Internship Training

at

STATE HEALTH SOCIETY, BHOPAL. (MP) NATIONAL HEALTH MISSION

Study/Project Title

Monitoring & evaluation of Chetna mobile app under RBSK program in two district of M.P. that is Badwani & Gwalior

by Ankita sharma

Enroll No. PG/15/009

Under the guidance of

Dr. B S Singh Associate professor

Post Graduate Diploma in Hospital and Health Management

2015-17



International Institute of Health Management Research New Delhi

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NATIONAL HEALTH MISSION MADHYA PRADESH

8, Arera Hills, Old Jail Road, Bhopal

S.NO./NHM/HR/RBSK/2017/

Date...../2017

This is to certify that Miss Ankita Sharma has successfully completed her Dissertation in "Rashtriya Bal Swasthya Karyakaram". She has successfully completed her Project on "Monitoring & evaluation of chetna mobile app under RBSK program in two District of MP that is Badwani & Gwalior".

We wish her all the best for her future endeavors.

Head Human Resource

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Ankita Sharma student of Post Graduate Diploma in Hospital and Health Management (PGDHM) from International Institute of Health Management Research, New Delhi has undergone internship training at STATE HEALTH SOCIETY, BHOPAL. (MP) NATIONAL HEALTH MISSION from 27/02/2017 to 10/5/2017.

The Candidate has successfully carried out the study designated to him during internship training and his approach to the study has been sincere, scientific and analytical.

The Internship is in fulfillment of the course requirements.

I wish him all success in all his future endeavors.

Dr. A.K. Agardval

Dean, Academics and Student Affairs IIHMR, New Delhi Dr. B S Singh Associate professor

IIHMR, New Delhi

Certificate of Approval

The following dissertation titled Monitoring & evaluation of chetna mobile app under RBSK program in two district of M.P. that is badwani & Gwalior NHM MP is hereby approved as a certified study in management carried out and presented in a manner satisfactorily to warrant its acceptance as a prerequisite for the award of Post Graduate Diploma in Health and Hospital Management for which it has been submitted. It is understood that by this approval the undersigned do not necessarily endorse or approve any statement made, opinion expressed or conclusion drawn therein but approve the dissertation only for the purpose it is submitted.

Dissertation Examination Committee for evaluation of dissertation.

Name

Dr. S.K. Patel

Dr. B.S. Sigh

Signature (

5



RBSK

Insultant HR

Certificate from Dissertation Advisory Committee

This is to certify that Ms. Ankita Sharma a graduate student of the Post- Graduate Diploma in Health and Hospital Management has worked under our guidance and supervision. She is submitting this dissertation titled Monitoring & evaluation of chetna mobile app under RBSK program in two district of M.P. that is badwanl & Gwalior NHM MP in partial fulfillment of the requirements for the award of the Post-Graduate Diploma in Health and Hospital Management. This dissertation has the requisite standard and to the best of our knowledge no part of it has been reproduced from any other dissertation, monograph, report or book.

Dr.B.S.Singh Associate professor,

IIHMR, NEW DELHI

INTERNATIONAL INSTITUTE OF HEALTH MANAGEMENT RESEARCH, NEW DELHI

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled Monitoring & evaluation of chetna mobile app under RBSK program in two district of M.P. that is badwani & Gwalior NHM MP has been submitted by Ankita Sharma Enrollment No PG/15/009 under the supervision of Dr. B S singh for award of Postgraduate Diploma in Hospital and Health Management of the Institute carried out during the period from 10/4/2017 to 10/5/2017 embodies my original work and has not formed the basis for the award of any degree, diploma associate ship, fellowship, titles in this or any other Institute or other similar institution of higher learning.





FEEDBACK FORM

Name of the Student: ANKITA SHARMA

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Table of Contents

CONTENTS	PAGE NO.
Acknowledgement	10
Abbreviations	11
ORGANIZATION PROFILE	12
NHM MP introduction	13
Core values, Vision and Mission	13-14
NHM goal	14-15
State profile	16-25
PROJECT REPORT	26
Introduction	27-36
Problem statement	37
Rationale	38
Review of Literature	39-41
Specific Objective	42
Methodology	43
Limitations	44
Findings	45-53
Result	54
Recommendation	55
Conclusion	56
References	57-58
Annexure	59-61

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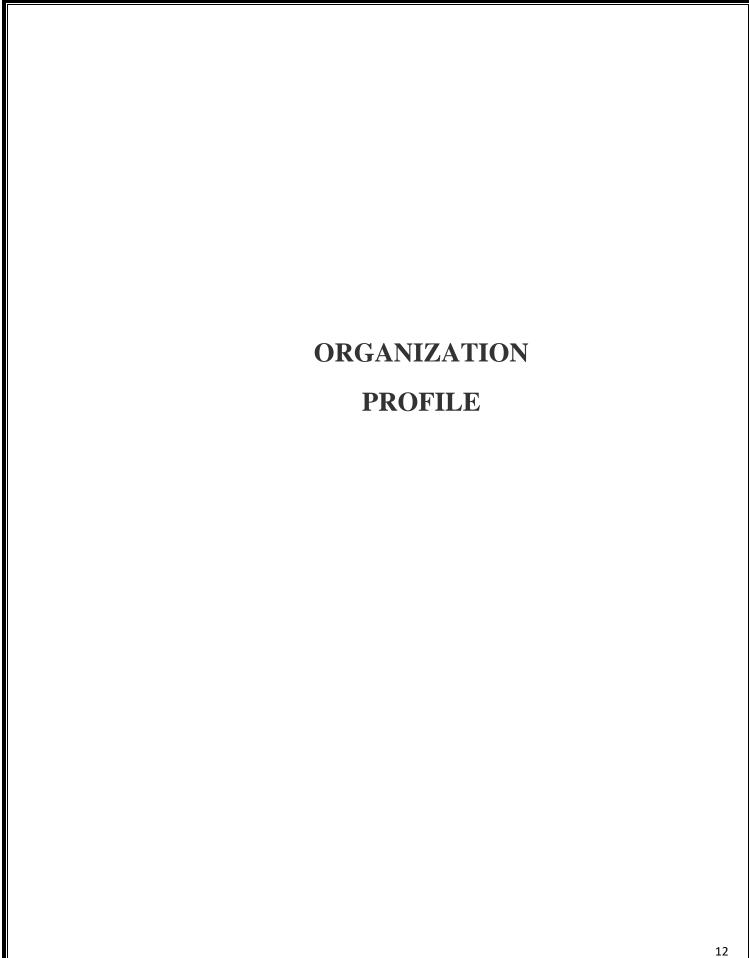
I am highly indebted to Dr. Rajesh tripathi, state consultant RBSK support team for providing me with this opportunity to be a part of NHM MP RBSK CHETNA APP team and giving me time and space from the induction and training schedule, to perform my work.

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Abbreviations

ICDS	Integrated Child Development Services
AWC	Anganwadi Centre
AWW	Anganwadi Worker
AWH	Anganwadi Helper
SC and ST	Schedule Caste and Schedule Tribe
ASHA	Accredited Social Health Activist
MIS	Management Information System
WHO	World Health Organization
PRIs	Panchayati Raj Institutions
SNP	Supplementary Nutrition Programme
THR	Take Home Ration
SHGs	Self Help Groups
PHC	Primary Health Centre
СНС	Community Health Centre
FRU	First Referral Unit
N-TSU	Nutrition-Technical Support Unit
MMR	Maternal Mortality Ratio
M & E	Monitoring and Evaluation
LS	Lady Supervisor
LQAS	Lots Quality Assurance Sample
CDPO	Child Development Programme Officer
DPO	District Programme Officer
MoHFW	Ministry of Health and Family Welfare
MoWCD	Ministry of Women and Child Development
IEC	Information Education Communication
BCC	Behaviour Change Communication
IFA	Iron Folic Acid
MDGs	Millennium Development Goals
ANMs	Auxiliary Nurse midwives
Mos	Medical Officers
DRG	District Resource Group
BRG	Block Resource Group
PNC	Post Natal Care
ECD	Early childhood Development



NAIONAL HEALTH MISSION STATE HEALTH SOCIETY, MADHYA PRADESH

Introduction

National Rural Health mission- (2005- 2012)

The National Rural Health mission (NRHM) was launched by the Hon'ble Prime Minister on 12th April 2005, to provide accessible, affordable and quality health care to the rural population, especially the vulnerable groups.

The key features in order to achieve the goals of the Mission include making the public health delivery system fully functional and accountable to the community, human resources management, community involvement, decentralization, rigorous monitoring & evaluation against standards, convergence of health and related programs form village level upwards, innovations and flexible financing and also interventions for improving the health indictors.

The National Health Mission-

The Union Cabinet vide its decision dated 1st May 2013 has approved the launch of National Urban Health Mission (NUHM)

The National Health Mission (NHM) encompasses its two Sub-Missions, the National Rural Health Mission (NRHM) and the newly launched National Urban Health Mission (NUHM). The main programmatic components include Health System Strengthening in rural and urban areas- Reproductive-Maternal- Neonatal-Child and Adolescent Health (RMNCH+A), and Communicable and Non-Communicable Diseases. The NHM envisages achievement of universal access to equitable, affordable & quality health care services that are accountable and responsive to people's needs.

Vision of the NHM-

"Attainment of Universal Access to Equitable, Affordable and Quality health care services, accountable and responsive to people's needs, with effective inter-sectoral convergent action to address the wider social determinants of health".

Core Values-

- < Safeguard the health of the poor, vulnerable and disadvantaged, and move towards a right based approach to health through entitlements and service guarantees
- < Strengthen public health systems as a basis for universal access and social protection against the rising costs of health care.
- Empower community to become active participants in the process of attainment of highest possible levels of health.
- < Institutionalize transparency and accountability in all processes and mechanisms.
- < Improve efficiency to optimize use of available resources.

Goals of NHM-

- 1. Reduce MMR to 1/1000 live births
- 2. Reduce IMR to 25/1000 live births
- 3. Reduce TFR to 2.1
- 4. Prevention and reduction of anaemia in women aged 15–49 years
- 5. Prevent and reduce mortality & morbidity from communicable, non-communicable; injuries and emerging diseases
- 6. Reduce household out-of-pocket expenditure on total health care expenditure
- 7. Reduce annual incidence and mortality from Tuberculosis by half

- 8. Reduce prevalence of Leprosy to <1/10000 population and incidence to zero in all districts
- 9. Annual Malaria Incidence to be <1/1000
- 10. Less than 1 per cent microfilaria prevalence in all districts.
- 11. Kala-azar Elimination by 2015, <1 case per 10000 population in all blocks.

Components of financing and support -

This financing to the state will be based on the state's Programme

Implementation Plan (PIP). The PIP shall have following parts:

Part I: NRHM RCH Flexipool

Part II: NUHM Flexipool,

Part III: Flexible Pool for Communicable Diseases

Part IV: Flexible Pool for Non Communicable Diseases, Injury and Trauma

Part V: Infrastructure Maintenance

State profile

Madhya Pradesh is the 2nd largest state in the republic of India, with nearly 6% of the country's population & stands at 25th position in the level of literacy. The density of population is 196, with 22.27% of tribal population. The state is characterized by geographical, social and cultural variations. The state is among the high focus states of the country, because of poor Human development index, literacy, infrastructure facilities, availability of health manpower, and health outcomes. The majority of tribal communities continue to be vulnerable even today in comparison to the general population and this is reflected in the socio-economic realities and problems of these groups such as land alienation, indebtedness, deprivation of forest rights, which is further compounded by low literacy and high school drop-out rates and of extreme poverty.

Madhya Pradesh is centrally located in national map as geographical heart of India. The state is surrounded on the west by Gujarat, on the northwest by Rajasthan, on the northeast by Uttar Pradesh, on the east by Chhattisgarh, and on the south by Maharashtra. The state straddles the Narmada River, which runs east and west between the Vindhya and Satpura ranges; these ranges and the Narmada are the traditional boundary between the north and south of India. Madhya Pradesh is a medley of various castes and communities. It is the second largest state of India by area which almost 9.5% of area of the country. Almost 31% of this area is covered by forest. The state has almost 6 % of national population. Population growth rate of the state is 24.34 where as national average is 21.34%.

The RCH II programme in Madhya Pradesh shall seek to address the attainment of goals as enshrined in Madhya Pradesh Population Policy. The programme is also consistent with the mandates of Millennium Development Goals, Common Minimum Programme and ICPD's Programme of Action. The state is implementing the NHM /RCH-II activities since last three years and the performance of the state is improving each year with the committed efforts from the state government.

Important statistics of MP-

	India	Madhya Pradesh
Area (in thousand square	3287	308
kilometers)		
Population 2011 Census		
(000)	1210193	72627
Total	623724	37612
Males	586469	35015
Females		
population growth rate (17.6	20.3
Decade 2001-2011)		
Total Child Population (0-6		10,809,395
Age		5,636,172
Male		5,173,223
Female		
Density/km2	382	236
Sex ratio (female \1000	940	931
male)		
Percentage rural population	66.8	72.4

Health profile of Madhya Pradesh State as compared to India figures

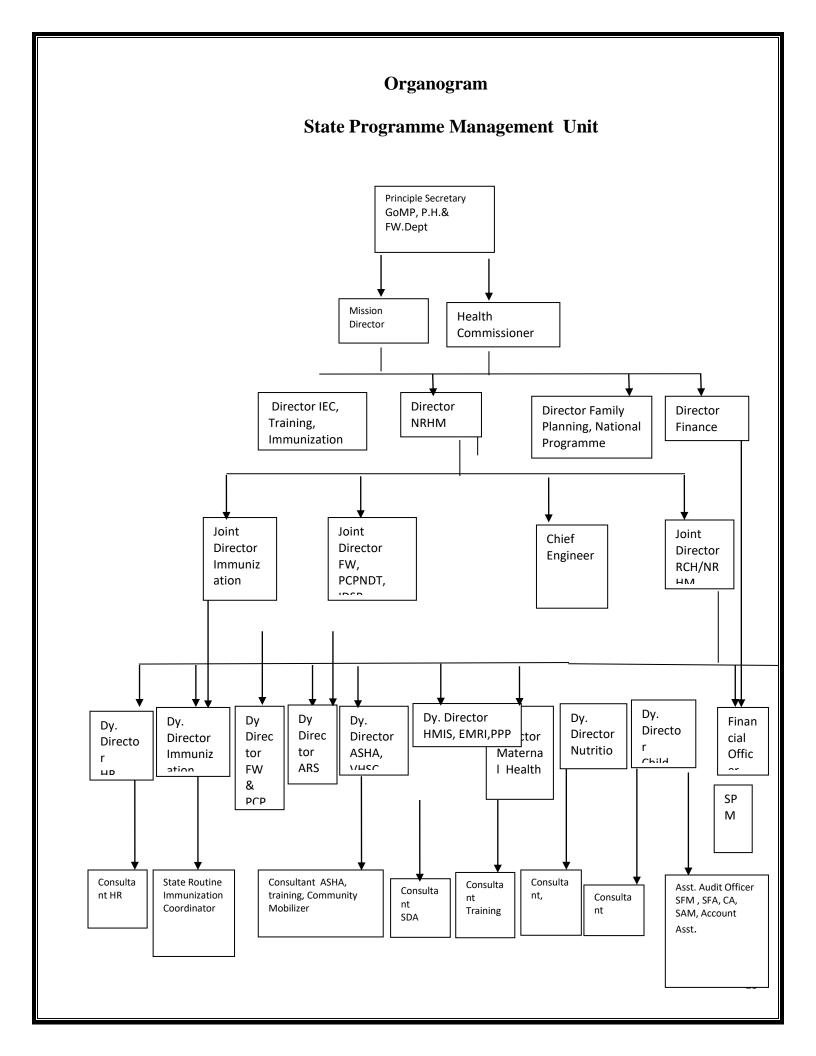
Indicators	MP	India
Crude Birth Rate (SRS 2013)	26.3	21.4
Crude Death Rate (SRS	8	7
2013)		
Infant Mortality Rate(SRS	54	40
2013)		
Maternal Mortality Rate	230	178
(SRS 2010-12)		
Crude fertility rate (SRS	2.9	
2013, AHS 2012-13)		

Health Infrastructure of Madhya Pradesh

S. No	Institute	Position as on 31/1/2015
	District Hospital	51
	Total number of beds	13700
	Civil Hospital	66
	Total number of beds	4467
	Community Health Centre	334
	Total number of beds	10020
	Primary Health Centre	1171
	Total number of beds	7026
	Sub Health Centre	9192
	Total number of beds	400 (approx.)
	Civil dispensary(Urban)	92
	Urban Family welfare center	96
	T. B . Hospitals	08
	(Bhopal, Indore, Gwalior, Chaterpur, Ujjain, Sagor,	
	Ratlam, Chindwada)	
	Chest center (Indore)	01
	Poly clinic	06
	Trauma Centre(Shivpuri, Ujjain, shahdol, Ratlam,	08
	Guna, Seoni, Narsinghpur, Sagore)	
	Gram Arogya Kendra	50,000

Amount of budget allocated to health sector by state (In lakhs) $\,$

Year	Total State budget	Health Budget of	Percentage of health
		state	budget from total
			budget
2010-2011	5342939.00	1831113.67	3.42
2011-2012	6584563.00	216580.29	3.28
2012-2013	8003098.00	284257.34	3.55
2013-2014	9194686.00	316644.44	3.44
2014-2015	11704099.00	480545.67	4.10



VISION OF NHM MADHYA PRADESH

The State's vision statement is as follows:-

'All people living in the state of Madhya Pradesh will have the knowledge and skills required to keep themselves healthy, and have equity in access to effective and affordable health care, as close to the family as possible, that enhances their quality of life, and enables them to lead a healthy productive life'.

Thus, it may be observed that the State's vision has primarily two components, namely empowering the people living in the State with knowledge and skills required to keep them healthy and equity in access to effective and affordable health care.

The State of Madhya Pradesh also subscribes to the vision adopted by the National Rural Health Mission. Consequently, the adapted vision components to be pursued by the State are presented in the box below:

STATE INNOVATIVE SCHEMES UNDER NHM, MADHYA PRADESH

I. <u>Sardar Vallabh Bhai Patel Free Drug Distribution Scheme</u>- The Free Drugs For All Scheme was launched in Nov 2012. The main objective of the scheme is to provide the Medicines to all Patients at Free of Cost.

The 24x7 Minimum Drug List Mandates the availability of count of Medicines as follows:

- 1). District Hospital 147
- 2). Civil Hospital 131 Drugs
- 3). Community Health Center 107 Drugs
- 4). Primary health Center 71 Drugs
- 5). Sub Health Center 24 Drugs
- II. **Free Diagnosis Scheme** Free diagnosis scheme was launched in 01/02/2013. The main objective of this scheme is to provide free diagnostic facility in all government hospital right from district hospital to sub Centre level.

Following number of diagnostic facility are provided at different level-

- 1. Sub center- 5
- 2. PHC-16
- 3. CHC-38
- 4. Civil hospital and DH- 48
- III. <u>Deendayal Antyodaya Upchar Yojana</u>- The scheme launched in September 2004 aims at providing medical treatment to patients belonging to BPL families of all the categories. Under the scheme, medical checkup and treatment worth up to Rs 20 thousand is given to a family in one financial year. Every beneficiary family is given a health card in which family's details are entered. Entries in the card are also made on a patient undergoing treatment by getting admitted to a hospital.
- **IV. Beemari Sayahata Yojana-** Under the scheme, free medical aid carrying up to Rs 1.50 lakh is provided to a patient belonging to BPL families. Out of this, Rs 25 thousand to Rs 75 thousand is sanctioned by the minister incharge and collector and Rs 75 thousand to Rs 1.50 lakh is provided by the Health Minister.

A poor man cannot even think of expensive medical treatment if he suffers from a chronic ailment. The scheme has come as a major relief to such poor paitents.

V. <u>Deendayal Mobile Hospital Scheme-</u>The Deendayal Mobile Hospital Scheme was launched in June 2006 with a view to providing qualitaty health facilities in the remote areas of the state. Under the scheme, a mobile van is equipped with a doctor, staff, necessary appliances and medicines. This van provides medical treatment to patients in tribal-dominated villages and Haat-Bazaars free of cost. Tribals residing in remote rural and forest areas cannot generally go to hospital. They also avoid going there due to lack of facilities. This scheme has provided them quality healthcare and treatment facilities in their villages as well as haat bazaars, which is nothing less than boon for them.

- VI. <u>Mukhyamantri Bal Hriday Upchar Yojana-</u> Under the scheme, financial assistance upto maximum Rs. 1 lakh is provided to concerning government and recognized private hospitals for heart surgery of BPL children from 0 to 15 years of age, who suffer from heart disease. So far, 2602 children have been provided benefit of the scheme since its launch in year 2011 at a cost of over Rs. 9 crore.
- VII. Sampark Setu Yojana- Under the scheme, all ASHA workers, ANMs and health officers and employees have been inter-connected through C.U.G. SIMs with a view to making available effective health services to all and in remote areas of the state. The facility has been provided to 77 thousand users. Through SSTC software implementation and monitoring of schemes and programmes of Health Department will be strengthened. Directives and guidelines will be sent directly to health workers through SMS from time to time. Through this SIM one user can talk to another user for unlimited time.
- VIII. Prevention of contagious diseases in state- Possibility of outbreak of contagious diseases increases with change in climate. These include diarrhoea, gastroenteritis, cholera, polio and brain fever. Keeping this in view, 5254 problem-prone villages have been identified in the state. Chances of spread of diseases are more than other villages in these villages. Combat teams have been formed at district and development block levels to deal with diseases in these villages. In all, 415 combat squads are in operation in the state. The squad rushes to affected area soon after receiving report of outbreak of disease and starts treatment and preventive measures. The squads have with them bleaching powder, lifesaving solution, chlorine, cloroquinn, paracetamol and metrozil tablets.
- IX. <u>Urban Health Programme</u>- Health Department is implementing this scheme in urban areas of the state to improve health and nutrition level of pregnant women and children from 0 to 5 years of age. Facilities like care of women during pregnancy, improvement in methods of taking care of newborn, vaccination at right time,

prevention from loose motions and malnutrition and family planning are provided under the programme. Besides, they are also counselled to maintain hygiene and sanitation by urban ASHA workers.

- X. Health Village Guard Squads- Health Village Guard Squads have been formed in rural areas of the state to ensure systematic and prompt health services. Apart from a senior health officer, each squad consists of field workers, ANM and ASHA worker. Each squad will have powers to spend upto Rs. 1 lakh. These squads will work by considering 50 thousand Village Health Centres as axis. They will play an important role as link of Mamta and Prerna Abhiyans.
- Mamta, Astha and Kayakalp Abhiyans- Mamta, Astha and Kayakalp Abhiyans are being implemented to effectively monitor all schemes and services of Health Department. Maternal and child health, vaccination and family welfare programme have been included in Mamta Abhiyan, TB, leprosy, blindness, malaria, dengue, chikanguiniya and swine flu and seasonal diseases in Ashta Abhiyan and works of entire infrastructure and development of health institutions is being done under Kayakalp Abhiyan. These include construction of new buildings, upgradation of old buildings, cleaning, safety, free medicines and pathology tests, food, transport etc for patients.
- XII. Special pay package in high-focus districts- Government has decided to give special pay package for availability of doctors in 9 of 17 high-focus districts including Jhabua, Alirajpur, Barwani, Mandla, Dindori, Sidhi, Singrauli, Balaghat and Anuppur. Accordingly, doctors at district level will be paid Rs. 60 thousand per month, sub-district level Rs. 75 thousand, PG diploma holder doctors at district level Rs. 75 thousand, sub-district level Rs. 90 thousand, PG doctors at district level Rs. 85 thousand and sub-district level Rs. 1 lakh per month.
- XIII. **Prerna Diwas** This year, July 25 was observed as Prerna Diwas in the state. On the day, people were apprised of benefits of family planning for better health of mothers

and children. Prerna Diwas is observed on 25th of every month. Public representatives, influential persons in society and subject experts are invited to functions on the occasion. Necessary medicines, equipments and material have been provided to all health institutions all over the state to help people choose method of family planning. Such efforts have been given the name of Prerna Yojana. Through it, work will be undertaken to ensure good health of mothers and children. It will also help in ensuring effective control over maternal and infant mortality rates.

XIV. Other initiatives- are

• MATERNAL HEALTH

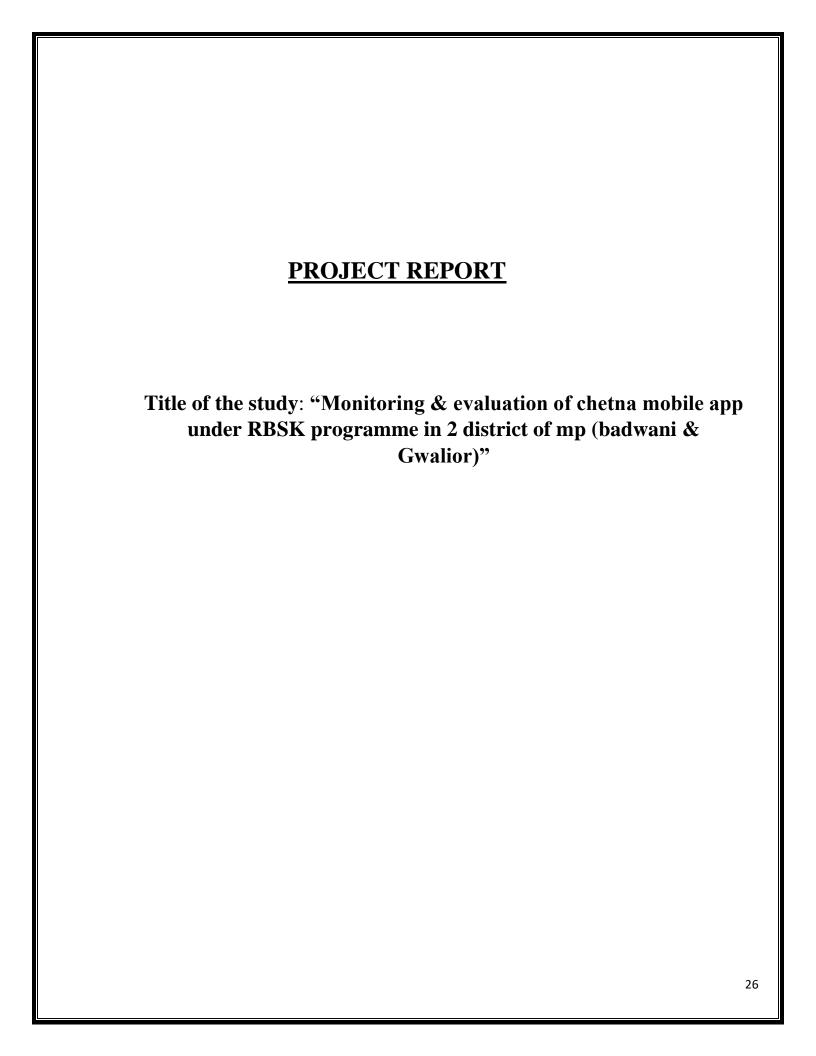
- 1. Vijaya Raje Janani Kalyan Beema Yojana
- 2. Janani Express Yojana
- 3. Janani Sahyogi Yojana
- 4. Dhanwantari Block Development Scheme
- 5. Prasav Hetu Parivahan Evam Upachar Yojana

• CHILD HEALTH

- 1. Alternate Vaccine Delivery System
- 2. Defaulter Tracking System
- 3. Bal Shakti Yojana

OTHERS

- 1. MCP (Mother & Child Protection Card)
- 2. Incentive Scheme for Health Worker (Female & Male) and Anganwadi Worker
- 3. Swawlamban Yojana
- 4. Prabha Kiran Training Scheme
- 5. NRHM Management Information System
- 6. New Drug Procurement Policy 2006
- 7. Mobility Support to Block MO's
- 8. HMIS (Bhopal Pilot)



***** INTRODUCTION

1. Historical perspective –

- First School medical inspection Baroda city in 1909.
- Every province in British India then introduced school health program in middle and high school.
- After independence at government level, Renuka Ray school health committee was set up in 1961 to review program at national level. Committee recommends Phase I (1962-66) PHC area cover 40 nearby schools & in urban cover all primary schools Phase II (1966-71) Should be extended to primary schools in both rural and urban areas.
- National policy on Health (1983) and on education (1986) strongly supports school health programs. Responsibility of state different states have their own schemes.
- School Health Programs These promotes health through schools. Includes all school
 based activities that contribute to understanding, maintenance and improvement of the
 health of the school population including Health services, Health education and
 Healthful school environment.

1.2. <u>Launching of RBSK</u>

UPA chairperson Sonia Gandhi on 6 February 2013 launched a new health initiative **called Rashtriya Bal Sawsthya Karyakram** (**RBSK**)at Palghar town in Thane district of Maharashtra. The RBSK, is a part of the National Rural Health Mission of the Union Ministry of Health and Family Welfare.

1.3. The rationale for the RBSK program

Out of every 100 babies born in this country annually, 6 to 7 have a birth defect. In Indian context, this would translate to 1.7 million birth defects annually and would account for 9.6 per cent of all newborn deaths1. Various nutritional deficiencies affecting the preschool children range from 4 percent to 70 percent. Developmental delays are common in early childhood affecting at least 10 percent of the children. These delays, if not intervened timely, may lead to permanent disabilities with regard to cognition, hearing and vision.

There are also groups of diseases which are very common in children e.g., dental caries, otitis media, rheumatic heart disease and reactive airways diseases which can be cured if detected early. It is understood that early intervention and management can prevent these conditions to progress into more severe and debilitating forms, thereby reducing hospitalization and resulting in improved school attendance.

The 'Child Health Screening and Early Intervention Services' will also translate into economic benefits in the long run. Timely intervention would not only halt the condition to deteriorate but would also reduce the out-of-pocket (OOP) expenditure of the poor and the marginalized population in the country. Additionally, the Child Health Screening and Early Intervention Services will also provide country-wide epidemiological data on the 4 Ds (i.e., Defects at birth, Diseases, Deficiencies and Developmental Delays including Disabilities). Such a data is for future expected to hold relevance planning of area specific services. (http://www.nipi.org.in/Items/RBSK.pdf)

2. Introduction-

Defects at Birth, Deficiencies, Diseases specific to childhood and Developmental delays including disabilities, "4Ds", can either lead to untimely death of a child or a survival with poor developmental outcomes. Such long lasting adverse health outcomes can be addressed only through early screening and timely management.

Extending preventive and promotive health as an approach for selected health conditions along with provision of free curative management, will help the marginalized and underprivileged population by reducing their out of pocket expenditure thereby influencing public health expenditure. This, in the long run, will improve the quality of our National human resource pool.

Keeping this in view, the Ministry of Health and Family Welfare, introduced "Child Health Screening and Early Intervention Services" as Rashtriya Bal Swasthya Karyakram (RBSK) under the National Health Mission. The services under RBSK are to cover all the thirty selected health conditions through their screening, early detection & free management, for children from birth to 18 years of age.

Selected Health Conditions for Child Health Screening & Early Intervention Services under RBSK

O. Anaemia especially Severe anaemia O. Vitamin A deficiency (Bitot's spot) O. Vitamin D Deficiency (Rickets) O. Severe Acute Malnutrition O. Anaemia especially Severe anaemia O. Vitamin D Deficiency (Rickets) O. Severe Acute Malnutrition O. Anaemia especially Severe anaemia O. Vitamin A deficiency (Bitot's spot) O. Vitamin D Deficiency (Rickets) O. Severe Acute Malnutrition O. Goitre
Developmental delays
1. Vision Impairment 2. Hearing Impairment 3. Neuro-motor Impairment 4. Motor delay 5. Cognitive delay 6. Language delay 7. Behaviour disorder (Autism) 8. Learning disorder 9. Attention deficit hyperactivity disorder
1. 2. 3. 4. 5. 6. 7. 8.

2.1. Target age group

RBSK aims to cover children from birth to 6 years of age and children from 6-18 year enrolled in classes 1st to 12th in Government and Government aided Schools. It is expected that these services will reach about 27 crore children in a phased manner. Children have been grouped into three broad categories, as different set of tools will be used for each category. Also different sets of health conditions have been accordingly prioritized.

Table-1 Target age group and service provider

Categories	Age Group	Service providers
Children born at delivery points in public health facilities	Birth to 48 hours	Doctors, ANMs and staff Nurses
Children born at home or those discharged from Public health facilities	From 48 hours to 6 weeks during HBNC	ASHA worker
Preschool children in rural areas and urban slum	6 weeks to 6 years	Mobile health team
School children enrolled in class 1st and 12th in Government and Government aided schools	6 years to 18	years Mobile health team

2.2 Operational approach of RBSK

Different mechanisms have been developed to reach the target groups of children for health screening-

1. For new born:

- Facility based screening at public health facilities, by existing health manpower including ANMs, Staff Nurses and Medical Officers at designated delivery points.
- Community based screening at home after 48 hours of birth and till 6 weeks of age during home visitation by ASHAs, as a part of HBNC package.

2. For children 6 weeks to 6 years:

- Anganwadi Center based screening at least twice a year by the dedicated Mobile Health Teams under RBSK.

3. For children 6 years to 18 years:

- Government and Government aided school based screening at least once a year by dedicated Mobile Health Teams.

2.3 Facility based newborn screening:

This includes screening of birth defects in institutional deliveries at public health facilities, especially at the designated delivery points by ANMs, Medical Officer/ Gynaecologists. Existing

health service providers at all designated delivery points will be trained to detect, register report and refer birth defects to the District Early Intervention Centers in District Hospitals.

2.4 Community based newborn screening (age 0-6 weeks) for birth defects:

Accredited Social Health Activists (ASHAs) during home visits for newborn care will use the opportunity to screen the babies born at home and the institutions till 6 weeks of age. ASHAs will be trained with simple tools for detecting gross birth defects. Further ASHAs will mobilise caregivers of children to attend the local Anganwadi Centers for screening by the dedicated Mobile Health Team.

For performing the above additional tasks, she would be equipped with a tool kit consisting of a pictorial reference book having self-explanatory pictures for identification of birth defects. Suitable performance based incentive may also be provided to ASHAs.

In order to ensure improved and enhanced outcome of the screening programme by Mobile Health Teams, ASHAs would particularly mobilise the children with low birth weight, underweight and children from households known to have any chronic illness (e.g., tuberculosis, HIV, haemoglobinopathy etc.). Line lists maintained by the ANMs and AWWs would also be used to mobilise children.

2.5 Screening of children aged 6 weeks till 6 years attending Anganwadi Centers:

Children in the age groups 6 weeks to 6 years of age will be examined in the Anganwadi Centers by the dedicated Mobile Health Teams.

2.6 Screening of children enrolled in Government and Government aided schools:

For children in the age groups 6 to 18 years, who will be screened in Government and Government

aided schools, the Block will be the hub of activity for the programme. At least three dedicated Mobile Health Teams in each Block will be engaged to conduct screening of children. Villages within the jurisdiction of the Block would be distributed amongst the mobile health teams. The number of teams may vary depending on the number of Anganwadi Centers, dicult to reach areas and children enrolled in the schools. The screening of children in the Anganwadi Centers would be conducted at least twice a year and at least once a year for school children to begin with.

2.7 The Mobile Health Team will consist of four members –

- Two Doctors (AYUSH) one male and one female, with a bachelor's degree from an approved institution,
- one ANM/Staff Nurse and
- one Pharmacist with proficiency in computer for data management.

<u>Functions of teams</u>- Teams will screen all the children upto 6 years of age registered with the Anganwadi Centers and all children enrolled in Government and Government aided schools. In order to facilitate implementation of the health screening process, vehicles will be hired for movement of the teams to Anganwadi Centers, Government and Government aided schools.

A tool kit with essential equipment for screening of children will also be provided to the Mobile Health Team members.

2.8 Role of BPM in RBSK -There is also a provision for engaging a Block Programme Manager for providing logistic support and for monitoring the entire health screening process. The Block Programme Manager is also expected to ensure referral support and manage compilation of the data. The Block Programme Manager will chalk out a detailed screening plan for all the three teams in consultation with schools, Anganwadi Centers and CHC Medical Officer

The Block teams will work under the overall guidance and supervision of the CHC Medical Officer.

A tour dairy will be maintained by Block Health Teams. A log book will also be maintained for movement of hired vehicles.

The teams will submit monthly report using standard formats on various indicators like the number of children screened, number of children referred etc. (Annexure I). The formats are enclosed in Annexures. This data will be digitized and made online for monitoring and follow up at higher levels. Integration with the existing MCTS will also be achieved.

2.9 District Early Intervention centre- An Early Intervention Centre is established at the District Hospital. The purpose of Early Intervention Centre is to provide referral support to children detected with health conditions during health screening. A team consisting of Paediatrician, Medical officer, Dentist, Staff Nurses, Paramedics, etc. are engaged to provide services. There is also a programme manager who carries out mapping of tertiary care facilities in Government institutions for ensuring adequate referral support.

Table-2 Composition of staff in DEIC

Professionals	Number
Medical Professionals (paediatrician-1, Medical officer-1, Dental doctor-	3
1)	
Physiotherapist	1
Audiologist & speech therapist	1
Psychologist	1
Optometrist	1
Early interventionist cum special educator cum social worker	1
Lab technician	2
Dental Technician	1
Manager	1
Data Entry Operator	1

Role of District Early Intervention Centre-

- 1. Providing referral services to referred children for conformation of diagnosis and treatment.
- 2. Screening children at District Early Intervention Centre
- 3. Visit all new-borns delivered at the District Hospital, including those admitted in SNCU, Postnatal and children wards for screening all new-borns irrespective of their sickness for hearing, vision, congenital heart disease before discharge.
- 4. Ensure that every child born sick or preterm or with low birth weight or any birth defect is followed up at DEIC.
- 5. All the referrals for developmental delay are followed and records maintained.
- 6. The lab technician of the DEIC would screen the children for inborn error of metabolism and other disorders at district level depending upon the logistics and local epidemiological situations.
- 7. Ensure linkage with tertiary care facilities through agreed MOU.

The DEIC team promptly responds to and manage all issues related to developmental delays, Hearing defects, vision impairment, neuro-motor disorders, speech and language delay, autism and cognitive impairment. Beside this, the team at DEICs are involved in new-born screening at the District level. This Centre has the basic facilities to conduct tests for hearing, vision, neurological tests and behavioural assessment. Once a referred patient comes to DEIC, Data Entry Operator at DEIC makes and entry of student's/child's unique ID and send her to the respective Staff for which he/she has been referred. Every staff member has his own entry

register in which against the entry of the child, his final diagnosis, treatment plan and treatment given to the child is recorded. A status to this child is allotted (either treated or Under treatment) the under treatment children are contacted and called for further follow ups. Some Patients can be treated at the DEIC level, but some need to be referred to higher institutes for tertiary level treatments mostly surgeries.

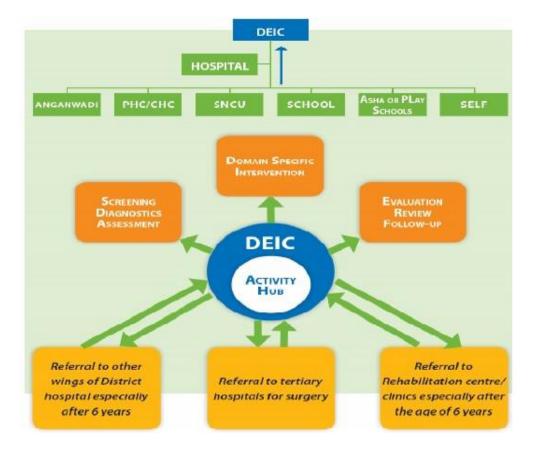


Fig. no- 1 – Showing flow chart of referral system

Objectives of the Chetna mobile app

- 1 Biometric attendance of the mobile health team to ensure there working.
- 2 The screened SNCU data is more validated & easily available to the teams.

❖ PROBLEM STATEMENT

According to March of Dimes (2006), out of every 100 babies born in this country annually, 6 to 7 have a birth defect. This would translate to around 17 lakhs birth defects annually in the country and accounts for 9.6% of all the newborn deaths. Various nutritional deficiencies affecting the preschool children range from 4 per cent to 70 per cent. Developmental delays are common in early childhood affecting at least 10 percent of the children. These delays if not intervened timely may lead to permanent disabilities including cognitive, hearing or vision impairment. Also, there are group of diseases common in children viz. dental caries, rheumatic heart disease, reactive airways diseases etc. Early detection and management diseases including deficiencies bring added value in preventing these conditions to progress to its more severe and debilitating form and thereby reducing hospitalization and improving implementation of Right to Education.

So the problem statement identified as there is a dire need of improving survival outcome in child mortality.

RATIONALE

- ✓ 6 to 7 babies per 100 have a birth defect.
- ✓ Nutritional deficiency in pre school children is up to about 4 to 70 %.
- ✓ Developmental delays affect 10 % of the population .
- ✓ Lack of timely intervention leads to permanent disabilities with respect to cognition ,hearing & vision.
- ✓ Reduce hospitalization & improve school attendance .
- ✓ Lessen the out of pocket expenditure of the poor & marginalized.

REVIEW OF LITERATURE

1. A research article titled "A Systematic Review of Healthcare Applications for Smartphones by Abu Saleh Mohammad Mosa1, Illhoi Yoo1,2* and Lincoln Sheets1,3was conducted in 2012 Background: Advanced mobile communications and portable computation are now combined in handheld devices called "smartphones", which are also capable of running third-party software. The number of smartphone users is growing rapidly, including among healthcare professionals. The purpose of this study was to classify smartphone-based healthcare technologies as discussed in academic literature according to their functionalities, and summarize articles in each category.

Methods: In April 2011, MEDLINE was searched to identify articles that discussed the design, development, evaluation, or use of smartphone-based software for healthcare professionals, medical or nursing students, or patients. A total of 55 articles discussing 83 applications were selected for this study from 2,894 articles initially obtained from the MEDLINE searches.

Results: A total of 83 applications were documented: 57 applications for healthcare professionals focusing on disease diagnosis (21), drug reference (6), medical calculators (8), literature search (6), clinical communication (3), Hospital Information System (HIS) client applications (4), medical training (2) and general healthcare applications (7); 11 applications for medical or nursing students focusing on medical education; and 15 applications for patients focusing on disease management with chronic illness (6), ENT-related (4), fall-related (3), and two other conditions (2). The disease diagnosis, drug reference, and medical calculator applications were reported as most useful by healthcare professionals and medical or nursing students.

Conclusions: Many medical applications for smartphones have been developed and widely used by health professionals and patients. The use of smartphones is getting more attention in healthcare day by day. Medical applications make smartphones useful tools in the practice of evidence-based medicine at the point of care, in addition to their use in mobile clinical communication. Also, smartphones can play a very important role in patient education, disease self-management, and remote monitoring of patients.

2. another study that was titled as Understanding the barriers to successful adoption and use of a mobile health information system in a community health center in Sao Paulo, Brazil: a cohort study chort study conducted by Rajan, Jayant V; Moura, JulianaAuthor Information; Gourley, Gato; Kiso, Karina; Sizilio, Alexandre; et al. BMC Medical Informatics and Decision Making; London 16 (2016) Background: Advanced mobile communications and portable computation are now combined in handheld devices called "smartphones", which are also capable of running third-party software. The number of smartphone users is growing rapidly, including among healthcare professionals. The purpose of this study was to classify smartphone-based healthcare technologies as discussed in academic literature according to their functionalities, and summarize articles in each category.

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3. another study evaluated the value of mobile apps in health care Williams, Jeni. Healthcare Financial Management; Westchester 66.6 (Jun 2012): 96-101 Disruptive innovation

in health care -- the introduction of new technologies, products, and services that make care more convenient, accessible, and affordable -- is marking the move toward a value-based delivery model, says Jason Hwang, MD, coauthor of the book The Innovator's Prescription: A Disruptive Solution for Health Care. Across the country, innovative organizations and clinicians are using mobile apps and devices to provide more convenient, safer, and higher-quality care. Private investment in healthcare technologies -- particularly technologies that can reduce healthcare costs by improving quality of care -- is increasing. Hospitals should keep three considerations in mind when developing a mobile app or tool: 1. Focus on a tool that can help patients determine whether a physician visit is needed. 2. Have finance professionals play a supporting rather than a leading role in the development of in-house mobile health apps. 3. Keep it simple.

❖ SPECIFIC OBJECTIVES

- > To understand the barrier to successful adoption & use of mobile halth app.
- > To cite recommendations with respect to the findings of the study, to bridge the identified gap.

***** METHODOLOGY

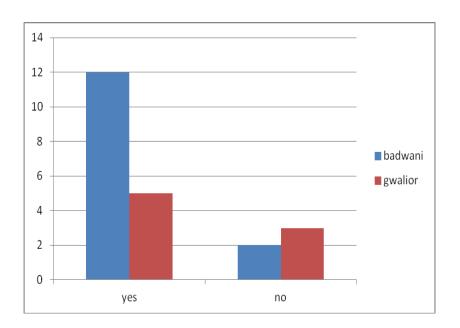
- ✓ **Study Design:-**Cross-sectional study
- ✓ **Study Period**:-two Month
- ✓ **Study area & group:** The study has been conducted in badwani & Gwalior district of M.P.each block has been appointed with 2 teams thats is team A & B consisting of 1 male & 1 female AMO 1 pharmacist & ANM . so the study group consist of 8 teams of Gwalior & 14 teams of badwani.
- ✓ **Tools and techniques:**-The data collection technique would be the secondary data that was made available by the organization
- ✓ **Data Collection:** we have taken the feedback of the teams by telephonic interview.
- ✓ Plan of data analysis:-The collected data will be compiled and analysed using various functions in Microsoft Office Excel software. Bar Charts and Pie Graphs will be used to represent the findings of this study, as and when required.

***** LIMITATIONS

- ✓ As the study duration was less, a large sample size could not be attempted.
- ✓ Number of study district could have been increased in order to ensure more representation and generalization of the findings.
- ✓ RBSK assessment study may be undertaken to rule out the areas defects and initiate corrective measures.
- ✓ Some respondents did not received the call.
- ✓ Teams were not complete due to some administrative reasons.

• FINDINGS

GRAPH-1 CHETNA MOBILE app users in Badwani & Gwalior.



Badwani shows that 12 team are using the CHETNA MOBILE app while 2 are not using it . Where as in Gwalior 5 team are using the CHETNA MOBILE app & 3 are not using .

> Highest education and occupation of working mobile health team.

Badwani has 10 A.M.O. 3 PHARMACIST & 1 ASHAWORKER where as GWALIOR has 4 A.M.O. 2 PHARMACIST & 2ASHA WORKER IN TEAMS A & TEAM B REGISTERED IN THE APP

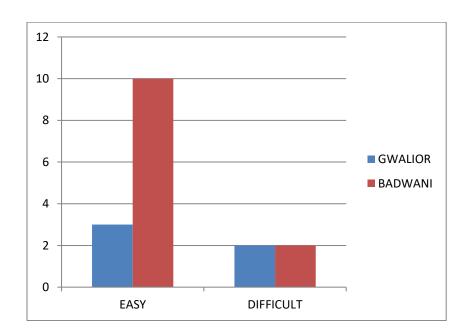
Platform on which the mobile health teams are using the CHETNA MOBILE app.

12 teams of gwalior & 5 teams of badwani are using andorid platform for using the chetna app

> Feature liked by the MHT team about the app.

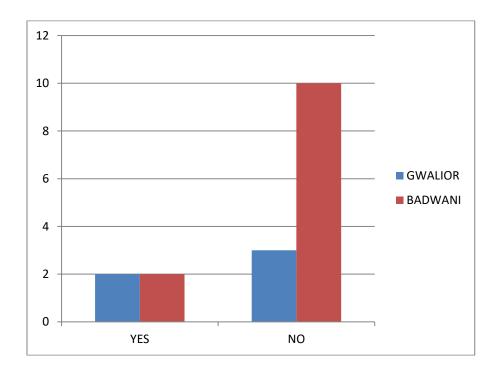
According, to Teams they are able to locate the screened SNCU data of the new born child easily with the help of this CHETNA MOBILE app.

GRAPH-2 Ease of using the app by the MHT team in Badwani &Gwalior.



In Badwani 10 teams are find it easy to use the app while 2 teams faced difficulty in using it. Whereas in Gwalior 3teams are find it easy to use the app & 2 teams faced difficulty in using app.

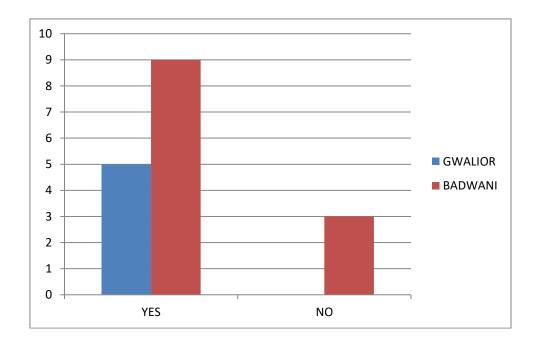
GRAPH-3 Compliance of understanding the app's technical jargons in Badwani & Gwalior.



In badwani 10 teams have not found any difficult technical jargon in the app while 2 teams have found the technical jargon difficult .

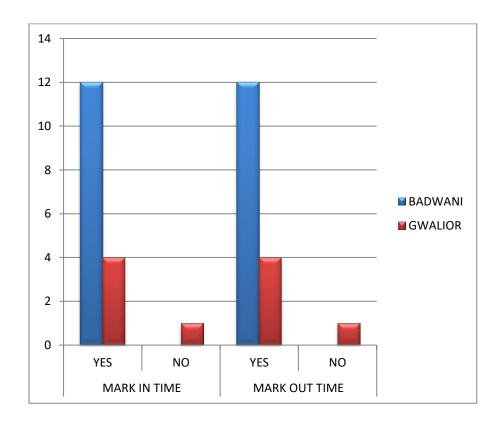
where as in gwalior 3 teams founded no technical jargon difficult while 2 teams have found the technical jargon difficult.

GRAPH-4 Satisfaction of MHT teams on the time consumed by the CHETNA MOBILE app in Badwani & Gwalior.



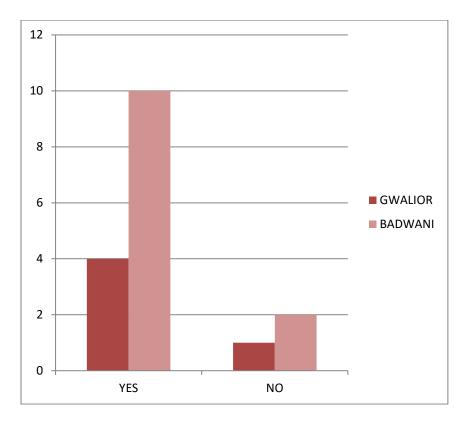
In Badwani 9 teams are the satisfied with time taken by the app to perform the task & 3 teams are not satisfied while in Gwalior 5 teams are satisfied with the time taken to perform the task by the app.

GRAPH-5 Mark in and mark out time required in the CHETNA MOBILE app for biometric attendance IN Badwani & Gwalior.



In Badwani district 12 functional team is doing the mark in and mark out time necessary for their biometric attendance while in GWALIOR district 4 teams are doing the mark in and mark out time and rest 1 team is not able to upload the feed

GARPH-6 Validation of SNCU data made available to MHT teams IN Badwani & Gwalior.



In badwani 10 teams find the SNCU data valid 2 teams founded invalid . in gwalior 4 teams found it valid & 1 team found the SNCU data in valid .

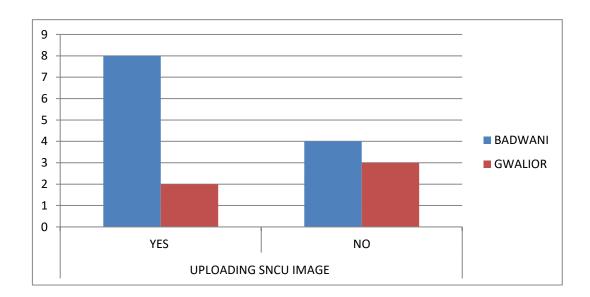
> Bugs found or task not performed by the CHETNA MOBILE app.

The teams found that the app is more battery consuming

> Customization feature needed by the teams.

The font size of the image should be adjustable which could be easily uploaded with the app.

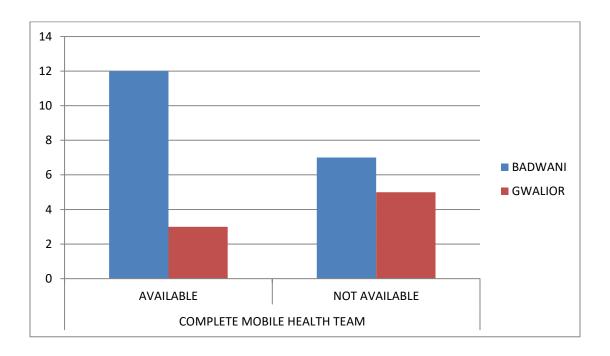
GRAPH-7 Uploading image of positive SNCU child in Badwani & Gwalior.



In Badwani district 8 teams are able to upload the SNCU positive child image and 4 teams are not able to perform the task.

Whereas in Gwalior district only 2 teams are able to upload the SNCU positive child image whereas, 3 teams are not able to perform the task.

Graph-8 Gap related to availability of visiting specialist in RBSK mobile health team according to operational guidelines in Badwani & Gwalior.



IN badwani district 12 teams are functional with the required number of the member i.e 1 male AYUSH medical officer, 1 female AYUSH medical officer, 1 pharmacist and 1 ASHA worker.

While 5 teams are have incomplete member staffing.

Whereas in Gwalior 3 teams are fully functional with the required number of member staff while 5 teams are having incomplete member staff.

RESULTS: -

➤ On the basis of questionnaire it can be found out that Badwani district is better performing with better outcome of results in form of treatment and referral as compared to the Gwalior district.

The treatment and referral data for Badwani is 2296 & 1906-and Gwalior is -0 & 2 respectively.

- ➤ Teams available in the Badwani district is more competent in terms of using the CHETNA APP and the availability of the members in the mobile health team as compared to Gwalior district.
- ➤ On the basis of some feedback questionnaire it could be found out that although the teams are able to perform the task but still CHETNA APP need technical rectifications such as improve the app on battery consumption, uploading the imges with the app etc.
- ➤ Since the members of the mobile health team are competant enough to work with the app hence only proper training schedule could make them work more efficiently with the CHETNA APP.
- ➤ It could be evaluated that the objective with which the CHETNA app has been introduced i.e the biometric attendance of mobile health team in field and screening of the SNCU CHILD is fulfilled with some technical faults remaining as the major issues with the app.

***** RECOMMENDATIONS

✓ The CHETNA mobile app introduced under the RBSK program need certain technical changes to enhance the outcome results.

The suggested technical changes recommended to IT - department are as follows:

- *i.* Since the app is more battery consuming users find it sometimes difficult to upload the data.
- ii. Although teams are uploading the feed in the CHETNA app but sometimes the app doesn't uploads the image and it stops automatically.
- *iii.* For the SNCU screened children location finder is the special feature recommended for the CHETNA app.
- ✓ Some Teams that are allocated under the RBSK program are incomplete which needs to be looked into by the higher authorities to enhance the working under CHETNA APP.
- ✓ In Badwani district 2 teams while in Gwalior district 3 teams are not willing to work and use the CHETNA APP since they haven't received the reimbursed handsets for operating the app hence the matter should be looked into to increase the efficiency of the working of the employees.
- ✓ Effective training of all health worker regarding using of the CHETNA APP method and organized proper training schedules under the supervision of higher authority to avoid any mishap.
- ✓ Regular feedback from beneficiary by higher authority to avoid gap and to know the ground reality so they can improve the services according to need.

CONCLUSION

From the report it could be concluded that although the introduction of the CHETNA APP still need technical advancements but main objective of monitoring the attendance through biometric mark in and mark out has been met successfully.

But the other objective of the CHETNA APP of increasing the outcome in the form of referral and treatment still requires improvement.this could be brought about by the following:

- 1) Making app more user friendly with timely updates according to the need of the user.
- 2) Other technical faults reported by the health mobile team by the feedback should be taken and should be corrected accordingly.
- 3) Proper training of the mobile health team on the basis of technical updates made in the app.

From the data made available for the referral and treatment in GWALIOR and BADWANI DISTRICT are 2 & 0 , 1906 &2296 respectively

It can clearly can be evaluated that badwani is better performing then the Gwalior district.

Hence, to improve the treatment and referral in Gwalior district the above mentioned steps should be taken by the program and the app incharge.

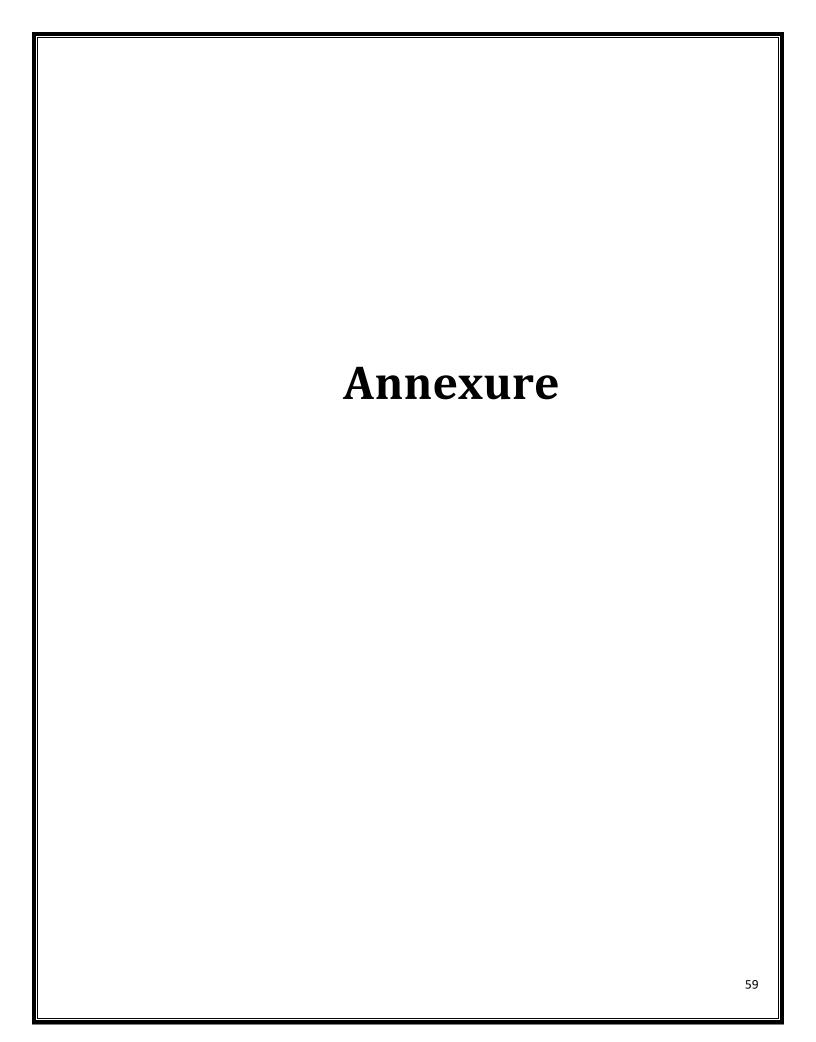
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DAILY RBSK MHT MONITORING CHECKLIST Contact with MHT leader

CHECKLIST OF QUESTINNAIRE:

- QUE 1: Are you using the CHETNA MOBILE app?
- QUE 2: What is your highest education and occupation?
- QUE 3: On which platform did you use the app?
- QUE 4: What do you / did you liked about the CHETNA MOBILE app?
- QUE 5 : How easy do you find it using the app?
- QUE 6: What technical jargon have you seen in the app which you don't understand?
- QUE 7: Are you satisfied with the time taken by the app to perform the task?
- QUE 8 : Do you find the SNCU screening data made available to you , valid / not ?
- QUE 9: Have you find any bugs in this app or the things which it can't perform/
- QUE 10: What customisation features would you like to add in the CHETNA MOBILE app?
- QUE 11 :are you doing the mark in and mark out time required in the CHETNA MOBILE app?
- QUE 12 : Are you able to upload image of the positively found screened child?
- QUE13: Gap related to availability of visiting specialist in RBSK mobile health team according to operational guidelines?

`Sr.No	District	Block	Team	Name of team Leader	Mail ID of team Leade r	APP status working /not working (Hand set name& number)	Are you doing Mark in- Time with Image	Are you doing Mark Out- Time with Image	Are you doing SNCU follow- up & data entry in APP	Re ma rk / Iss ues
1			Team A							
2			Team B							
3			Team A							
4			Team A							
5			Team B							
6			Team A							
7			Team B							
8			Team A							
9			Team B							

Caller name:-Date:-

