General (Health) along with her colleague Ms Yvonne Mokgalagadi, Technical Expert (Health) and Ms Moki Makura Country Representative, Bill & Melinda Gates Foundation (BMGF), visited AAMC at Delhi and SCALE model at Rajasthan to know about the primary health care services and PPP model of LEHS. The delegation visited the Mohalla Clinics on 27th June 2017. The objective of the visit, organised by the BMGF South Africa Office, was to understand the Urban Healthcare Model that LEHS has curated and to pick good practices from here to replicate/transfer to their context.

The delegation visited Bhadoti PHC managed by LEHS at Sawaimadhopur district. The government run Sesha PHC and the Adarsh PHC Khirni in the same block of Bonli of Sawaimadhpur were also visited by them. The delegation also visited the Kundali Nadi Sub centre of Bhadoti PHC where a Swasthya ATM has been installed on pilot basis. Besides visiting the facilities, the delegation met with Mr. K.C. Verma, District Collector, Sawaimadhopur. The District Collector shared about the health scenario of Sawaimadhopur and the focus areas of intervention with the delegation.

Honourable Health Minister, Shri Kali Charan Sharaf with South Africa delegation
On 29.6.2017 the delegation met with Hon’ble Health Minister, Mr. Kali Charan Sharaf at State Institute of Health & Family Welfare, Jaipur and Ms. Venu Gupta, Principal Secretary Health, GoR at Secretariat, Jaipur. Through these meetings the delegation came to know about various key achievements of GoR in Health and key initiatives which have led to the success. They also shared some of the important health issues of South Africa and how the key learning of the Model can be replicated in South Africa. The visit was well covered by the local media.

2. Visit of Afghanistan Delegation: LEHS team facilitated the visit of delegation from Afghanistan comprising of Dr. FerozuddinFeroz, Minister of Public Health, Dr. Abdul Qadir, Director General of Policy and planning, Mr. MomenMansoor, Director of Central Public Private Partnership Directorate accompanied by Mr. William Slater, Director of Office of Health and Nutrition/USAID Afghanistan, Ms. Marietou Satin, Office Director (A) Health/USAIDIndia and Mr. Arvind Kumar, Senior Manager - Strategic Partnerships, USAIDIndia with the Hon’ble Minister of Health, ShSatyendar Jain on 29th September 2017. The Afghanistan delegation was keen to learn from the Govt of NCT of Delhi about its experiences of Public Private Partnerships which it has introduced in the health sector.

3. UP Urban Primary Healthcare: A visit of SIFPSA representative, Dr. Rinku Srivastava, was organized for Mohalla Clinics in June. As a result, LEHS is now in discussion with Urban Health Mission, Government of UP, to explore partnering for an urban clinic initiative in Gorakhpur and Lucknow.

4. BMGF India: A Visit of a 6 member team of BMGF to Richha PHC was organized to understand the LEHS model. We continue to be engaged with BMGF and are exploring support in certain new geographies.
Award and Recognition

The staff of LEHS rural PHCs in Rajasthan has also been awarded at District and Block level for achieving the targets. Some glimpses are shared as under.

Global Leaders Field Learning Tour

LEHS commemorated two years of its work in India with a host of activities from November 13th - 15th, 2017 that commenced with LEHS Board Members’ meeting in Delhi followed by the Global Leaders Field Learning Tour in Delhi, Haryana and Rajasthan. Around 65 leaders from corporate and multilateral organizations, development sector partners, board members and innovators participated in the celebrations on November 13 in Delhi.

Rajesh Ranjan Singh, COO, LEHS presented LEHS’s journey of two years and the way forward. The 10-year goal for Healthy India@80 (aligned with the SDGs) envisioned by
Mr. Sunil Wadhwani, Founder Donor of LEHS, were announced with an open invitation to partners and donors to collaborate in this important effort.

Donors and partners shared their experiences of association with LEHS in the last two years, including USAID, GSK Consumer Healthcare, and entrepreneurs, including Accuster. For the first time CSR Heads, industry leaders, Development Sector professionals and some Board Members together visited key LEHS program sites in New Delhi, Gurugram in Haryana, and Sawai Madhopur in Rajasthan. The purpose was to enable the participants comprehend both urban and rural models of LEHS programs and experience LEHS innovative solutions that are reaching the under-served with quality healthcare services.