SUMMER INTERNSHIP PROGRAM

at

NATIONAL HEALTH MISSION, GUJARAT

From the 6th of May, 2024 - 5th of July, 2024

A REPORT BY

Sreyasi Chattopadhyay

Master of Business Administration

Hospital and Health Management

2023-25

under the Mentorship of

Dr. Deepti Sharma

IIHMR UNIVERSITY

IIHMR University Faculty Mentor Approval

This is to certify that Dr. SREYASI CHATTOPADHYAY of academic year 2023-25 of INSTITUTE OF HEALTH MANAGEMENT RESEARCH has prepared a poster with respect to her summer internship held during May-June 2024.

She has carried out work as per the guidelines. Her poster is approved for presentation.

Date: 22nd of July, 2024

Dr. Deepti Sharma

Associate Professor
IIHMR University, Jaipur.

Ministry of Health & Family Welfare
Government of India

NATIONAL HEALTH MISSION

Certificate of Internship

This is to certify that ~~Mr./Miss.~~ Dr. Sreyasi Chattopadhyay student of IIHMR University, Jaipur has successfully completed the Internship of MBA (Hospital and Health Management) from 06.05.2024 to 05.07.2024 at RBSK - CoH, Gandhinagar.

During the period of ~~his~~/her internship programme with us, ~~He~~/She has been exposed to different processes and was found diligent, hardworking & inquisitive.

We wish ~~him~~/her every success in life & career.

Mrs. K.M. Sheth, GAS
Programme Officer(Admin)
National Health Mission, Gujarat

Remya Mohan, IAS
Mission Director,
National Health Mission, Gujarat

Enhancing Follow-Up and Rehabilitation Adherence in Congenital Heart Disease Patients 0-5 years old: Challenges and Interventions

Organization History, Vision & Mission

History

National Health Mission(NHM) was launched by the GoI in 2013 after integrating the NRHM(2005) and the NUHM(2013).It's main aim is to enhance the overall quality of healthcare delivery in rural and urban areas and strengthen the primary healthcare infrastructure.The Rashtriya Bal Swasthya Karyakram(2013) is an initiative under NHM that aims to improve the quality of life of children aged 0-18 years by providing a wide range of comprehensive healthcare services, and a strong focus on early detection of the 4Ds- Birth Defects, Diseases, Deficiencies and Developmental delays including disabilities.

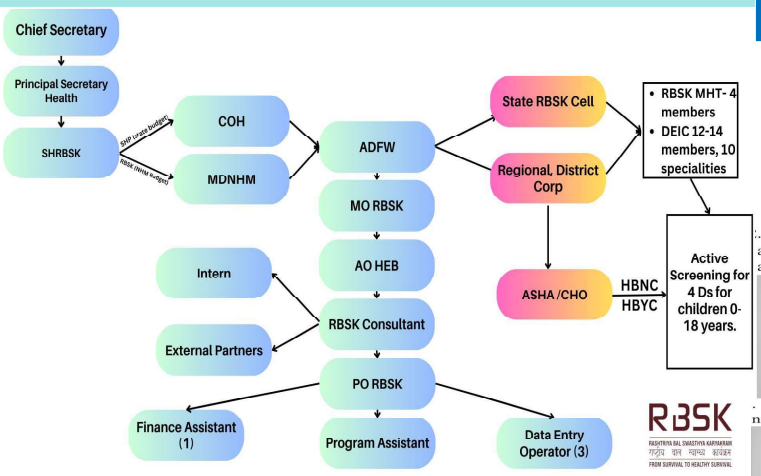
Vision

To provide equitable, affordable, high quality healthcare services that are accessible by all and focused on addressing the diverse health needs in the population grounded in accountability and responsiveness.

Mission

To ensure that the public health delivery system is accountable and fully functional to the community through decentralization, community involvement, effective HR management, infrastructural strengthening, rigorous monitoring and evaluation against the set standards from the most peripheral levels upwards through innovations, flexible financing and appropriate health interventions

ORGANIZATION STRUCTURE



SWOT Analysis

STRENGTHS

- Extensive interdepartmental coordination and good intradepartmental communication
- Continuous and extensive monitoring done to identify gaps and come up with appropriate solutions
- Extensive screening by MHTs to ensure early detection
- Strong referral system to DEICs and tertiary centres to provide timely interventions
- Supportive services to ensure compliance on the patient's part

WEAKNESS

- Lack of awareness among the parents of children about the benefits of early interventions
- Low adherence to treatment modalities due to myths/superstitions or lack of knowledge
- Lack of HR and infrastructure in certain DEICs and MHTs affecting the quality of care
- IEC materials are information extensive
- Lack of attention given to social capital of beneficiaries
- Insufficient focus on the problem of undernutrition in CHD cases causing delay in treatment

OPPORTUNITIES

- Develop IEC/BCC to increase awareness about the benefits of early interventions
- Utilization of IT platforms to make up for the lack of HR or non-adherence due to travel/distance
- Strengthen CHCs for pre/post op rehabilitation services
- Approaches to improve social capital of patients
- Nutritional rehabilitation under RBSK

THREATS

- Delay of entry or incorrect entry into HMIS/TeCHO platforms
- Misreporting about HR and infrastructure in districts
- Scarce literature regarding importance of follow-ups and cardiac rehabilitation
- Lack of linguistic inclusivity in the organization

LEARNING AND VALUE ADDITIONS

Difference between practical exposure at SIP organisation and theoretical understanding from IIHMR University

IIHMR-U	NHM Gujarat
• Theoretical understanding of the program's functioning, targets, beneficiaries, implementation and monitoring • Theory of conducting primary research • Theoretical learning about developing IEC and SOPs • Theoretical learning about MIS and its importance as a source of data for monitoring and analysis	• Practical exposure of the logistics of mobilising such a vast program across the state, its challenges and gaps at the field level • Understanding of the practicalities of primary research and suggesting interventions • Developing IECs and SOPs • Hands-on experience of data analysis

Challenges

- Insufficient linguistic inclusivity
- Myths & Superstitions

Usefulness

- Gained first hand knowledge of program functioning, implementation, monitoring, gap evaluation, and improvement opportunities
- Building connections; skill development

Learnings

- Functioning and staffing of RBSK
- HMIS and TeCHO
- Developing SOPs and IEC material
- Field level observation/ monitoring and evaluation
- Interdepartmental collaboration
- Data analysis and triangulation
- Data representation
- Summarising proposals by external partners
- Conducting primary research
- Functioning of public health system and refferals

KEY OBSERVATIONS

Aim: To assess the adherence to pre-surgical and post-surgical follow-up and rehabilitation regime in identified CHD cases in children

Objectives –

- To identify potential barriers to adherence to follow-up
- To elicit the social capital of patients diagnosed with CHDs
- To assess the factors affecting patient and caregiver's satisfaction
- To suggest potential interventions

Study Design: Observational study with cross-sectional design

Sample size taken for study: 30

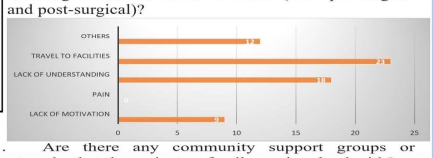
Sampling: Convenience sampling/Purposive sampling at UNMICRC, Ahmedabad

- Inclusion : Children aged 0-5 with CHDs visiting UNMICRC from Gujarat.
- Exclusion: Children above 5 years of age which CHDs, children not from Gujarat, parents of children who were not willing to participate for the interview

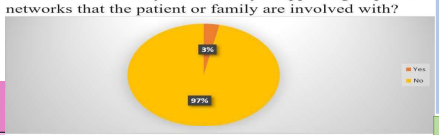
Limitation: Maternal factors and health institutes/hospitals visited prior to UN Mehta were not considered

. What barriers, if any, prevent the patient from attending follow-up appointments (both pre-surgical and post-surgical)?

. What barriers, if any, prevent the patient from adhering to rehabilitation exercises (both pre-surgical and post-surgical)?

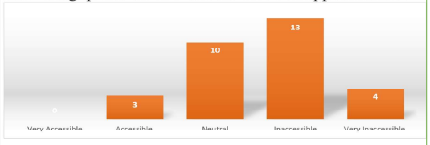


. Are there any community support groups or networks that the patient or family are involved with?



How often does the parents of patient discuss their health and follow-up care with friends/peers/relatives?

. How accessible are healthcare providers for answering questions or concerns between appointments?



OTHER FINDINGS

- Unnecessary delay of surgery/treatment due to undernutrition in children
- 67% of families bore additional expenses due to travel, medications or diagnostic tests
- Lack of education and financial freedom in the mother of the child despite being the primary caretaker and having to rely on the father for major treatment decisions
- 17% had post-op chronic conditions
- Only 5 out of 30 patients visited all follow-ups
- 18 out of 30 children felt unhappy/very unhappy and 20 patients showed distress/changed behaviour following visits

SUGGESTIONS

- Increase linguistic inclusivity in the organization for better understanding and input of ideas
- Ensure proper availability of HR/Infrastructure at DEICs and the MHTs; along with accurate and timely reporting of HR gaps
- Provide standardized guidelines to all organizations functioning as tertiary centers of RBSK
- Use of IT to enhance follow-ups, strengthen CHCs to improve care and
- Introduction of support groups through PRA via NGOs for better adherence to treatment regimen and emotional support and to make up for the lack of social capital
- Utilisation of CMAM platform and mandate visits to CMTC/NRC when required for CHD patients
- Conduct proper training and upskilling to ensure accurate and timely entry into HMIS and TeCHO from all districts.

Name: Dr. Sreyasi Chattopadhyay
Roll No: 1855
University Mentor: Dr. Deepti Sharma
Batch: MBA HM 28
Organisation Mentor: Dr. Manshi Mankiwala, RBSK Consultant

REPORT 6th MAY to 11th MAY

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 1 **From: ……6th May 2024…… to …..11th May2024……..**

Activity Done	• Studied about the Rashtriya Bal Swasthya Karyakram program, operational guidelines, Comprehensive Newborn Screening, DEIC operational guidelines • Learnt about the institutions for management of conditions under the 4D's, the referral and follow up • Learnt about Mobile Health Teams, Case Manager of BEIC, DEIC staffing and equipment requirements, staff roles & responsibilities • Studied in depth about congenital heart diseases (ASD, AVSD, ToF, Patent Ductus Arteriosus, Patent Foramen Ovale, TGA) and congenital blindness with a focus on Retinopathy of Prematurity and causative factors, screening at SNCU. • Literature review of above topics and discussions with facility mentor and peers to identify my area of interest.
Linking theory with practice at your organisation	• Learning about RBSK, NHM, SNCUs under RMNCHA+N in the National Health Program and Health Delivery Systems module enabled me to understand better and catch up faster • Several features of Essential Newborn Care during Health and Development module could be correlated • Correlated with Neonatal Mortality Rate and Infant Mortality Rate learnt in Demography and Types of Studies in Epidemiology • Review of Literature taught in Research methodology enabled me perform proper reviews of articles • IEC/BCC materials were better analysed with the knowledge of Communication Planning and Management • Worked with other interns from Indian Institute of Public Health and engaged in effective Group discussions regarding our learnings
Gaps identified in the working area.	• IEC/BCC materials being used under RBSK had too much information and the layout was cluttered • IEC materials didn't highlight the actual areas of work under RBSK • Certain DEIC centres other than the ones in and around Ahmedabad and Gandhinagar had vacant spots for speech

	therapists, audiologists, optometrists, ophthalmologists, physiotherapists and psychologists. • Certain DEIC centres lacked equipment for physiotherapy and rehabilitation
Suggestions for improvement	• Better layout and representation of information in the IEC and BCC materials • Ensuring proper availability of speech therapists, audiologists, ophthalmologists, optometrists, physiotherapists and psychologists at DEIC for delivery of quality services • Ensure proper availability of equipment required for rehabilitation and physiotherapy
Plan for the next week	• Identify area of interest and topic for research • Work on the questionnaire • Observe the department's daily operations and activities • Understand the role of various individuals

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 13th MAY to 18th MAY

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 2 **From:** …...13th May 2024…… to……18th May 2024……..

Activity Done	• Summarised a proposal by Neuberg Diagnostics Centre of Genomic Medicine titled "Newborn Screening Program: A baby's first step towards a Healthy Life" covering 7 biotest panels for Inborn Errors Of Metabolisms (IEMs)Studied and reviewed articles pertaining to IEMs and pilot programs. Cost-benefit analysis with literature review • Field Visit 1- To Vasan, Gandhinagar to observe staffing and functioning of Mobile Health Teams (MHTs) under RBSK. Observed functioning of ASHA in HBNC and Home visits by MO • Participated and observed Comprehensive Newborn Screening in 4 households • Observed Subcentres and activities of ANM, MPHWs and CHO. Comprehensive study and observation of HBYC, role of SBA • Field Visit 2- UN Mehta Institute of Cardiology, Ahmedabad to understand functioning of tertiary centres of referral under RBSK and trends in Congenital Heart Defects in current times. Understood trends in congenital heart defects, etiological factors and functioning of RBSK • Field Visit 3- District Early Intervention Centre, Gandhinagar. Observed the staffing, infrastructure and functioning of DEIC. Observed management of two cases- neuromotor rehabilitation of Down's Syndrome and talipes (club foot) • Identified 3 key areas of research and started designing the questionnaire
Linking theory with practice at your organisation	• Research Methodology- Review of articles for summarising report • Economics- Cost-Benefit Analysis concept • Health and Development, Health Systems, National Health Programs- functioning of RBSK and roles of its staff • Research Methodology and Epidemiology- to frame the type of study and questionnaire
Gaps identified in the working area.	• Apprehensions to avail treatment provided by RBSK free of cost due to lack of awareness • In one case, the neonate was not present at home for HBNC, therefore the required visit couldn't be conducted

	• Poor road infrastructure in certain peripheral areas that allow only one vehicle to pass through and may pose a challenge in cases of emergency • Delay to avail treatment (especially in asymptomatic cardiac defects) in spite of thorough counselling by RBSK teams at all levels due to lack of awareness worsening the condition • Lack of awareness of the importance of follow up and rehabilitation • Certain posts such as those of speech therapist and audiologist were not yet occupied in the DEIC posing a challenge to providing comprehensive care
Suggestions for improvement	• IEC/BCC to increase awareness about the importance of Early Intervention and follow-up. This may include communicating already successful cases to the community to increase motivation and mandating the presence of neonate at a stable location for 42 days to aid the conduction of all HBNC visits and Home visits by MO • Mandating follow-ups even after successful interventions through incentivised schemes and raising awareness about the same. Ensuring that proper staffing is available at DEIC
Plan for the next week	• Finalise topic for research and design the questionnaire • Begin collecting data for the study

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 20th MAY to 24th MAY

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 3 **From:**……..20th May 2024…… to ……24th May 2024……..

Activity Done	• Finalised topic for research as "Enhancing Pre- and Post- Surgery Follow Up and Rehabilitation Adherence in Congenital Heart Disease in Patients 0-5 Years Old: Barriers and Interventions" • Conducted reviews of articles and prepared questionnaire for the study. • Finalised questionnaire after discussion with mentor and submitted it to the organisation • Conducted a pilot survey to understand the drawbacks of the questionnaire and made relevant changes • Co-ordinated with UN Mehta Institute of Cardiology for the study from the coming Monday
Linking theory with practice at your organisation	• Research Methodology – review of articles, framing the questionnaire for the study, deciding the methodology and type of study • Epidemiology – deciding the appropriate type of study, concept and importance of conducting a pilot study
Gaps identified on the working area.	• Scarce literature pertaining to follow ups (both pre-surgery and post-surgery) and its adherence especially in India and much lesser in cases of CHDs • Sufficient lack of awareness about post-surgical complications that may occur post a successful surgery for the correction of CHDs • Lack of awareness about the possible outcomes of Asymptomatic CHDs such as failure to thrive in children
Suggestions for improvement	• Conducting more research on the factors affecting adherence to follow-ups and collecting constant feedback from all institutions regarding the difficulties faced with keeping up rehabilitation and pre-surgery and post- surgery follow ups • Conducting proper counselling sessions highlighting the importance of pre-surgical/post-surgical follow-ups and rehabilitation services and the drawbacks and possible complications of no adhering to them
Plan for the next week	• Report to UN Mehta Institute of Cardiology and Research Centre, Ahmedabad from Monday

	• Begin collection of data for the study from the relevant cases that are lost to follow-up or have a significant delay for follow-ups (both pre-surgical and post-surgical cases) • Understand the possible reasons for delay/lack of adherence to the advised schedule

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 27th MAY to 1st JUNE

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 4 **From:** ……..27th May,2024…… to ……1st June,2024……..

Activity Done	• Observed cases of CHDs in paediatric patients (symptomatic and asymptomatic)(pre-surgical and post-surgical) • Conducted 30 interviews of parents of patients 0-5 years for pre-surgical and post-surgical follow-ups and rehabilitations • Observed rehabilitation exercises and post-surgical counselling of geriatric cardiac patients
Linking theory with practice at your organisation	• Conducting Interviews- Research Methodology
Gaps identified on the working area.	• Insufficient adhering and follow-ups in children due to several factors • Lack of empowerment of women to take medical decisions of the children despite being primary caretakers • Lack of involvement in treatment of the sick child in fathers, despite being the financial provider and decision-maker of the treatment • Insufficient waiting area of the paediatric OPD as per the patient inflow • Overcrowding inside OPD due to allowance of more people not just the mother and father of patient • No proper nourishment of children despite repeated counselling and encouragement to gain weight from the specialists due to myths and beliefs • Poor cellular connectivity in the hospital causing trouble of communication regarding important decisions causing time wastage
Suggestions for improvement	• Conducting better education and awareness drives to encourage and motivate people to attend the pre- surgical and post-surgical follow-ups by enabling them to understand the various risks associated with being irregular and about nutrition in children • Providing proper waiting areas to accommodate the attenders of the people

	• To prevent overcrowding inside the OPD check-up room, assure only two attenders along with the patients • Ensure better cellular connectivity around the OPD
Plan for the next week	• Conduct discussions with mentor about findings during the visit • Analyse the data collected and start working on the report

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 3rd JUNE to 7th JUNE

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: **1855** **Stream:** MBA-HHM 28

Week no: 5 **From:**……..3rd June,2024…… to ……7th June,2024……..

Activity Done	• Reported back to CoH, shared findings with mentor, started data analysis • Analysed data for indicators in all 28 DEICs as per NQas standards in terms of services, HR, Infrastructure and number of patients treated under RBSK in Gujarat to identify the best performing and under-performing DEICs and to analyse the gaps • Prepared SOP for tele-rehabilitation services for speech therapy and locomotor disability rehabilitation to ensure proper continuity of treatment inspite of lack of rehabilitation therapists in nearby centres; as a pilot in Kutch and Banaskantha (in HWCs) and then across all DEICs and CHCs in the state • Prepared PPT to present the topic of research, key observations and suggested interventions to the State RBSK
Linking theory with practice at your organisation	• Research Methodology and Biostatistics- analysis of data • Principles of Management, Organisation behaviour, Communication Planning and Management - Preparing SOP for the tele-rehabilitation services for speech therapy and locomotor disabilities • Digital Health – e-Sanjeevani norms
Gaps identified on the working area.	• Several DEICs lacked proper HR to aid in the rehabilitation services and infrastructure with very few performing like they were supposed to. • No proper support groups to motivate or provide a sense of community to individuals with CHDs and their families, to continue rehabilitation services • Certain cases involved heavy travel expenses as the family resorted to renting vehicles for long-distance travel in the heat or paying for medication and other advised diagnostic tests
Suggestions for improvement	• Start certain support groups as a part of RBSK or in association with other NGOs where individuals and their families can openly discuss treatment and be motivated to continue rehabilitation and follow-ups

	• Ensure proper HR and infrastructure at all DEICs so they have a standardised performance • Introduce measures to ensure better travel facilities considering the distance to the required medical facility and climatic conditions
Plan for the next week	• Present the PPT to the State RBSK with the results, observations and suggested interventions • Start working on poster for presenting the work done during SIP to the college

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 10th JUNE to 15th JUNE

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 6 **From:** ……..10th June,2024…… to ……15th June,2024……..

Activity Done	• Finalised PPT on research findings and presented findings to 180 members of RBSK state consisting of Nodal officers, RPC, DPC, CPC, RCHO, School Health Assistants and Additional Director of Family Welfare at the RBSK Review meeting conducted at Gujarat National Law University • Participated in discussions and presentations on budgeting, roles of ANM/ASHA/CHO, Td 10 and 16 vaccination, DPT Booster 2 vaccination, data entry in TeCHO • Managed attendee registration and attendance for RBSK Review Meeting • Prepared a checklist to understand the status of MHT in the state after the meeting • Prepared a brief for submitting major findings of the research and suggested interventions to the State • Prepared a script for IEC short video to raise awareness on rehabilitative services of DEICs • Learnt how to use the TeCHO platform, observed data and performed data analysis • Attended webinar by CanKids on Retinoblastoma early diagnosis and timely interventions' importance
Linking theory with practice at your organisation	• Presenting PPT, attending meeting and preparing IEC – Communication Planning and Management, 7C's of BCC • Data Analysis – Classes on MS Package
Gaps identified on the working area.	• Many districts had gaps in the HR in the MHT and struggled to update data timely on the TeCHO platform • The meeting highlighted that several people were not aware of the free services provided at DEICs and there was significant gender discrimination for adhering to rehabilitative services • Many gaps in the data on the TeCHO platform • Severe lack of awareness about retinoblastoma, its early signs and importance of early detection among both RBSK Team workers and community leading to severely progressed cases approaching care delivery points

Suggestions for improvement	• Analyse the HR gap and ensure proper staffing as necessary • Conduct proper skill enhancement sessions on how to use TeCHO platform to ensure accurate and timely data entry • Proper IEC that highlights the benefits of attending rehabilitative services • Conduct proper skill enhancement sessions highlighting the importance of staying up-to-date about all statistically prevalent health conditions among children even beyond the 4D's to ensure proper delivery of care
Plan for the next week	• Continue to work on poster for submitting to the university • Learn to use HMIS

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 17th JUNE to 21st JUNE

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 7 **From:**……..17th June,2024…… to ……21st June,2024……..

Activity Done	• Learnt HMIS at Jilla Panchayat Gandhinagar from the District Data Entry Manager, Gandhinagar • Accessed data from TeCHO and HMIS and conducted data analysis • Observed Mamta Divas at Charedi Chapra, GD-2, Palaj (ANC and vaccination for children up to 6 years of age) • Made a compiled report of the research conducted • Worked on the SIP poster to be presented in college
Linking theory with practice at your organisation	• SWOT analysis- Principes of Management • Mamta Divas- National Health Programmes • Research Report- Research Methodology
Gaps identified on the working area.	• No gloves worn during vaccination of children and during administration of TT to women during ANC visits, dustbins kept uncovered at session sites • One ANC visit could not be conducted as transfer of case from Ahmedabad was not done on TeCHO • Some women reporting for ANC had low blood pressure and proper counselling wasn't provided • Incorrect or late data entry on HMIS/TeCHO
Suggestions for improvement	• Maintenance of proper hygiene during vaccination, ensure availability of covered dustbins at session site. • Proper counselling about diet and rest during ANC visits • Timely and accurate data entry into HMIS/TeCHO • Increase ease of transferring cases from one zone to another on TeCHO to ensure better access to ANC
Plan for the next week	• Continue working on SIP poster and report

Signature of the Student-

Approved by the IIHMR University's Mentor-

REPORT 24th TO 5th JULY

Name of the Organisation: National Health Mission, Gujarat

Area/ Department/ Project of Summer Internship Program: RBSK, CoH, Gandhinagar, Gujarat

Name of the Student: Sreyasi Chattopadhyay

Roll no: 1855 **Stream:** MBA-HHM 28

Week no: 8&9 **From:**……..24th June,2024…… to ……5th July,2024……..

Activity Done	• Data analysis done • Assembling SIP poster and report for submission • Field visit to Surendranagar, Gujarat to observe the Anganwadis at Rajpar and Jurovarnagar; SNCU, Delivery point and DEIC at District Hospital, Surendranagar • Week 9 - Field visit to Government schools in Moti Siholi and Motipura to observe school health screenings under RBSK by the MHTs
Linking theory with practice at your organisation	• Classes on MS package- Data Analysis and preparing poster and report • Health Delivery Systems and Health Policy – SNCUs at delivery points, referral system • NHP – concept of DEICs under RBSK, Anaemia Mukt Bharat Programme, PMJAY scheme under Ayushmann Bharat
Gaps identified on the working area.	• Severe lack of awareness about malnutrition in children and methods to tackle it • Interventions being delayed due to undernutrition, developmental delays as a result of undernutrition. Anaemia, dental caries and refractive errors of the eye very common in school aged children • Interventions being delayed due to undernutrition and no counselling about visits to CMTC/NRC that is further worsened by apprehensions to stay for 15 days at the institute • No use of gloves, masks or headcaps in the SNCUs, and no mandatory referral to DEIC for screening • DEIC non-functional since the past 2-3 years due to lack of infrastructure at the DH complex in Surendranagar
Suggestions for improvement	• Conduct proper counselling sessions at Anganwadis to tackle undernutrition in children and prevent delay in treatment. • Development and distribution of standardised IEC material for better adherence to counselling • Mandate visits to CMTC/NRC

	• Proper maintenance of protocol and hygiene in SNCUs to prevent contamination and infection of neonates • Measures to utilise already available infrastructure to temporarily run a DEIC and immediate measures to establish a permanent one • Conduct proper awareness and counselling about IFA supplementation, dental hygiene and dietary habits, referral to optometrist at DEIC for refractive errors
Plan for the next week	• Visit school health screenings by MHT in government schools (visited in week 9) • Submit SIP poster and report

Signature of the Student-

Approved by the IIHMR University's Mentor-

COMPILED REPORT

Name of the Organization: NHM Gujarat, Gandhinagar

Department of Summer Internship Program: Rashtriya Bal Swasthya Karyakram

Name of the Student: Sreyasi Chattopadhyay

Roll Number: 1855

Stream: MBA Hospital and Health Management (MBA HM-28)

Activity Done	Overview of the School Health-Rashtriya Bal Swasthya Karyakram (SHRBSK) Initially, I studied the operational frameworks of SHRBSK program. This included the guidelines for Comprehensive Newborn Screening, the operational procedures of RBSK and guidelines for the functioning of District/Block Early Intervention Centres (DEICs/BEICs). I familiarized myself with the management institutions for conditions under the 4D's in Gujarat. This foundational knowledge was critical for understanding the referral and follow-up processes within the program. Additionally, I studied about the staffing, roles and responsibilities of the members of the Mobile Health Teams and DEICs (staffing and equipment requirements essential for the efficient functioning). Clinical and Field Observations Field visits provided me with an opportunity to gain hands-on experience and insights into the practical aspects of healthcare delivery under the RBSK program. 1. **Vasan, Gandhinagar**: In depth observation of the operational dynamics of Mobile Health Teams (MHTs) and witnessed the crucial role played by Accredited Social Health Activists (ASHA) in Home-Based Newborn Care (HBNC) visits. This helped me understand the on-ground challenges in implementing healthcare programs. Participated in comprehensive newborn screenings performed by the Medical Officer of the MHT in four households, observing the application of screening protocols. In addition to this, I observed the functioning of the ANMs, MPHWs, and CHOs at the sub-centre level; their engagement and role

	in Home-Based Young Child Care (HBYC), contribution to the Anaemia Mukt Bharat programme and understanding the role of Skilled Birth Attendants (SBA). 2. **UN Mehta Institute of Cardiology, Ahmedabad**: This field visit allowed me to understand the functioning of tertiary referral centres under RBSK. I gained insights into current trends in congenital heart defects, their etiological factors, gaps within the current system and how these could be managed under the RBSK framework. 3. **District Early Intervention Centre, Gandhinagar**: Observed the staffing, infrastructure, and management of cases such as neuromotor rehabilitation for Down's Syndrome and talipes (club foot). 4. **Mamta Divas**: Observed 15 cases at Mamta Divas at Anaganwadi Charedi Chapra, GD-2, Palaj, where ANC and vaccinations for children up to 6 years were conducted. This visit provided insights into maternal and child healthcare delivery at the community level and functioning of an Anganwadi 5. **Anganwadis (rural and urban), SNCU at delivery points and DEIC, Surendranagar:** Observed the functioning of Anganwadis, screening by MHTs and common defects in that age group. Observed functioning of the SNCU at District Hospital, Surendranagar and the DEIC at the DH complex. This visit helped me gain insights of the ground realities and challenges faced by the RBSK team outside the capital city of Gandhinagar 6. **School Health Screenings, Government Schools at Siholi and Motipura:** Observed the functioning of RBSK MHTs in Government school screenings for children 6-18 years old and gained insights on the the common conditions under the 4D's in this cohort and steps taken to tackle it. <u>Proposal Review: Inborn Errors of Metabolism (IEMs)</u> I summarized a proposal by Neuberg Diagnostics Centre of Genomic Medicine titled "Newborn Screening Program: A baby's first step towards a Healthy Life." The proposal covered seven biotest panels for Inborn Errors of Metabolism (IEMs). I reviewed articles related to IEMs and various pilot programs and performed a cost-benefit analysis through literature review. <u>Research and Data Analysis</u> **Research Topic**: I chose the topic "Enhancing Pre- and Post-Surgery Follow-Up and Rehabilitation Adherence in Congenital Heart Disease in

	Patients 0-5 Years Old: Barriers and Interventions." This topic was selected based on a comprehensive literature review and discussions with my mentor. **Questionnaire Development**: I conducted thorough reviews of existing literature to prepare a detailed questionnaire and conducted a pilot survey. This was to ensure that the final questionnaire was relevant to the best possible extent to capturing the necessary data. **Data Collection**: I conducted 30 interviews with parents of paediatric patients between ages of 0-5 suffering from CHDs at UN Mehta Institute of Cardiology and Research Centre, Ahmedabad focusing on both pre-surgical and post-surgical follow-ups and rehabilitation adherence. I also observed rehabilitation exercises and post-surgical counselling sessions for geriatric cardiac patients, providing a broader perspective on cardiac care. <u>Program Evaluation and Improvement Proposals</u> **Data Analysis**: I conducted an analysis of the 28 DEICs according to the NQAS (National Quality Assurance Standards)- based on services, human resources, infrastructure, and patient footfall in the various departments. This analysis identified the best and under-performing DEICs and enabled me to understand the gaps in service provision. **Improvement Proposals**: I prepared a Standard Operating Procedure (SOP) for tele-rehabilitation services targeting speech therapy and locomotor disability rehabilitation to address the gap of speech therapists and rehabilitation therapists in several districts. This proposal aimed to pilot program at HWCs in Kutch and Banaskantha followed by state wide implementation across all DEICs/CHCs. <u>Presentations and Reporting</u> **RBSK Review Meeting**: I presented my research findings at a state-level RBSK Review meeting held at Gujarat National Law University, attended by 180 members, including Nodal officers, RPC, DPC, CPC, RCHO, School Health Assistants of all districts of Gujarat and the Additional Director of Family Welfare. The presentation covered key observations and suggested interventions to enhance the program's effectiveness particularly pertaining to CHD rehabilitation and follow-ups. I also participated in discussions about the budgeting of the programme in individiual districts, lack of HR, role enlargement of ANM/ASHA/CHO, incorporation of Td 10 and 16, DPT Booster 2 vaccination and data entry in TeCHO.

	Reports and Checklists: I prepared a detailed checklist to assess the status of Mobile Health Teams and gaps in their HR post-meeting and a comprehensive brief summarizing major research findings and suggested interventions for submission to the state. **Awareness Campaigns**: I developed a script for an IEC short video aimed at raising awareness about rehabilitative services offered by DEICs. <u>Administrative and Management Skills</u> **Event Management**: I managed attendee registration and attendance for the RBSK Review Meeting, gaining experience in event coordination and logistics. **Data Systems**: I learned to use the TeCHO platform and the Health Management Information System (HMIS) at Jilla Panchayat Gandhinagar. I performed data analysis and triangulation after accessing data and represented them for monitoring and evaluation.
Linking theory with practice at your organization	• National Health Programmes - About NHM, RBSK (DEICs and MHTs), Anaemia Mukt Bharat, SNCU's functions under the RMNCHA+N wing • Health Policy and Health Delivery Systems- Referral systems, staffing of Subcentres, PHC's, CHC's and tertiary referral centres, SNCU's infrastructure at Delivery points such as District Hospitals • Health and Development- Essential Newborn Care concept, Mamta Divas • Biostatistics – analysis of data of DEICs, and data obtained from HMIS, TeCHO • Demography – Infant Mortality Rate, Neonatal Mortality Rate • Epidemiology – types of study, concept and importance of pilot study • Research Methodology – Literature review, selection of appropriate study design, Methodology and sample size, preparing questionnaire, conducting interviews • Communication Planning and Management- review of IEC/BCC related to RBSK, conducting group discussions, preparing SOP, 7C's of SBCC, developing script for IEC short video, Presenting findings to the officials at RBSK review meeting • Digital Health – e-Sanjeevani norms • Economics and Health financing- Cost-benefit Analysis, Discussions about Budgeting at RBSK review meeting at GNLU • Financial Management- summarising proposals of external agents by analysing the present value and future values of current investments on projects • Organisation Behaviour- Preparing SOP and assigning roles to the staff • Principles of Management- SWOT Analysis, Preparing SOP

	• Classes on MS Package- using Excel for data analysis, preparing PPT on PowerPoint, combined final report on MS word
Gaps identified in the working area.	IEC/BCC Materials, Awareness Issues and lack of literature The IEC/BCC materials had too much information, cluttery layout, and failed to highlight the actual areas of work effectively. Apprehensions to avail free treatment provided by RBSK were common due to a lack of awareness. Despite thorough counseling by RBSK teams, there was a delay in availing treatment, not only for CHD, but for all asymptomatic cases, exacerbating the condition and sometimes even leading to developmental delays due to delayed interventions. Awareness of the importance of follow-up and rehabilitation was also lacking, contributing to poor health outcomes. In addition to this, there was significant lack of research and literature on failure to follow-up or to attend rehabilitation services, the outcome of asymptomatic CHDs and post-surgical complications due to lack of follow-up hindering quality service provisions DEICs and Human Resources DEICs in majority of districts faced significant human resource challenges, with vacant positions for speech therapists, audiologists, optometrists, ophthalmologists, physiotherapists, and psychologists. Additionally, certain DEIC centers lacked essential equipment for physiotherapy and rehabilitation, further hindering comprehensive care. A peculiar finding in the district of Surendranagar was that the DEIC was non-functional since the past 2-3 years due to lack of infrastructure. This was not identified in the DEIC data uploaded on HMIS due to faulty data entry. Several children from the Anganwadis and the SNCU graduates were not screened effectively by trained HR because of this. After discharge from the SNCU, the neonates were only screened at the OPD (not referred to any DEIC) and cleared which was against protocol Mobile Health Teams (MHT) and Human Resource Gaps Many districts had gaps in the human resources in Mobile Health Teams (MHT) and struggled to update data timely on the TeCHO platform. The HR gaps in MHTs not only caused overburdening of responsibilities to the staff present, but also hindered the effective implementation of RBSK initiatives and timely interventions. Community, Infrastructure and Logistical Challenges In some peripheral areas, poor road infrastructure posed challenges,

	allowing only one vehicle to pass through and creating difficulties in emergencies. In one instance, a neonate was not present at home for the Home-Based Newborn Care (HBNC) visit, preventing the required check-up. The under-nourishment of children with CHDs, despite repeated counseling and encouragement from specialists, was attributed to myths and beliefs. Poor cellular connectivity in UNMICRC caused communication issues, leading to time wastage and delays in important decision making. In addition to this, the infrastructure for diagnostic tests and waiting area in the pediatric cardiac OPD was insufficient as compared to the footfall of patients causing overcrowding and extremely long turnabout time and discomfort. There was also a problem of overcrowding inside the OPD room as 4 doctors were attending to the patients and more than 2 attenders were allowed with the child. <u>Gender Dynamics and Family Involvement</u> There was a significant imbalance in gender dynamics affecting child health outcomes. Women, despite being primary caretakers, lacked empowerment to make medical decisions for their children. Conversely, the fathers being the financial providers and decision-makers, showed insufficient involvement in the treatment of sick children. The RBSK review meeting revealed significant gender discrimination against girls and their adherence to follow-ups and rehabilitative services, further impacting health outcomes. <u>Lack of attention to social capital and supportive services other than treatment</u> There were no proper support groups to motivate or provide a sense of community or emotional support to individuals with CHDs and their families. In addition to this, lack of travel support and provision of CHD related cardaic care and rehabilitation services in local centers (such as CHCs), led to families incurring heavy travel expenses by renting vehicles for long-distance travel or paying for medications and diagnostic tests. The long travels in summer months also acted as a deterrent to follow-ups. <u>Data Management</u> There were significant gaps and incorrect or late data entry on Health Management Information System (HMIS)/TeCHO. This usually led to confusion, delayed or incorrect decision making that had to be identified and corrected later. Many districts had no data entry operator, or they didn't understand the importance of real-time entry/early entry (before the 5th of every month). <u>Insufficient awareness about other conditions outside the 4D's</u>

There was inadequate awareness about disease and conditions other than the 4D's which were common in children for example-retinoblastoma,IEMs; its early signs, and the importance of early detection among both RBSK team workers and the community leading to severely progressed cases approaching care delivery points that cannot be managed as effectively as it could have been earlier

Lack of adherence to proper hygiene protocol in SNCU, Surendranagar

The SNCU at Surendranagar District hospital provided no gloves, masks or headcaps before entry. Most of the staff did not wear masks, headcaps or gloves while handling the LBW neonates leaving tremendous scope for infection.

Hygiene and Logistical issues during vaccinations in Mamta Divas for children and ANC visits

Visits to Anganwadis for Mamta Divas revealed that no gloves were being worn during child vaccinations and the administration of tetanus toxoid (TT) to women during ANC visits. In addition to this, the dustbins containing discarded syringe wrappers and cotton were uncovered and posed a threat of contamination and infection to the toddlers who often touched its contents curiously.
One ANC visit was missed because the transfer of the case from Ahmedabad was not completed on TeCHO. Some women reporting for ANC had low blood pressure but did not receive proper counseling.

Undernutrition in Children

Despite repeated counseling and encouragement from specialists to gain weight, many children were not receiving proper nourishment due to prevalent myths and beliefs among the community. There was no referral being made to CMTC/NRC for SAM children. Failure to thrive was seen prominently in children with CHDs and this caused significant delay of surgical interventions, which are more effective the earlier it is done. Majority of children being screened in government schools suffered from anemia. The issue of undernutrition is a significant challenge to the overall health and development of children under the RBSK program.

Defects in School Children identified in Screenings by MHTs

Besides anemia, dental caries and refractive errors of the eyes were very common in school going children. They were not properly counseled about the importance of IFA supplementation, or adherence to the prophylactic/therapeutic regimen. Majority did not take IFA due to myths and superstitions. The high prevalence of dental caries showed lack of

	awareness about oral hygiene. Majority of the cases suffering from refractive errors were unaware of the services provided by the NPCBVI.
Suggestions for improveme-nt	<u>IEC/BCC Materials and Awareness</u> Improve the IEC and BCC materials under SHRBSK in Gujarat, by enhancing the layout and representation of information. This would make the materials more user-friendly and focused on key areas of RBSK work. Additionally, IEC/BCC materials must be targeted towards increasing awareness and the importance of early intervention procedures and follow-up visits. This includes communicating the successful cases within the community to motivate others and mandating the presence of neonates at a stable location for 42 days to facilitate Home-Based Newborn Care (HBNC) visits and home visits by medical officers. Awareness about other programmes and services provided by the government should also be included (eg- AMB, NPCBVI) to ensure comprehensive care. <u>Human Resources in MHTs and HR/Infrastructure at DEICs</u> Ensuring the availability of qualified human resources is crucial. Speech therapists, audiologists, ophthalmologists, optometrists, physiotherapists, and psychologists should be available at the DEICs to deliver quality services. Similarly, MHTs should have proper HR to carry out services effectively. Proper equipment for rehabilitation and physiotherapy should also be ensured to enhance the effectiveness of care provided. Similarly, an analysis of the HR gap in the MHTs is necessary to ensure proper staffing, and continuous monitoring and adjustment should be implemented. Similarly, proper HR and infrastructure at all DEICs should be standardized to ensure consistent performance across the board. Measures to utilise already available infrastructure to run a temporary DEIC should be taken at Surendranagar and construction of a permanent functional DEIC should be treated as a priority. <u>Follow-Ups and Rehabilitation</u> Follow-ups and rehabilitation services are critical for long-term health outcomes. To encourage adherence to follow-ups even after successful interventions, incentivized schemes should be implemented, and awareness about the importance of follow-ups should be raised. Conducting research on factors affecting adherence to follow-ups and collecting constant feedback from institutions about the challenges faced in maintaining rehabilitation and pre-surgery and post-surgery follow-ups are essential. Proper counselling sessions should highlight the importance of these follow-ups and the potential complications of not adhering to them. The awareness sessions of follow-ups should be crafted keeping in mind that the primary caretaker of the child is the mother in most of the cases with a

	primary or secondary education, rarely with financial freedom to take a decision. The guardian interacting most with the child should be designated as the primary decision maker of the child's treatment Children in schools suffering from refractive errors should be referred to the optometrist at DEIC or the ophthalmologist at the DH. Provide proper IEC that highlights the benefits of attending rehabilitative services, age-appropriate nutritional information should be mandated. <u>Data entry on TeCHO/HMIS</u> Skill enhancement sessions on using the TeCHO/HMIS platform for accurate and timely data entry should be conducted. Data entry operators should ensure proper entry and be available in all districts. <u>Awareness of the team regarding other defects</u> The RBSK Team should stay up-to-date not only about the 4D's but all common conditions affecting children (especially inborn errors of metabolism and common childhood cancers) for early intervention. <u>Waiting Areas and OPD Management</u> Proper waiting areas should be provided to accommodate attenders and prevent overcrowding inside the OPD check-up room by allowing only two attenders with the patient, diagnostics should be strengthened to bear the patient load at UNMICRC. Better cellular connectivity around the OPD is also essential to improve communication and efficiency in service delivery. <u>Increasing Social Capital of Patients</u> Introduction of support groups via PRA through NGOs, social welfare schemes or with parents of children suffering from CHDs as volunteers. These support groups should include workshops that focus on care and nutritional management of children with CHDs. Increase in social capital will provide better emotional support and motivation to follow-up throughout the treatment. The child will also react better to the treatment and be more compliant if the process is normalised by being around similar peers. <u>Undernutrition in children (with CHDs or otherwise)</u> Referrals should be mandated to CMTC/NRCs when deemed necessary for children failing to thrive due to CHDs, utilization of CMAM platform should also be done. ANM, Anganwadi workers and CHO should be

	involved for better health and nutrition education and awareness for patients with CHDs. IEC material having standardized nutritional guidelines as per the age of the child should be developed and distributed at all delivery points. Nutrition counselling by pediatric dietician, distribution of standardized IEC regarding nutrition should be ensured at UNMICRC and enquiring about nutritional status of the child during routine telephonic follow-ups should be included to track growth and nutritional status. In addition to this awareness sessions about the importance of proper nutrition and IFA supplements should be done in schools, and dietary counselling should also include the ill-effects of high sugar diet and lack of dental hygiene on the oral health of the child. <u>Travel and Accessibility</u> Measures should be taken to reduce travel as much as possible by strengthening the CHCs for rehabilitative services (cardiac and otherwise). IT platforms may also be utilised for this. When this is not possible better travel facilities, considering the distance to the required medical facility and climatic conditions should be provided. Enhancing the ease of transferring cases from one zone to another on TeCHO will ensure better access to antenatal care (ANC). <u>Following proper protocol during vaccination at Mamta Divas and SNCUs at Delivery points</u> Maintaining proper hygiene during vaccination of children and pregnant women in Mamta Divas and providing proper counselling about diet and rest during ANC visits should be mandated. The skill enhancement sessions of ANMs should be conducted regarding needle safety and sterile measures to be followed during vaccination. The dustbins containing discarded cotton, syringe wrappers etcat the Mamta Sessions are to be mandatorily covered in order to reduce scope of infection to children. Proper maintenance of hygiene is crucial in SNCUs to prevent infection and ensure proper recovery of neonates in a sterile environment. SNCU graduates should also be referred to DEIC for proper screening and early interventions of possible developmental delays.

Signature of the Student-

Approved by the IIHMR University's Mentor