An overview of FRHS' Research activities
during 2020-2021

Annual Report 2020-2021

Foundation for Research in
Health Systems (FRHS)

Foundation for
Research in
Health
Systems

A not-for-profit research organization

August 2021

INDEX

LIST OF ABBREVIATIONS

AWWs	Anganwadi Workers
ANMs	Auxiliary Nurses and Midwives
ECCE	Early Childhood Care and Education
FRHS	Foundation for Research in Health Systems
GoI	Government of India
ICM	International Confederation of Midwives
IIITB	Indian Institute of Information Technology- Bangalore
IITB	Indian Institute of Technology- Bombay
IIPHG	Indian Institute of Public Health- Gandhinagar
SEAR	South-East Asia Region
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

Foundation for Research in Health Systems (FRHS), founded in February 1989, is now in its 33rd year of work with a focus on research, innovations, and practice. The period of last one and a half years has been an extraordinary one with a global pandemonium on a scale not seen for over a century. Despite many constraints of lockdown, travel restrictions and some cases of infection, FRHS has continued its work, as set out in the annual report, on several projects. These have included -exploring the quality of midwifery services through case studies ; development of e-Learning modules on Birth and Death Registration Act for RGI; development and psychometric testing of self-assessment tool measuring the confidence of Nurse Educators from SEAR countries; measuring the confidence of midwifery educators and practitioners using psychometrically validated questionnaires;   development and pilot testing of an eLearning module for promoting infection control, hygiene and sanitation in hospital setting; designing a survey-viz tool for visualization of survey data and Digitizing FRHS' Health Monitor data set to facilitate dashboards generations that health managers can use.

During these extraordinary times of a global public health crisis, FRHS, in collaboration with local institutions, institutions in South Asia from Bangladesh and Srilanka, and international collaborators from New York University, the London School of Economics and others proposed several projects involving health data collection, IT systems design, health education and policy research and so on. While we did reach final levels of shortlisting in many cases, focus of funding institutions has been on more immediate issues to address specific medical and epidemiological concerns and success has been limited. The crisis has exposed many deficiencies in the pre-existing systems in terms of validity of information systems, testing and response times and many other issues in public health. 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. The competencies developed in terms of its exceptional record over the last three decades, I am sure will preserve relevance and value of efforts by FRHS in the future.

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 2020-2021, FRHS' activities continued in line with the vision and Mission of the Foundation, however the work was restricted for a considerable period due to the lockdowns and other restrictions placed across the country due to Pandemic COVID-19. The key FRHS projects during the year – both externally funded and funded by FRHS – included exploring the quality of midwifery services through case studies: lessons from Gujarat and Telangana; development of e-Learning modules on Birth and Death Registration Act for RGI with support from UNICEF; development and psychometric testing of self-assessment tool measuring the confidence of Nurse Educators from SEAR countries; measuring the confidence of midwifery educators and practitioners from six Indian states using the psychometrically validated questionnaires developed for this study; development and pilot testing of an eLearning module for promoting infection control, hygiene and sanitation in hospital setting; designed a survey-viz tool for visualization of survey data and Digitized FRHS' Health Monitor data set to facilitate dashboards generations that health managers can use.

FRHS was successful in its application for 80G certification by the Government of India, opening up opportunities to seek funding/grants from organizations under their CSR. FRHS' recognition as a Scientific and Industrial Research Organization (SIRO) was also extended by the Department of Science and Technology (DST) and stands valid till March 2024.

FRHS submitted a joint proposal for a seed grant by UK Medical Research Council on behalf of the consortium for evaluating quality of Midwifery Services in two Indian states. The project implementation would have started from April 2020, but was delayed due to the Pandemic COVID-19; and kicked off from January 2021.
During 2020-2021, FRHS received research grants amounting to about INR; 51.51 lacs and invested INR 45.54 lacs from its own research and development fund in previous year to create eLearning module to enhance healthcare providers' competence in infection control, hygiene and sanitation management; to develop a data visualization app, testing utility of mSakhi app for ASHA workers and creating a field practice area in collaboration with Covenant Centre for Development (CCD), Tamil Nadu to help FRHS expand its research agenda beyond the constraints of sponsored research FRHS undertakes.

This report presents a brief overview of activities undertaken by FRHS during the financial year 2020-2021; 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 2020-2021.

SECTOR DEVELOPMENT (2016-2021)

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:

Pandemic preparedness in light of COVID-19:

The COVID-19 outbreak was first reported in Nov-Dec 2019, which rapidly evolved as a global pandemic, affecting both High Income and Low-and-Middle Income Countries with equal magnitude. The pandemic preparedness of health systems has since then received focused global attention (WHO, 2020). While large sections of scientists have generated evidence around the microbe, and its pathology, several public health research avenues have also opened up in the field of Pandemic preparedness, like:

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.

'Respectful maternity care' (RMC) term was coined by WHO in 2010s'; which replaced the more provocative term "disrespect and abuse in maternity care" first reported by the feminist researchers from across the Globe. The RMC has been promoted through several platforms for decades past, but its typology was first described by Bowser and Hill (2010) after a landscape analysis of disrespect and abuse during maternity care reported across the world, from both High and Low-Middle Income Countries. Midwifery is known to follow a woman-centric and respectful maternity care-based model, and may be one of the reasons that the Government of India recently formed a technical resource group (TRG) on promoting RMC – including respectful neonatal care – in India along the same time as the launch of National Midwifery Guidelines. The Executive Director of FRHS was part of the TRG that compiled the first draft of National RMC Guidelines.

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 staff s and for assessing the impact of this eLearning strategy on knowledge and practices.

mHealth initiatives

In the field of health services too, several *mHealth initiatives* have been launched by the Government of India under its Digital India initiative; with several end-user apps launched in past years, such as mDiabetes (2015); *No More Tension* (2016); *India Fights Dengue* (2016); *NHP Swasth Bharat* (2016). The *'Vaccine Tracker'* app was launched (2016) by GoI under *Indradhanush* immunization scheme for parents to track and remember essential immunization for their children. Similar apps have also been launched for the health workforce to aid them in undertaking their activities systematically: The *Aide Memoire* (2015-2016) is a smart phone app for ASHAs and ANMs to promote prompt services to Pregnancy, Childbirth and Postpartum care. *The Mother and Child Tracking System* is a mobile app for the community-level health care providers to track pregnant/postnatal women and under-5 children in their designated areas The *'Kilkari'* initiative – accessed by more than 7 crore people from 11 Indian states – comprises of 72 free weekly and time-appropriate audio messages on pregnancy, childbirth and newborn care; through calling a toll free number *'Nikshay'* is an initiative based on missed-call call-center, which has been implemented across all Indian states and Union Territories for monitoring, counselling and providing treatment support to TB patients. Approximately 85 lakh patients have been registered under this initiative.

While the apps developed by individual institutions are being tested for their impact on access to health information, the apps made available by the GoI seem to be unregulated in terms of their effectiveness in improving access to health information. This interpretation is drawn because the relevant websites of ministry of health and family welfare, Government of India merely list the numbers of time a particular app is downloaded (in millions); but no information can be found about how the app is being used, primary beneficiaries and how the information gained impacts the health seeking behaviour. This knowledge gap provides some research opportunities which could be considered by FRHS. The DRISHTI app; and the m*Mitra* and mCheck interventions developed by FRHS are strong first steps, and other such interventions could be further conceptualized.

In 2019-2020, FRHS has supported maintenance and field-testing of the mSakhi app for ASHA workers. Originally developed by IntraHealth, the App is now freely available in public domain and can be adapted and re-purposed for varied health scenarios including pandemic preparedness.

Empirical evidence generation around AYUSH medicine:

Universal Health Coverage (UHC) in the Indian context is understood as easily accessible and affordable health services for all citizens. The Planning Commission of India constituted a High-Level Expert Group (HLEG) in October 2010 for the purpose of drafting the guidelines of UHC. The primary focus of UHC is to provide a financial protection against non-essential expenditures to all citizens seeking health services. An adequate health infrastructure, skilled health human resources, and access to affordable drugs and technologies are required so that all people receive the level and quality of care they are entitled to in a socio-culturally appropriate manner. Department Health and family welfare launched AYUSH (*Ayurveda, Yoga, Unani, Siddha and Homeopathy*) in 2003 under National Health Mission (then, National Rural Health Mission) as an alternative to the allopathic

health care system, and though the AYUSH system is not equipped to handle cases of acute medical and surgical emergency, it has solutions for most health problems, including treatment of life-style related and non-communicable diseases.

For example, an *Ayurvedic* herbal-mineral preparation, named *Punarnavadi Mandura* treats anaemia, and has been added in the drug kit of accredited social health activists (ASHAs) working in Kerala. A report by the chief of technical services at the *Arya Vaidya Sala*, Kottakkal, Kerala, estimates that the cost of *Ayurvedic* treatment for a minor ailment, such as the common cold or a stomach upset, would be INR 50–100; whereas a major ailment requiring a couple of months' treatments could cost around 500 INR: significantly cheaper than the allopathic treatment.

Non-Governmental Organizations working with alternative medicines also engage in research to identify indigenous medicines as alternatives to allopathic medicines. FRHS has previously supported projects promoting indigenous medicine and can still make considerable contribution; including conduction of research on health and wellness, identifying practices that restore the wellness balance and improve quality of life.

Foundation for Research in Health Systems

Annual Activity Report

April 2020- March 2021

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BACKGROUND

The Foundation for Research in Health Systems (FRHS) was founded in 1989 as a not-for-profit 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 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 Welcome Trust, Rockefeller Foundation, CARE, DFID, UNICEF, ICICI Social Initiative Group; Deepak Charitable Trust, and ICRW.

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 2020-2021. 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

Sr. No.	Project Title	Period	Budget (in Lacs)	Sponsor	Location	Key Staff involved	Status
I. Projects with FC (External)Funding							
1	Improving maternal-neonatal outcomes through implementing Quality Midwifery Services in India: a case study of facilitators and barriers	April 2021 to Mar 2022	4.39	Medical Research Council (MRC)-United Kingdom		Dr.Paridhi Jha Mr.Deep Jyothi Kalita	Ongoing

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.

Sr. No.	Project Title	Period	Budget (in Lacs)	Sponsor	Location	Key Staff involved	Status
II. Projects with Indian (External)Funding							
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 Nov 2021	51.22	UNICEF		Dr. Nirmala Murthy Mr.Gaurav Sharma	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. Click on the link below to view a *sample* module.

https://360.articulate.com/review/content/3cb4efef-acde-4639-aa93-516d57ca4750/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	Ongoing

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. The tool is currently circulated to the nurse- educators from SEAR countries as an app for data collection, with WHO regional centers for excellence supporting data collection in each SEAR country. Target is to have data collected from 1000 participants from 11 countries.

3	Competency assessments for midwifery skills of providers and tutors, and barriers and facilitators in providing quality midwifery services in India.	Apr 2019 - Sep 2020	84.0	WHO India Office	Karnataka & Assam	Dr. Paridhi Jha Mr. Deep Jyoti Kalita Ms. Lydia S. Ms. Nivedita L. Ms. Anne P. Rani	Completed

Description of the Project:
FRHS research team, in collaboration with Indian Institute of Public Health, Gujarat (IIPHG) undertook a research project to: 1) measure the core competencies of midwifery educators posted at public and private ANM training centres, schools and colleges of nursing, in terms of self-practice and developing the core competencies amongst the students from six selected States of India; 2) measure the core competencies of midwifery practitioners from public and private clinical sites attached to selected ANM training centres, and schools and colleges of nursing from six selected States of India; 3) explore the opportunities and barriers as perceived by the midwifery educators in practicing core competencies of midwifery themselves as well as in developing the core competencies amongst the students; 4) explore the opportunities and barriers as perceived by practitioners in achieving and practicing the core competencies of midwifery and sustaining them; and, 5) benchmark the current midwifery curricula given by the Indian Nursing Council for ANM, GNM, and B.Sc. nursing courses against the ICM Essential Competencies for Midwifery Practice. A study undertaken to form the roadmap for implementation of national midwifery guidelines (2019). The study has developed and validated questionnaires for measuring midwifery competencies of clinical midwifes (practitioners) and midwifery teaching competence of midwifery educators in public and private sectors in collaboration with IIPHG, MAMTA HIMC and WHO HQ researchers. FRHS is using the tools in Assam and Karnataka whereas its partners IIPHG is leading the study in Gujarat and MAMTA-HIMC is leading the study in Bihar UP and Telangana. Data collection in six states is complete, with responses from Midwifery Educators (n=2016), Clinical Midwives (n=2296), and ANMs (n=1137).

	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-Oct 2021		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,

3	FRHS Programme-development Initiative: utilizing mSakhi App in Jharkhand and Bihar by ASHA workers	Dec 2018to Aug 2020	20.00	FRHS	Bihar, Jharkhand	Dr. Meenakshi Jain	Ongoing

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

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 adolescents girls knew their Haemoglobin levels but 91.5 % correctly knew that anemia is a deficiency and not a disorder. 39.9 % girls knew the haemoglobin 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 2020-2021. 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:

- **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 under development:

- Development and psychometric testing of a self-assessment questionnaire measuring the confidence of midwifery practitioners based on ICM's list of essential competencies (2014).
- 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)
- Confidence of midwifery educators in sustaining their own clinical midwifery skills and imparting quality midwifery education to their students: findings from six Indian states
- 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
- Facilitators and barriers to imparting quality midwifery education and strategies to overcome the barriers: lessons from a qualitative study from six Indian states
- Roadmap of establishing midwifery as a profession in India: A commentary

Project Reports:

- Situational analyses of nursing education institutes and their compliance with Indian Nursing Council Norms for imparting quality midwifery education: Findings from six Indian states
- Situational analyses of confidence of midwifery educators as per the global standards of midwifery education and the factors influencing: Findings from six Indian states
- Situational analyses of confidence of midwifery practitioners (GNM/BSc or higher degree holders) in performing as per global standards of midwifery practice and the factors influencing: Findings from six Indian states
- Situational analyses of confidence of ANMs as per the global standards of midwifery practice and the factors influencing: Findings from six Indian states
- Facilitators and barriers to imparting quality midwifery education and strategies to overcome the barriers
- Facilitators and barriers to imparting quality midwifery practice and strategies to overcome the barriers
- Roadmap of midwifery in India

Manual/training material/module development

Digitization of FRHS' Health Monitor (2020)

Short e-learning course on improving hospital upkeep

FRHS STAFF MEMBERS: As on MARCH 2021

Name	Email	Designation	Location	Phone
Dr. Paridhi Jha	paridhijha@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 Assistant	Bangalore	9901942483
Manjunath B. K.	manjunathbk137@gmail.com	Driver	Bangalore	9901503132

FRHS INTERNS 2020-21:

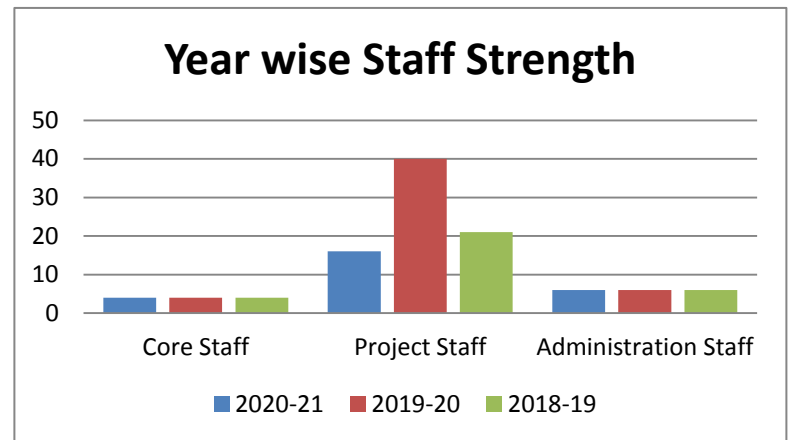| Name	Email	Location	Phone
Mr. Dravid Hemanth	thedravid18@gmail.com	Chennai	07604949178
Ms. Moumita Sarkar	moumitasarkar1234567@gmail.com	West Bengal	07872836620

PROJECT STAFF 2020-21:

Name	Period (From- to)	Designation	Location	Contact details	Remarks
Ms. Laimayum Nivedita Devi	1st Jan 2020 to 31st Jan 2021	Research Associate	Bangalore	7005717523	Technical staff
Ms. Lydia S	1stJune 2020 to 31st July 2020	Consultant	Bangalore	7625017613	Technical staff
Mr. Himakhy Saikia	1st June 2020 to 31st July 2020	Research Investigator	Assam	dimpisaikia72@gma il.com	Technical staff
Ms. Liza Saikia	1st June 2020 to 31st July 2020	Research Investigator	Assam	lizasaikia91@gmail. com	Technical staff
Ms. Mrigatrishna Das	1st June 2020 to 31st July 2020	Research Investigator	Assam	mrigatrishnadas@gm	Technical staff
Ms. Aradhana Baruah	1st June 2020 to 31st July 2020	Research Investigator	Assam	-	Technical staff
Ms.Parbin Sultana Begum	1st June 2020 to 31st July 2020	Research Investigator	Assam	-	Technical staff
Mr. Randhir Kumar	17th Mar 2020 to 30th July 2020	Project Coordinator	Sitamarhi, Bihar	9576449071	Technical Staff
Ms. Alpita Kapadia	13th November 2020 to 31st March 2021	Project Associate	New Delhi	8866455990	Technical Staff
Mr. NagarajaGopalan	13th November 2020 to 31st March 2021	Technology Expert	Bangalore	-	Technical Staff

Mr. Suresh BM	13th November 2020 to 31st March 2021	Instructional Designer	Bangalore	-	Technical Staff
Mr. Yogesh Kumar	13th November 2020 to 31st March 2021	Graphic Designer	Bangalore	-	Technical Staff
Mr. Ankur Saxena	13th November 2020 to 31st March 2021	Translator	Bangalore	-	Technical Staff
Mr. Ajay Shetty	13th November 2020 to 31st March 2021	Translator	Bangalore	-	Technical Staff
Mr. Prashanth PN	13th November 2020 to 31st March 2021	Graphic Designer	Bangalore	-	Technical Staff
Dr. Meenakshi Jain	19th Jan 2019	Advisor & Team Leader	New Delhi	09971755334	Technical staff

YEAR-WISE STAFF STRENGTH

(As on March 31st 2021, 2020 and 2019)

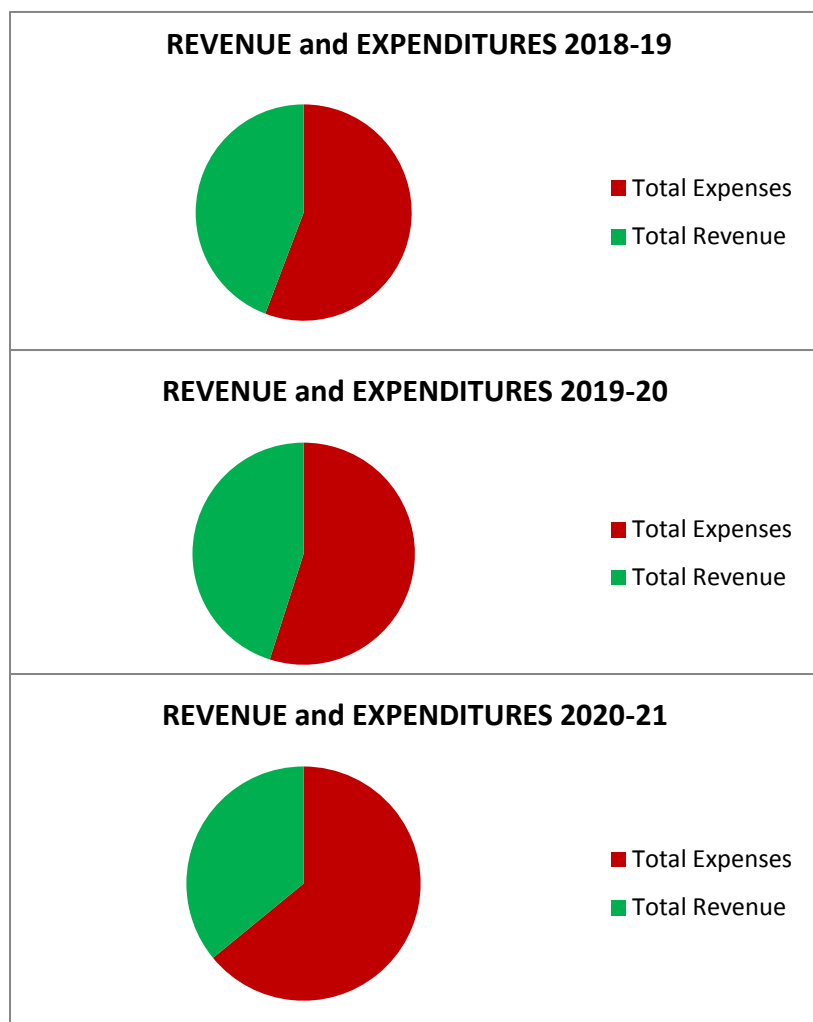| Year wise Staff Strength				
Year	Core Staff	Project Staff	Administration Staff	Total
2020-21	4	16	6	**26**
2019-20	4	40	6	**50**
2018-19	4	21	6	**31**

Year wise Staff Strength

REVENUE and EXPENDITURES 2018-2021

YEAR-WISE INCOME AND EXPENDITURE STATUS (As on March 31st 2021, 2020 and 2019)

The provisional financial audit report for the year 2020-21 is attached with this report. The financial trends of FRHS over the past three financial years (2018-2019; 2019-20 and 2020-21) follow:

Revenue (in lakhs)	2018-2019	2019-20	2020-21
Receipts from projects	51.20	131.92	51.51
Interest income	16.22	10.00	10.81
Miscellaneous income	-	1.69	0.32
Total Revenue	67.42	143.61	62.36
Total Expenses	85.05	175.10	111.17
Excess of Income over Expenditure	-17.87	-31.90	-48.81
Reserves and Surplus at the beginning of the year	255.33	237.46	205.55
Reserves and Surplus at the end of the year	237.46	205.55	156.68

ASSET COMPOSITION (2018- 2021)

REVENUE and EXPENDITURES 2018-19

REVENUE and EXPENDITURES 2019-20

REVENUE and EXPENDITURES 2020-21

CONCLUSION

While the COVID-19 pandemic enforced the curtailing of several project opportunities in 2020-2021; the networking and collaborations by FRHS team have re-initiated the project collaborations; as evidenced by a Memorandum of Understanding signed with University of Gothenburg, Sweden for ongoing nursing and midwifery research in SEAR; and three small projects testing a midwife-led care unit's implementation in a private hospital in Bengaluru are already being implemented w.e.f. April 2021.

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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Pillar, Jayanagar 2nd Block, Bangalore-560011

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