



Annual Report

2021-2022

Foundation for Research in Health Systems (FRHS)

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LIST OF ABBREVIATIONS

AWWs	Anganwadi Workers
ANMs	Auxiliary Nurses and Midwives
ECCE	Early Childhood Care and Education
ECHO	Extension for Community Healthcare Outcomes
FRHS	Foundation for Research in Health Systems
GoI	Government of India
ICM	International Confederation of Midwives
IITB	Indian Institute of Information Technology- Bangalore
IITB	Indian Institute of Technology- Bombay
IIPHG	Indian Institute of Public Health- Gandhinagar
SEAR	South-East Asia Region
UGOT	University of Gothenburg
UNICEF	United Nations' Children's Fund (Previously called United Nations International Children's Emergency Fund)
UNFPA	United Nations' Population Fund
WHO	World Health Organization

FROM THE PRESIDENT'S DESK

The World and India are now in a recovery mode after the trauma of a once-a century global pandemic. The experience has had diverse impact on peoples and regions of the country and the globe. In my own observation, from the relative safety of Bangalore, the city and rural areas around appear to have weathered this major assault on public health systems much better than some of the less fortunate regions with less resilient systems elsewhere. In fact, having briefly visited “developed” countries during early part of 2022 there is perhaps ground for satisfaction that India and more specifically Karnataka seem to have weathered the storm as well as or better than California or Ontario !

The pandemic experience provided scope for much significant research on building improved public health care systems. Despite many constraints of lockdown, travel restrictions and some cases of infection, FRHS has continued its work, on several projects. These are outlined in subsequent reports in this document. Many systemic issues, involving monitoring and restructuring health information systems, education, and training etc, would need to be urgently addressed to prepare better to confront likely threats in the future However, grants for research projects have been hard to come by. To sustain our work during this period of financial constraint, FRHS has had to relocate its offices to conserve limited funds available for organizational support. Hopefully as we continue the work despite the challenges, conditions will improve in the coming years.

S Krishna

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EXECUTIVE SUMMARY

Foundation for Research in Health Systems (FRHS), a not-for-profit research organization was founded in the year February, 1989. FRHS is registered in New Delhi, under the Societies Registration Act 1860 with the administrative headquarter located in Bengaluru, while undertaking projects across India.

In 2021-2022, FRHS' activities continued in line with the vision and Mission of the Foundation, with specific focus on health systems strengthening. In addition, the Foundation entered new partnerships with reputed institutions within India and abroad and strengthened collaborations with ongoing partnerships. The key FRHS projects during the year – both externally funded and funded by FRHS – ranged from ‘improving maternal-neonatal outcomes through implementing quality midwifery services in India’; ‘developing and standardising a self-assessment tool measuring competence of nursing educators in South-East Asia Region’; ‘exploring contextual factors influencing India’s effort in implementing midwife-led care’; “Everyday Resilience and Capacity-Building in Primary Healthcare: A study of Village Health Sanitation and Nutrition Committees (VHSNCs) in Rural India” and “Geographic Information Systems for Primary Healthcare Management in India”; and ‘developing E-Learning modules on Registration of Birth Death (RBD) Act: Procedures and Rules for training registrars of birth and death’. In addition, FRHS – along with the Foundations project partners – worked on development of six manuscripts using the evidence from the multi-centric study in India assessing the competence of midwifery educators and practitioners.

FRHS was successful in a competitive bidding on a call for proposals from World Health Organization South East Asia Office’s (WHO SEARO) for studying the work environment of professional midwives and nurses working in maternity wards of Bangladesh and Nepal. The Foundation signed a MoU with Extension for Community Healthcare Outcomes (ECHO) for developing and implementing research methodology trainings for students and early-career public health researchers. FRHS entered into a formal collaborative partnership with Department of Health and Care Sciences, University of Gothenburg (UGOT), Sweden with an aim to work jointly for improving maternal and neonatal health by strengthening midwifery in South East Asia. FRHS-UGOT are collaborating on a project “Aastrika: Establishing a Midwife-led Care Model” in Bengaluru with funding from Nilekeni Foundation. FRHS also initiated the processes to become a collaborating center with WHO SEAR; supporting the WHO’s work in the region in the lines of SDGs and regional strategic directions with specific focus on midwifery and nursing workforce.

FRHS successfully pilot tested its own research methodology course focusing on PhD students from public health/ nursing/ midwifery background and is in the process of developing a unique mentorship programme for small groups of scholars from 2022-2023.

During 2021-2022, FRHS received research grants amounting to about INR 37.35 lacs. The major research activities undertaken during 2021-2022 included development and testing of an e-course for training the registrars of birth and death; developing the first ever standardised and comprehensive tool for assessing the competence of nursing educators; initiating a first of its kind research project on understanding the work environment for the midwives and nurses from SEAR; and Everyday Resilience and Capacity-Building in Primary Healthcare: A study of Village Health Sanitation and Nutrition Committees (VHSNCs) in Rural India.

During the period of 2018-2020, FRHS invested INR about 45.54 Lac rupees from its own research and development fund to support FRHS staff overlooking the development and updation of digital version of Health Monitor: FRHS’ home production for bringing nearly 95 public health indicators related figures in one document for easy access of researchers and public health students.

This report presents a brief overview of activities undertaken by FRHS during the financial year 2021-2022; along with a note on sector development in the research areas where FRHS is currently active. The report also covers the Foundation's financial report for 2021-2022.

SECTOR DEVELOPMENT (2017- 2022)

Over the past few years; several interest areas for FRHS have seen programmatic changes and other sector development incidents. This section aims to list the major sector updates that influence FRHS' involvement; so FRHS' work can be placed within a national context to help develop a vision of the Foundation's future for it to remain relevant. For example:

The regional strategic directions for nursing and midwifery (2021-2025):

The strategic directions for nursing and midwifery were launched by WHO on 6th April 2021 stressing the policy focus on quality nursing and midwifery education, deployment, leadership and service delivery. In line with the strategic directions, the WHO Head Quarters supported the piloting of a leadership training programme in India, where a batch of 21 senior midwives (3-member teams from seven states) underwent an interactive training. MAMTA Health Institute for Mother and Child is working in close collaboration with Lund University, Sweden to prepare a diverse group of midwifery champions – from midwives, midwifery educators to Directors Health Services – to prepare a ‘go-to’ person within seven Indian states for the Nurse Practitioners in Midwifery (NPMs) with their challenges and work needs.

In a first-of-its-kind activity, researchers from FRHS-IIPHG have been developing a leadership profile for the states of Telangana and Gujarat under the advise of WHO HQ and compiling the evidence around midwifery policies, facilitators and barriers for midwifery education and practice, and comparing the curricula for NPMs and NPM educators against the ICM competencies (2018) and WHO core competencies for midwifery educators (2014); with an aim to build a project around midwifery leadership in the coming years.

Work environment for better health service delivery:

India is one of the 36 Asia-Pacific countries to sign the International Labour Organization (ILO) convention for improving work environment for ensuring decent work for sustainable social and economic development. Covid-19 pandemic further highlighted the need for improving the work environment of healthcare providers so that they could remain healthy as without a healthy health workforce to tackle the pandemic, the health systems of several LMICs witnessed a near collapse, further increasing the chaos and panic around COVID-19. A small online survey by FRHS in 2019 during the first wave of pandemic, where nearly 70% of the nurse-midwives had reported that their work environment needed improvement and majority of the participants felt they were overworked, and not satisfied with their jobs and salaries and many were burnt out as indicated by their scores on a standardised test.

With funding from WHO SEARO, FRHS drew from its small online pilot study mentioned above to develop a project in collaboration with its Indo-Swedish partners, Indian Institute of Public Health Gandhinagar (IIPHG) and University of Gothenburg (UGOT), and has initiated a first-of-its-kind study assessing the work environment of midwives and nurses working in maternity wards, and its association with the burnout experienced by the midwives and nurses.

Pandemic preparedness in light of COVID-19:

The second wave of Pandemic COVID-19 hit India from March 2021- Aug 2021; bringing to the fore-front the critical need of understanding the burden of pandemics on health systems, especially those located in low- and middle-income countries (LMICs). A quick review of published articles shows that while the lockdowns have proven an effective strategy to breakdown the spread of infection chain (1), the lockdowns in themselves delayed service seeking for routine/emergency health services for the common public, especially for patients on treatment

for chronic debilitating illnesses (2). A working paper by Canadian researchers Brodeur et. al. (2020) studied the google search trends and their association with loneliness, unhappiness and boredom among people under lockdown due to COVID-19, and reported significant surge in numbers of above-mentioned searches indicating severe impact of lockdowns on general public's mental health. A study carried out in Italy reiterated an increased level of stress and anxiety among people under lockdown who reported lack of sleep, decreased quality of sleep, anxiety and depressive symptoms (3).

In case of healthcare providers, the review of studies from HIC and LMIC show that the self-reported mental stress by healthcare providers was proportional to the time they spent among COVID-19 patients: Out of the 14 studies carried out from January- March 2020 in HIC and LMIC, extreme stress was reported by nearly 14.5% of all care providers working with COVID-19. Such healthcare providers were also reported to be at a higher risk of developing anxiety, panic attacks and depression (4). A UK-based study reported development and evaluation of an e-Package for the use of healthcare providers to mitigate the stress related to managing COVID-19 (5). The package outlines the actions that team leaders can take to provide psychologically safe spaces for staff; promoting self-care strategies like rest, work breaks, sleep, shift work, fatigue, healthy lifestyle behaviour; and managing emotions such as moral injury, coping, guilt, grief, fear, anxiety, depression, preventing burnout and psychological trauma (5). A US study reported using the 'battle buddy' strategy – devised by US army's buddy system – pairing up two healthcare providers as buddies to vent out the stress and anxiety of dealing with COVID-19 (6). It is noteworthy that most of the published studies have reported studies from HIC, and most have reported support strategies for the healthcare workers.

Negligible numbers of ongoing studies are reported for other critical areas for effective pandemic management, such as: the health systems' resilience, preparation of competent Health Workforce to manage pandemics, supply and demand related procedures for drugs and Personal Protective Equipment, tracking and threat assessments using traditional and innovative methods and the impact of a raging pandemic on other regular health services. All these areas have emerged as critical research areas, requiring further research, with opportunities of funding from national development partners, local charity organizations and by state and central government research organizations.

FRHS initiated an online cross-sectional survey amidst healthcare providers working with COVID-19 in Indian public and private sectors with an aim to see the prevalence and level of anxiety and stress and its association with availability of resources and duration of shifts being served by participants. The Survey was launched on 7th April 2020 and has received nearly 660 responses from 16 states and Union Territories in India.

2020-The year of the Nurse and the Midwife:

The WHO called out the national leaders across the globe to invest into development of competent nurses and midwives in their countries. This was in light of the growing evidence that committed, competent midwives are capable of handling all normal pregnancy and births; while they can accurately identify 85% of complications in their early stages and effectively engage with the obstetricians in managing such complication (7,8). Since then several countries – including Nepal, Sri Lanka, Bangladesh and Timor Leste – have launched professional midwifery with promising early results from midwifery-led care interventions. In January 2019, Government of India released its first guideline on establishing midwifery as a profession in India (9). In May 2019, the World Health Assembly declared the year 2019 as the "Year of the Midwives" and the year 2020 as "the Year of the Nurses and Midwives". This has attracted a renewed interest in undertaking research amidst Indian Nurses and Midwives – currently called as nurse-midwives – to benchmark and consolidate their midwifery competencies against international standards issues by International Confederation of Midwives (updated in 2019); and to initiate midwifery-led care interventions in India. Trained Nurses Association of India (TNAI) has initiated discussions on research on nurses: competence, work conditions, care-interventions.

FRHS has been actively involved in undertaking pioneering research in the field of midwifery since the launch of

national midwifery guidelines: FRHS – in collaboration with IIPHG – is leading a study to develop regional tools of assessment of competencies among midwifery educators and clinical midwives in the states of Assam, Gujarat and Karnataka. FRHS received a grant from WHO-SEARO for developing and testing 10 case-vignettes for testing midwifery competence in managing leading causes of maternal and neonatal mortality in South-East Asia, and to modify the self-assessment survey tool developed for Indian midwifery educators and midwives for utilization in all SEAR countries. FRHS was successful in receiving a third grant – as the lead applicant in an Indo-UK collaborative project - for taking forward its midwifery research in 2020-2021, and will continue responding to other upcoming opportunities.

Launch of National Educational Policy (NEP 2020):

The Government of India launched the National Educational Policy (2020) in July 2020 with renewed focus on streamlining and standardizing professional education in India (10). Envisioned as a strategy to achieve the Sustainable Development Goal 4 of “ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all” by 2030, the NEP-2020 has given special attention to a) educational pedagogy; b) preparation of competent teachers at all levels of education; c) promoting academic research through establishment of National Research Foundation; d) improving governance and leadership in Indian Higher Education Institutes; e) improving quality of professional education and online digital education (10). The key changes that pertain to FRHS’ focus areas are:

The National Research Foundation will be formed as an independent authority in academic research governed by a board of Governors who are proven research experts of their field. The NRF will coordinate its funding efforts with existing Research Regulatory bodies like DST and ICMR to avoid duplication of efforts, but will offer seed grants and full grants for quality research across all fields including public health (10).

The NEP underlines the need to re-envision the healthcare education, so that the duration, structure, and design of the educational programmes match the role requirements of passing out professionals. Formative and summative assessments will be carried out throughout the course to ensure that the training healthcare professionals are competent to work independently at primary and secondary level hospitals. A greater emphasis has been placed on preventive healthcare and community medicine in all forms of healthcare education and the AYUSH medical systems.

FRHS has an opportunity to support capacity building of healthcare providers and educators from the field of medical and paramedical sciences, especially in developing their research capacities,

eLearning as an effective alternative to traditional educational methods:

The recent rise in epidemics and pandemics across the world and in India highlighted the need to establish a digital alternative of traditional educational methods in times when in-person mode of education is not possible, and this has been stressed in the National Educational Policy (2020) also. The NEP has revealed a gap in existing knowledge in terms of carefully designed and appropriately scaled pilot studies that will be of help in determining the benefits of online teaching methods while revealing the short-comings and recommending mitigation techniques (10).

The NEP focuses on building the capacity building of *Anganwadi* workers as ECCE teachers through a systematic effort in accordance with the curricular/pedagogical framework developed by NCERT. The *Anganwadi* workers will have the opportunity to receive this on-the-job training through an online/digital/distance mode using DTH channels and/or smartphones (10).

The Adult Literacy Programme has also received special attention in NEP 2020, with a vision to promote technology as a means to strengthen and ensure 100% adult literacy. Quality technology-based options for adult learning such as apps, online courses/modules, satellite-based TV channels, online books, and ICT-equipped

libraries have been highlighted as the first few focus areas.

The eLearning platform is gaining cognition for making latest knowledge transfer feasible to the health care providers without drawing them away from health care facilities that are acutely short-staffed. A niche has been created for eLearning by Government of India under its "National Mission for Education" (www.sakshat.ac.in). The Government of India has soft-launched its own portal for eLearning; which is currently under development. Till its full-launch, the website hosts selections of eLearning content from development partners such as WHO, UNICEF and UNFPA. The content covers a variety of health conditions and service specialties, such as: Newborn care and care of sick newborn (WHO and/or AIIMS); Addictions and Mental Health (NIMHANS); accreditation courses for health care providers on research methods, health care guidelines by several reputed universities from around the world.

In India, researchers from two medical colleges AIIMS-Raipur and DMIMS-Wardha (2014) developed an eLearning module on pharmacology for 4th year medical students, and their published research is gaining recognition as the benchmark for testing other eLearning modules from different specialties from medical sciences. AIIMS-Delhi has also developed an eLearning module for comprehensive neurosurgery skills training (2016). The Santosh University, Noida has developed a virtual ICU and eLearning tool for trainee and intern physicians (2016). The Jodhpur Institute of Nursing (JINC) has very recently launched online tutorials for nursing students on their eLearning platform. While considerable investigation is being carried out on usefulness, feasibility and utility of electronic media/mobile apps in knowledge translation and its impact on clinical practices; the interventions have, till date, been limited to individual institutes, testing of the tools and publication. There is a wide-open field for establishing collaborations with state governments for establishing intervention testing, accreditation and post-accreditation evaluation for health service improvement in health sector using eLearning strategies.

To this end, the FRHS' Technology-enabled Learning and Skill Development (TeLSD) project has completed building its first eLearning course on "Hospital hygiene, sanitation and infection control" incorporating the Revised *Kayakalp* guidelines from Government of India and from WHO, and the product is now ready for its roll-out for health facility based medical and paramedical staffs and for assessing the impact of this eLearning strategy on knowledge and practices.



Annual Activity Report

April 2021 - March 2022

Foundation for Research in Health Systems (FRHS)

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BACKGROUND

The Foundation for Research in Health Systems (FRHS) was established in 1989 as a not-for-profit research organization with an aim to find ways for a healthier nation through research, innovation and interventions. FRHS' mission is to combine research with practice to make health research relevant to health workers, programme managers and policy makers. FRHS' research and intervention areas include public health research, Information Communication Technology (ICT) solutions, decentralized planning, evaluation, community monitoring, and health management information systems.

FRHS predominantly works in the areas of maternal health, adolescent health, child health and nutrition, reproductive health, family planning and prevention of HIV/AIDS. In these areas, FRHS focuses on programme planning to strengthen existing systems; carrying out monitoring and evaluation; and programme/policy evaluation, and has received funding support from organizations such as World Health Organization (Regional and Country Offices); UKAid, Medical Research Council United Kingdom, University of Gothenburg, Wellcome Trust, Rockefeller Foundation, CARE, DFID, UNICEF, and ICICI Social Initiative Group.

Intervention research is another of FRHS' focus areas, specifically in designing and implementing Health Management Information System (HMIS) and to use the HMIS data to reach out to the target beneficiaries and to build capacities of programme managers in making service delivery, efficient and effective.

Table 1 presents a brief overview of all projects active in the financial year 2021-2022. The projects are divided into three groups based on nature of funding:

- I. Projects with FC (External) funding
- II. Projects with Indian (External) funding
- III. Projects funded by FRHS (Internal)

Table 1: Report on Activities and Research Projects Status

I. Projects with FC (External)Funding							
Sr. No	Project Title	Period	Budget (in Lacs)	Sponsor	Location	Key Staff involved	Status
1	Improving maternal-neonatal outcomes through implementing Quality Midwifery Services in India: a case study of facilitators and barriers	April 2021 to Dec 2022	18.76	Medical Research Council (MRC)- United Kingdom		Dr. Paridhi Jha Mr. Deep Jyothi Kalita Dr. Purna Chandra Sahoo	Ongoing
<p>Description of the Project: Seed grant to undertake a feasibility testing study amidst newly trained midwives being posted in public health facilities and then impact on Quality of Maternal and new-born services and outcome. This is being done through systematic review of available policy and guidelines on Midwifery services by an audit of maternal and neonatal deaths in facilities where midwives are posted (Pre-post analysis) and by direct interviews with women, their families and midwives to understand the acceptability and utility of midwifery.</p>							
2	Study titled “Contextual factors influencing India’s effort in implementing midwife-led care”	July 2021- March 2022	1.94	University of Gothenburg		Dr. Paridhi Jha and Dr. Purna Chandra Sahoo	Completed
<p>Description of the Project: The first research study originating from FRHS-UGOT collaboration where representatives from 10 key stakeholder organizations working with National Government for supporting the rollout of midwifery services, training of Nurse Practitioners in Midwifery (NPMs) and operationalization of Midwife-led Care Units (MLCUs) were invited to participate in a qualitative study exploring the contextual factors around establishment of MLCUs in India. The study findings were used to develop two scientific manuscripts, one has been published (May 2022) and the second manuscript is currently under review with an international journal.</p>							
3.	LSE International Development Department RIIF Grant: Everyday Resilience and Capacity-Building in Primary Healthcare: A study of Village Health Sanitation and Nutrition Committees (VHSNCs) in Rural India.	Dec 2021 to Dec 2022	2.99	London School of Economics		Dr.S Krishna & Dr. Shirin Madon	Ongoing
<p>Description of the Project: This project extends theory development by drawing on the concept of ‘everyday resilience’ as discussed in health policy and planning literature. The aim is to study how the VHSNCs can help strengthen absorptive, adaptive and transformative capacity for addressing chronic diseases as well as current and future pandemics.</p>							

4.	LSE Department of Management RIIIF Grant: Geographic Information Systems for Primary Healthcare Management in India.	February 2022 to Dec 2022	7.76	London School of Economics		Dr.S Krishna & Dr. Shirin Madon	Ongoing
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Description of the Project: This project focuses on the urgent need to make accessible timely and relevant information at PHC level for routine public health operations as well as for management during pandemic situations.

II. Projects with Indian (External)Funding

Sr. No	Project Title	Period	Budget (in Lacs)	Sponsor	Location	Key Staff involved	Status
1	Developing E-Learning modules on Registration of Birth Death (RBD) Act: Procedures and Rules for training registrars of birth and death	Nov 2020 to March 2022	53.77	UNICEF		Dr. Nirmala Murthy Mr. Gaurav Sharma Dr. Purna Chandra Sahoo	Ongoing

Description of the Project: Development of eLearning module on Civil Registration and Vital Statistics (CRVS) system was undertaken in English and in 10 Regional languages, as suggested by the Registrar General of India and with the financial support from the UNICEF.

In 2019, RGI had approved a joint work plan with UNICEF in which one of the key tasks was to develop e-learning module on the Registration of Birth and Death (RBD) Act, Rules and procedures, to enhance capacities of registrars at all levels. The choice of e-learning module was made because face-face training across length and breadth of the country, with uniform training quality, did not seem feasible. Also, registrars now have easy access to computers and mobile communication devices which make e-Learning easy to organize. It is also an efficient way to deliver on-the-job training to registrars working in the civil registration system. This eLearning module consists of 8 sub-modules, describing the RBD Act and its implementation procedures, runs for about 5.5 hours. All 8 Sub-modules were developed and submitted to UNICEF. We are now waiting for their feedback. Click on the link below to view a *sample* module.

<https://360.articulate.com/review/content/01de9ebd-c98a-458f-a909-fcea6ef66ff4/review>

2	To develop the regional competency assessment tool for nursing educators as well as perform the psychometric validation of the tools.	March to July 21	10.80	WHO SEARO	11 SEAR countries	Dr. Paridhi Jha Dr. Purna Chandra Sahoo	Completed
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Description of the Project:

The FRHS team of researchers reviewed the WHO document on essential competency of Nursing Educators (2018) and supplemented the evidence with key nurse-educator competencies identified and reported through research studies from low-, middle- and high-income countries over the past 10 years' to draft the first global comprehensive tool measuring the confidence of nurse-educators from SEAR countries in their competence to teach nursing (theory and practice) and in sustaining their clinical nursing skills. The Tool has been circulated to leading nurse-educator experts from SEAR countries for content validation and CVI indexing was performed. Principal Component Analyses were performed to assess the psychometric properties of the questionnaire and the final report of findings and final questionnaire was submitted to WHO SEARO. The report will soon be published on WHO SEARO website.

3	To development of technical manuscripts for publication from midwifery competency assessment study findings	Aug 2021 to Oct 2021	8.29	WHO via IIPHG		Dr.Paridhi, Mr.Deep Jyoti Kalita, Mr.Purna Chandra Sahoo	Ongoing
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Description of the Project: The FRHS-IIPHG collaborative project (2018-2020) with funding from WHO India office has generated a very vast repository of data on competence of midwives, midwifery educators and facilitators and barriers experienced by them in teaching and implementing quality midwifery care. WHO India had provided additional funding to researchers at FRHS and IIPHG to develop six manuscripts using some of the data. The six manuscripts have been submitted. Two that report the psychometric properties of the questionnaires developed by researchers under this project have received the go ahead by the WHO office for submission to international journals for publications. The other four manuscripts have been shared with the MoHFW for their comments, and will be submitted to the journals once we have a go ahead. WHO has agreed to review the remaining data and other possible manuscripts that can be further prepared.

4	Provide/modify an existing ICT application suitably to be used by ANMs along with logistical support during field testing and subsequent deployment during the pilot.	May 2021 to September 2021	29.45	Indian School of Business (ISB)		Dr. Meenakshi Jain, Dr. Nirmala Murthy, Ms. Alpita Kapadia	Completed
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Description of the Project:

This project is supported by Max Institute of Health Management, ISB, Hyderabad. In collaboration with IIT Delhi and District Health Society, Muzaffarpur, Bihar, ANMs, ASHAs and caregivers of children. FRHS led the implementation of the timely immunization pilot in four blocks of Muzaffarpur district in Bihar with a sub-contract from ISB. The pilot assessed the feasibility of a package of interventions to improve timely immunization of infants. This final report documents the process for implementing the key activities of the pilot, modifications made to the proposed plan due to the need to align with the larger government plans and COVID-19 pandemic precautions. All data gathered as part of the pilot has been shared with ISB for analysis to understand the quantitative impact of the interventions on timely immunization and the factors that interact to produce that effect.

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III. Projects with FRHS (Internal) Funding

Sr. No	Project Title	Period	Budget (in Lacs)	Sponsor	Location	Key Staff involved	Status
1	Video-based learning on “Sanitation, Hygiene, and Infection Control in Hospital	Jan 2020-		FRHS	Tested in Karnataka	Dr. Nirmala Murthy Dr. Paridhi Jha Mr. Deep Jyoti Kalita Mr. Gaurav Sharma Mr. Hemanth Dravid	Ongoing

Description of the Project: This 5 hours long eLearning programme, contains 10 modules on Hospital Sanitation, Hygiene and Infection Control, provides an orientation to Infection Control practices in Hospital. The scientific content for this program was compiled based on WHO guidelines, GOI’s *Kayakalp* Guidelines and LaQshya Guidelines. Each module runs for about 30 minutes, and is presented as a video. Each session starts with a pretest consisting of 10 questions, and ends with a post-test consisting of 10 questions. The results are shared with the learner. A learner getting more than 70% marks on the post-test gets certificate of proficiency. This program is aimed at healthcare providers working at any level in the hospital including nurses, midwives, physicians, lab technicians, and hospital housekeeping supervisors. One module was pilot-tested among 75 nursing students from NIMHANS College of Nursing. The result showed percent of learners getting the passing score of 70 was 52% at the pretest, which increased to 95% at the immediate post-test. The course likely to be offered by the SRM university and the TDU as a part of their regular degree program.

Free Webinar conducted by FRHS on Hospital Sanitation, Hygiene, and Infection Control .84 students joined the webinar from College of Nursing , NIMHANS, Bengaluru and FRHS has provided them the participation certificate.

3	FRHS Programme-development Initiative: utilizing mSakhi App in Jharkhand and Bihar by ASHA workers	Dec 2018 to Aug 2020	20.00	FRHS	Bihar, Jharkhand	Dr. Meenakshi Jain	Ongoing
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Description of the Project: FRHS funded documenting effectiveness of mSakhi app – meant for assisting ASHAs during field work – and promoting its adoption in the state governments of Uttarakhand, Bihar and Jharkhand. The project team demonstrated App effectiveness in Uttarakhand though the state government chose to adopt GOI promoted app, while the State Government of Bihar invited FRHS to demonstrate the app in Sitamarhi district.

4	Implementing community-based interventions to improve the health and nutrition among children and adolescents in selected communities district blocks of Tamil Nadu	Nov 2019 to June 2021	10.00	FRHS	Tamil Nadu	Ms. V K Padmavathy, CCD Dr. Subramaniyan R, FRHS	Ongoing
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Description of the Project:

The NALAM health care programme was in the stage of inception during 2019-2020 and CCD has decided to take up the baseline data and understand the status of the girls in the working blocks. For the first phase of data collection Narikudi block of Virudhunagar district, sedapatti block of Madurai district and Mandapm block of Ramnad district has been chosen out of 15 working blocks as a sample. It was decided to use the baseline information for reducing the anaemia among the adolescent girls through adopting BCC approach. The plan was to collect the baseline from 5000 adolescent girls and improve their health status by addressing the gaps identified in the baseline of each adolescent girl. CCD has approached FRHS for both fund and technical support for collection and analysis of data and to evolve health MIS for the project.

The preliminary survey results from Kariappatti block of virudhunagar district in Tamil Nadu, based on data gathered from 1000 adolescent girls, showed that only 15.3 % of adolescent's girls knew their Haemoglobin levels but 91.5 % correctly knew that anemia is a deficiency and not a disorder. 39.9 % girls knew the hemoglobin level women should have (10+); 62.6 % were aware that cause of anemia was iron deficiency. 55.8 said, consuming iron-rich foods prevents anaemia and 72.3 % knew about iron rich food items. However, only 33 % of girls were fully aware about anemia prevention, meaning they knew that anemia was due to iron deficiency, also knew about the iron-rich food items and that consuming those food prevents anemia. . These findings from the survey underscored the need for Anaemia awareness program for Adolescent girls in this area, being undertaken through the CCD-FRHS intervention.

CURRENT MEMBERSHIP: RESEARCH ADVISORY BOARD, FRHS

FRHS' Research Advisory Board was formed in Dec 2018, in line with the requirements for getting licensure from Department of Scientific and Industrial Research (DSIR), New Delhi. Eminent researchers from public health, theological representative and a lay-person representing the community were invited. The current list of RAB members – four external and two internal – is shared below:

Name	Designation	Internal/External	Email Address	Contact Number
Dr. N Girish	Professor of Epidemiology, Centre for Public Health, NIMHANS	External (Chairperson)	girishn@nimhans.ac.in	9341226277
Dr. Hemanth Apte	Anthropologist, Independent Consultant	External (Member)	hamapte@gmail.com	020- 25561158
Dr. Nirmala Murthy	Founder, Foundation for Research in Health Systems	Internal (Member)	murthy.nirmala@gmail.com	080-26720135 26723937(O)
Dr. Padma Venkat	Dean, Public Health, SRM University	External (Member)	padmavenkatl@gmail.com	9482582825
Dr. Biju KC	Professor, Department of Media, Christ University	External (Member)	fr.biju@christuniversity.in	9742704212
Dr. Paridhi Jha	Executive Director- FRHS	Internal (Member)	paridhijha@frhsindia.org	8349192280

CURRENT MEMBERSHIP: ETHICAL REVIEW BOARD, FRHS

The Institutional Review Board of FRHS reviewed and approved all research projects undertaken by the Foundation during 2021-22. The present ERB is formed by following research experts:

Name	Email	Title	Location	Phone
Dr. Hemant Apte	hamapte@gmail.com	Chairman	Pune	09422512256
Dr. D.K. Srinivas	drdks9@gmail.com	Member	Bangalore	9480494245
Ms. Sanghamitra Iyengar	sanghamitra.iyengar@gmail.com	Member	Bangalore	080-26605161
Ms. Aparna Ravi	aparna.ravi@clpr.org.in	Member	Bangalore	09986022206
Dr. Vijay Gopichandran	vijay.gopichandran@gmail.com	Member	Chennai	09445226806
Ms. Vani Lakshman	vanilman@gmail.com	Member	Bangalore	09902029891
Dr. Nirmala Murthy	murthy.nirmala@gmail.com	Member	Bangalore	09448116094

Published Research Articles:

One scientific article and one book chapter have been co-authored by FRHS researchers since August 2020. Please find below the list:

- Malin Bogren, **Paridhi Jha**, Bharati Sharma, Kerstin Erlandsson Contextual factors influencing the implementation of midwifery-led care units in India; *Women & Birth*; 24 May 2022.
- Kerstin Erlandsson, **Paridhi Jha**, Bharati Sharma et al. Contextual factors influencing the implementation of a new midwife education programme in India: A qualitative study, 18 July 2022, PREPRINT (Version 1) available at Research Square [<https://doi.org/10.21203/rs.3.rs-1843345/v1>]

- "Theorizing community health governance for strengthening primary healthcare in LMICs" Shirin Madon¹, and **S Krishna**²

1 Department of International Development/Department of Management, London School of Economics & Political Science, Houghton Street, London WC2A 2AE, UK

2 Foundation for Research in Health Systems and Indian Institute of Management, Bangalore, India
Published in *Health Policy and Planning*, 37, 706–716 January 25, 2022, Oxford University Press.

- **Murthy N**, Chandrasekharan S, Prakash MP, Ganju A, Peter J, Kaonga N, et al. Effects of an mHealth voice message service (mMitra) on maternal health knowledge and practices of low-income women in India: Findings from a pseudo-randomized controlled trial. *BMC Public Health*. 2020;20(1):1–10.
- Shalini Singh, **Paridhi Jha**, Richa Goel. *Respectful Maternity Care*. Chapter 22. *Case Discussions in Obstetrics and Gynecology*. 2nd ed. New Delhi: Jaypee Brothers Medical Publishers; 2020. p. 345–54.

Manuscripts to be submitted by September 2022:

1. Development and psychometric testing of a self-assessment questionnaire measuring the confidence of midwifery practitioners based on ICM's list of essential competencies (2014).
2. Development and psychometric testing of a self-assessment questionnaire measuring the confidence of midwifery educators based on WHO list of essential competencies of midwifery educators (2018)

Manuscripts awaiting approval from funders before submission:

3. Confidence of midwifery educators in sustaining their own clinical midwifery skills and imparting quality midwifery education to their students: findings from six Indian states
4. Confidence of midwifery practitioners in sustaining their clinical midwifery skills and providing quality midwifery services to women in their care: findings from six Indian states
5. Facilitators and barriers to imparting quality midwifery education and strategies to overcome the barriers: lessons from a qualitative study from six Indian states
6. Roadmap of establishing midwifery as a profession in India: A commentary

Project Reports:

- Development and Psychometric Evaluation of a Self-Assessment tool measuring the competencies of Nurse Educators from SEAR Countries:
- Project Report for the project titled “Provide/modify an existing ICT application suitably to be used by ANMs along with logistical support during field testing and subsequent deployment during the pilot”.

Manual/Training Material/Module Development

- Digitization of FRHS’ Health Monitor (2020)
- Short e-learning course on improving hospital upkeep

FRHS STAFF MEMBERS: 2021-22

Name	Email	Designation	Location	Phone
Dr. Paridhi Jha	paridhi@frhsindia.org	Executive Director	Bangalore	8349192280
Mr. Gaurav Sharma	gsharma@frhsindia.org	Senior Technical Officer	New Delhi	9358079432
Mr. Deep Jyoti Kalita	dkalita@frhsindia.org	Research Officer	Bangalore	9085725110
Mr. Purna Chandra Sahoo	drsahoopc@gmail.com	Research Associate	Bangalore	7205695416
Ms. Sandhya Savanth	accounts@frhsindia.org	Finance Officer	Bangalore	9538608808
Ms. Lali L.B	admin@frhsindia.org	Administrative Officer	Bangalore	9945108333
Mr. Chethan S	chetan.frhsindia@gmail.com	Office Assistant	Bangalore	9008488938
Kemparase Gowda	kemparasegowda17@gmail.com	Office Attendant	Bangalore	9901942483
Manjunath B. K.	manjunathbk137@gmail.com	Peon	Bangalore	9901503132

FRHS INTERNS 2021-2022:

Name	Email	Location	Phone
Mr. Dravid Hemanth	thedravid18@gmail.com	Chennai	07604949178
Ms. Moumita Sarkar	moumitasarkar1234567@gmail.com	West Bengal	07872836620

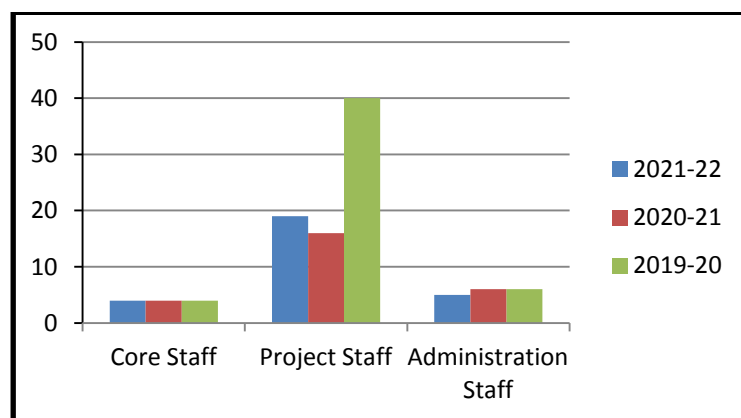
PROJECT STAFF 2021-22:

Name	Period (From- to)	Designation	Location	Remarks
Mr. Nagaraja Gopalan	13 th November 2020 to 31 st March 2022	Technology Expert	Bangalore	Technical Staff
Mr. Suresh BM	13 th November 2020 to 31 st March 2022	Instructional Designer	Bangalore	Technical Staff
Mr. Yogesh Kumar	13 th November 2020 to 31 st March 2022	Graphic Designer	Bangalore	Technical Staff
Mr. Ankur Saxena	13 th November 2020 to 31 st March 2022	Translator	Bangalore	Technical Staff
Mr. Ajay Shetty	13 th November 2020 to 31 st March 2022	Translator	Bangalore	Technical Staff
Mr. Prashanth PN	13 th November 2020 to 31 st March 2022	Graphic Designer	Bangalore	Technical Staff
Ms. Alpita Kapadia	1 st June 2021 to 30 th September 2021	Data Consultant	Bihar	Technical Staff
Mr. Arunanand Murmu	23 rd May 2021 to 31 st July 2021	Project Coordinator	Bihar	Technical Staff
Mr. Pranav Kumar	1 st June 2021 to 31 st July 2021	Project Assistant	Bihar	Technical Staff
Mr. Sudhakar Kumar	1 st June 2021 to 31 st August 2021	Advisor, Program Support	Bihar	Technical Staff

Dr. Meenakshi Jain	5th May 2021 to 30 th September 2021	Project Advisor	New Delhi	Technical Staff
Mr. Anand Kumar	1 st July 2021 to 30 th September 2021	Project Assistant	Bihar	Field Staff
Mr. Mukesh Kumar	23rd September 2021 to 30th September 2021	Project support consultant	Bihar	Field Staff
Mr. Nikhil Kumar	1st July 2021 to 31st August 2021	Project Assistant	Bihar	Field Staff
Mr. Ramesh Kumar	1st July 2021 to 31st August 2021	Project Assistant	Bihar	Field Staff
Mr. Satyanshu Kumar	1st July 2021 to 31st July 2021	Project Assistant	Bihar	Field Staff
Mr. Ravi Prakash	1 st September 2021 to 30 th September 2021	Project Assistant	Bihar	Field Staff
Mr. Rudresh PN	1 st December 2021 to 31 st December 2022	Field Staff	Karnataka	Field Staff
Mr. K Lakshmana	1 st December 2021 to 31 st December 2022	Field Staff	Karnataka	Field Staff

YEAR-WISE STAFF STRENGTH

Year wise Staff Strength				
Year	Core Staff	Project Staff	Administration Staff	Total
2021-22	4	19	5	28
2020-21	4	16	6	26
2019-20	4	40	6	50



REVENUE and EXPENDITURES 2019-2022

YEAR-WISE INCOME AND EXPENDITURE STATUS (As on March 31st 2022, 2021 and 2020)

The provisional financial audit report for the year 2021-22 is attached with this report. The financial trends of FRHS over the past three financial years (2019-20; 2020-21 and 2021-2022) follow:

Revenue (in lakhs)	2019-20	2020-21	2021-22
Receipts from projects	131.92	51.51	37.35
Interest income	10.00	10.81	4.31
Miscellaneous income	1.69	0.32	0.00
Total Revenue	143.61	62.36	41.67
Total Expenses	175.10	111.17	88.81
Excess of Income over Expenditure	-31.90	-48.81	-47.14
Reserves and Surplus at the beginning of the year	237.46	205.55	156.74
Reserves and Surplus at the end of the year	205.55	156.68	109.61

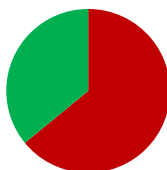
ASSET COMPOSITION (2019- 2022)

REVENUE and EXPENDITURES 2019-20



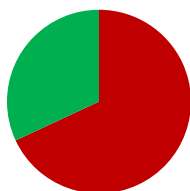
■ Total Expenses
■ Total Revenue

REVENUE and EXPENDITURES 2020-21



■ Total Expenses
■ Total Revenue

REVENUE and EXPENDITURES 2021-22



■ Total Expenses
■ Total Revenue

CONCLUSION:

While the COVID-19 pandemic enforced the curtailing of several project opportunities in 2021-22. FRHS was successful in a competitive bidding on a call for proposals from World Health Organization South East Asia Office's (WHO SEARO) for studying the work environment of professional midwives and nurses working in maternity wards of Bangladesh and Nepal. The Foundation signed a MoU with Extension for Community Healthcare Outcomes (ECHO) for developing and implementing research methodology trainings for students and early-career public health researchers. FRHS entered into a formal collaborative partnership with Department of Health and Care Sciences, University of Gothenburg (UGOT), Sweden with an aim to work jointly for improving maternal and neonatal health by strengthening midwifery in South East Asia. FRHS-UGOT are collaborating on a project "Aastrika: Establishing a Midwife-led Care Model" in Bengaluru with funding from Nilekeni Foundation. FRHS also initiated the processes to become a collaborating center with WHO SEAR; supporting the WHO's work in the region in the lines of SDGs and regional strategic directions with specific focus on midwifery and nursing workforce.

FRHS successfully pilot tested its own research methodology course focusing on PhD students from public health/ nursing/ midwifery background and is in the process of developing a unique mentorship programme for small groups of scholars from 2022-2023. FRHS has also optimized on the increased focus on e-Learning in the wake of COVID-19 and has demonstrated its ability to develop e-Learning material which is relevant for today's health scenario and made available to the health community at affordable costs.

FRHS Offices

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