

Comparison of Knowledge, Attitude, and Practices of Mobile Health Teams of District Burhanpur and Khandwa Posted Under Rashtriya Bal Swasthya Karyakram in Madhya Pradesh

By

Arpit Datey

*Dissertation submitted for the partial fulfillment of the
MBA Hospital and Health Management*

Academic year, 2015-2017



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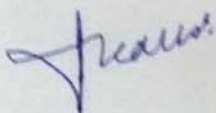
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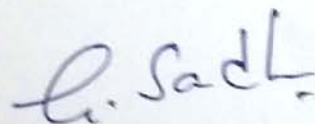
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The Internship is in fulfillment of the course requirements.

I wish him all success in all her future endeavors.



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Dean - Academics and Student Affairs
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Dr. Goutam Sadhu
Professor and Incharge,
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National Health Mission

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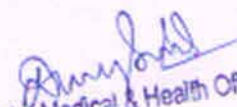
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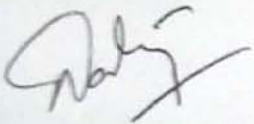
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We wish him all the best for future endeavours


Chief Medical & Health Officer
District Burhanpur

CERTIFICATE BY SCHOLAR

This is to certify that the dissertation titled **Comparison of Knowledge, Attitude and Practises of Mobile Health Teams of District Burhanpur and Khandwa posted under RBSK in Madhya Pradesh** and submitted by **Dr Arpit Datey** Enrollment No: **IIHMR-U/01/2015-17/0263** under the supervision of **Dr. Goutam Sadhu** for award of MBA in Hospital and Health Management of the University carried out during the period from **February 6, 2017 to May 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.



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This is to certify that all ethical issues have been considered while collecting data for my dissertation titled "**Comparison of Knowledge, Attitude and Practises of Mobile Health Teams of District Burhanpur and Khandwa posted under Rashtriya Bal Swasthya Karyakram in Madhya Pradesh**"



Signature of student



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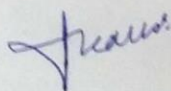
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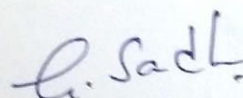
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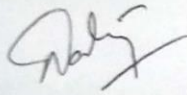
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Signature

District Burhanpur



^[11] General Profile:

General Information	Statistics
(i) Geological Area	3427 km ²
(ii) Administrative Division :	4
Number of Tehsils	
Number of Blocks	2
Number of villages	263
(iii) Population	757847
(iv) Proportion of Rural population to total population	65.7
(v) Population Density (per sq. Km.)	221
(vi) Sex Ratio	951
(vii) Literacy Rate	64.4



National Health Mission

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Chief Medical & Health Officer
District Burhanpur

Rashtriya Bal Swasthya Karyakram (RBSK)

Background:

Noteworthy progress has been made in dropping mortality in children over the last seven years (2005-12). While there is an advance in dropping child mortality there is a terrible need to improving survival outcomes. This would be stretched by early detection and management of disorders (conditions) that were not talked systematically in the past .

March of Dimes (2006), out of every 100 babies born in the country yearly, 6 to 7 have birth defects. This would transform to around 17 lakhs birth defects yearly in the country and accounts for 9.6 percent of all the new-born deaths. Various nutritional deficiencies affecting the pre-school children range from 4 percent to 70 per cent . Developmental delays are very much common in early childhood affecting at least 10 percent of the children in the country. These delays if not arbitrated timely may lead to permanent a disability which includes hearing, cognitive and 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 additional value in averting these conditions to advancement to its more severe and debilitating form and thus decreasing hospitalization and improving carrying out of Right to Education .

Rashtriya Bal Swasthya Karyakram (RBSK) is an important initiative pointing at early identification and intervention for children from birth to 18 years to cover 4 'D's viz. Deficiencies, Diseases, Defects at birth, Development delays including disability .

It is significant to note that the 0-6 year's age group will be precisely managed at District Early Intervention Centre (DEIC) level while for 6-18 years age group, management of conditions will be done at the existing public health amenities. DEIC will act as referral linkages for both the age groups .

Screening of primary level is done at all delivery points through current Medical Officers, Staff Nurses and ANMs. After 48 hours till 6 weeks the screening of new-borns will be carried out by ASHA at home as a part of Home Based New-born Care (HBNC) package. The Outreach screening will be completed by dedicated Mobile Health teams for 6 weeks to 6 years at Angan-wadis centres and 6-18 years children at school .

Once the child is screened and referred from any of these points of identification, it would be ensured that the required treatment/intervention is delivered at No cost to the family .

Introduction:-

There is no hesitation that early identification of health conditions and their linkage to care, support and treatment by child health screening and early intervention services will help us accomplish equitable child health care. In the coming years, the programme would bring societal and monetary gains, particularly for the poor and under-privileged, by reducing out of pocket(OOP) expenditure, burden of diseases, refining health awareness among community, improving competence in service delivery and establishment the public sector hospitals. This would thus lead to upgrade of health among children which is of vital value and an end in itself .

In a huge country like India, the need for guaranteeing a healthy and vibrant future for a large population and creating a developed civilization, alert and able to compete with the rest of the world, stands as of supreme importance. The vision of such a healthy and developed society can be attained through concerted efforts and initiatives undertaken in a organized manner at all levels. Impartial child health, care and early detection and treatment can be the most realistic initiative, or rather solution, at this point in time!

The ‘Child Health Screening and Early Intervention Services’ Programme under National Health Mission initiated by the Ministry of Health and Family Welfare (MoHFW), therefore, aims at early detection and treatment of the 4Ds prevalent in children. These are Defects at birth, Diseases in children, Deficiency conditions and Developmental Delays including Disabilities .

Health screening of children is a called as intervention under the School Health Programme. It is now being extended to cover all children from birth to 18 years of age. The Programme has been started as noteworthy progress has already been made in reducing child mortality under the National Health Mission. However, further gains can be achieved by early detection and treatment of conditions in all age groups. Out of every 100 babies born in this country annually, 6 to 7 have a birth defect. In our countries prospective, this would translate

to 1.7 million birth defects annually and would account for 9.6 per cent of all new-born deaths. Various nutritional deficiencies affecting the preschool children range from 4 percent to 70 percent. Developmental delays are very much common in early childhood affecting 10 percent of the children. These delays, if not arbitrated timely, may lead to permanent disabilities with regard to hearing, cognition 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 assumed that early intervention and management can prevent these disorders to progress into more severe and devastating forms, thereby reducing hospitalisation and resulting in better-quality school attendance .

The ‘Child Health Screening and Early Intervention Services’ will also turn into monetary benefits in the long run. Appropriate intervention in correct time would not only halt the condition from deteriorating but would also reduce the out-of-pocket (OOP) expenditure of the poor and the marginalised populace in the country. Furthermore, the “Child Health Screening and Early Intervention Services” will also provide pan country epidemiological data on the 4 Ds (i.e., Defects at birth, Diseases, Deficiencies and Developmental Delays including Disabilities). Such a data is likely to hold importance for future planning of area definite services .

Birth Defects, Deficiencies, Diseases, Developmental Delays and Disabilities in Children

Defects at Birth:

Internationally, about 7.9 million children are born yearly with a serious birth defect of genomic or partly genetic origin which books for 6 percent of the total births. Stern birth defects can be fatal at times. For those who do not receive specific and timely intervention and yet survive, these disorders can cause irreparable life-long mental, physical, auditory or visual infirmity. At least 3.3 million children under 5 years of age die from birth defects every year and additional 3.2 million of those who last may be disabled for life. More than 90 percent of all infants with a serious birth defect are born in middle & low income countries. Cutting across nations and their economic status, 64.3 infants per 1000 live births are born yearly with birth defects. Of these, 7.9 have cardiac defects, 4.7 have neural tube defects

(NTDs) and 1.2 have some form of haemo-globinopathy, 1.6 have Down 's syndrome and 2.4 have G6PD deficiency (All figures are in per 1000) .

With a huge birth cohort of nearly 26 million per year, India accounts for the major share of birth defects in the world. This would convert to an expected 1.7 million babies born with birth defects yearly. In the study by National Neonatology Forum, congenital malformations were the 2nd most common cause (9.9%) of mortality amongst stillbirths and the fourth commonest cause (9.6%) of neonatal mortality and that approximated for 4 per cent of under-five mortality (U5MR) .

Primary reports of metabolic studies from five zonal centres covering 5 lakh new-borns has revealed an frequency of congenital hypothyroidism of 1 in 1000 live births. Messages emerged from this study suggest that diagnosis is time and again delayed due to lack of consciousness among the experts and ignorance about the practical expertise required to handle such cases of birth defects. A comparable prevalence rate of 1 in 1000 was reported for Down's syndrome in India. There are numerous reports of the frequency of beta thalassemia trait from various parts of the country which differs from less than 1 percent to as high as 17 percent making it vital to have a policy on common screening in selected geography and inhabitant groups .

Deficiencies:

Data suggests that almost half of children under age five years (48%) are chronically malnourished. In statistics it would mean that nearly or above 47 million children under five years are stunted, 43 percent of children under age five years are underweight and about 20 percent of children less than five years of age are wasted. More than 6 percent of children less than five years of age suffer from Severe Acute Malnutrition (SAM). However, recent survey steered in 100 worst affected districts revealed SAM prevalence of 3 percent in children less than five years of age. Anaemia prevalence has been stated as high as 70 percent amongst under five children largely due to iron deficiency. The situation has practically remained unaffected over the past decade. During pre-school years, children continue to suffer from adverse effects of anaemia, malnutrition and developmental disabilities, which eventually also impact their performance in the school .

Diseases:

As reported in various surveys, the prevalence of dental caries is between 50-60 percent among Indian school going children. Rheumatic heart disease is reported at 1.5 per thousand among school going children in the age group of 5-9 years and 0.13 to 1.1 per thousand among 10-14 years children. The median prevalence of reactive air way disease comprising asthma among children is reported to be 4.75 percent .

Developmental Delays and Disabilities :

Internationally, 200 million children do not reach their growing potential in the first five years due to poverty, bad health, lack of nutrition and lack of early stimulation. The prevalence of early childhood stunting and the people living in outright poverty could be used as representation indicators of poor improvement in under five children. Both of these indicators are diligently associated with poor thinking and learning performance in children and not able to reach towards optimal developmental potential. Additional, Special New-born Care Units (SNCU) Technical Reports have described that nearly 20 percent of children discharged from health facilities are seen to suffer from developmental delays or disabilities at a future age .

Target Group

The facilities aim to cover all children of 0-6 years of age group in rural areas & urban slums, in addition to older children up to 18 years of age registered in classes till 12th in Government and Aided schools. It is estimated that these services will spread and benefit about 27 crore children in a phased method .

Categories	Age group	
Babies born at public health facilities and home	Birth to 6 weeks	20 million
Preschool children in rural areas and urban slums (Data Source: CCEA release 24 th Sept, 2012)	6 weeks to 6 years	80 million
Children enrolled in classes 1 st to 12 th in Government and Government aided schools (Data Source : Elementary Education in India, 2012, DISE 2010-11: Flash Statistics, NUEPA & DSEL, MoHRD, GOI. and State Report Cards: 2010-11 Secondary education in India, NUEPA)	6 to 18 years	170 million

Health Conditions Identified for Screening :

“Child Health Screening and Early Intervention Services” under NHM visualize covering 30 Recognized health conditions for early detection and treatment & management. Based on the high prevalence of diseases like hypothyroidism, sickle cell anaemia and beta thalassemia in definite geographical pockets of States/UTs and convenience of testing and expert support facilities, these States and UTs may integrated them as part of this initiative .

Identified Health Conditions for Child Health Screening and Early Intervention Services

Defects at Birth

1. Neural tube defect
2. Down's Syndrome
3. Cleft Lip & Palate / Cleft palate alone[#]
4. Talipes (club foot)
5. Developmental dysplasia of the hip
6. Congenital cataract
7. Congenital deafness
8. Congenital heart diseases
9. Retinopathy of Prematurity

Child hood Diseases

15. Skin conditions (Scabies, fungal infection and Eczema)
16. Otitis Media
17. Rheumatic heart disease
18. Reactive airway disease
19. Dental caries
20. Convulsive disorders

Deficiencies

10. Anaemia especially Severe anaemia
11. Vitamin A deficiency (Bitot spot)
12. Vitamin D Deficiency, (Rickets)
13. Severe Acute Malnutrition
14. Goiter

Developmental delays and Disabilities

21. Vision Impairment
22. Hearing Impairment
23. Neuro-motor Impairment
24. Motor delay
25. Cognitive delay
26. Language delay
27. Behaviour disorder (Autism)
28. Learning disorder
29. Attention deficit hyperactivity disorder

30. Congenital Hypothyroidism, Sickle cell anaemia, Beta thalassemia (Optional)

Implementation Mechanisms

The Operational Guidelines outline the subsequent mechanism to reach all the target groups of children for health screening-

1. For new-born:

- Facility based new-born screening at health facilities, by prevailing manpower.
- Community based new-born screening at home by ASHA workers for new-born till 6 weeks of age.

2. for children between 6 weeks to 6 years of age:

- Anganwadi Centre based screening by the committed Mobile Health Teams of the particular districts.

3. for children between 6 years to 18 years of age:

- Government and aided school based screening by dedicated Mobile Health Teams .

Facility based new-born screening:

This comprises screening of birth defects in public institutional deliveries at public health facilities, particularly at the selected delivery points by ANMs, Medical Officers & Gynaecologist if available. Existing health service workers at all identified delivery points will be trained to detect, register & report and refer birth defects to the District Early Intervention Centres (DEIC) in District Hospitals .

Community based new-born screening (age 0-6 weeks) for birth defects:

ASHAs during home visits for new-born care will use the chance to screen the babies born at home and the infants till 6 weeks of age. ASHAs will be skilled with simple tools for detecting gross birth defects. Additionally ASHAs will mobilise the kith and kin of the children to be present at the local Anganwadi Centres for screening by the devoted Mobile Health Team. For carrying out the above additional tasks, she would be prepared with a tool kit comprising of an illustrative reference book containing self-explanatory pictures for identification of birth defects. Appropriate performance based incentive is also given to ASHAs. In order to make sure improved and enhanced conclusion of the screening

programme by Mobile Health Teams, ASHAs would principally mobilise the children with low birth weight, underweight and children from households (e.g., tuberculosis, HIV, haemoglobinopathy etc.). Line lists maintained by the ANMs and AWWs would also be used to assemble children .

“Responsibility of ASHA under Child Health Screening and Early Intervention Services

- 1) Identify birth defects among 0-6 week’s old babies through home visits.**
- 2) Provide help to mothers for early stimulation of children of 0-6 weeks**
- 3) Explain the screening programme to parents/caregivers of children up to 6 years and mobilise them to attend the screening camps by the dedicated mobile health team at local Anganwadi Centres.**
- 4) Help parents in referral services, if required .**

Screening of children aged 6 weeks till 6 years attending Anganwadi Centres:

Children between the age groups 6 weeks to 6 years of age shall be examined by the dedicated Mobile Health Teams at Anganwadis.

Screening in Government and Government aided schools:

For children between the age groups 6 to 18 years, that would be screened in Government and aided schools; the Block will have activity for the programme. At least two dedicated Mobile Health Teams in each Block will be involved to carryout screening of children. Villages within the Block would be disseminated among the mobile health teams. The number of teams may differ based on the number of Anganwadi Centres, difficult terrain and children enrolled. The screening at Anganwadi Centres would be conducted at least twice a year and once a year for school children .

The Mobile Health Team will have of four members – Two AYUSH Doctors { one male and one female}, one ANM/Staff Nurse and one Pharmacist with proficiency in computer for data management .

Suggested Composition of Mobile Health Team

Member	Number
Medical officers (AYUSH) - 1 male and 1 female at least with a bachelor degree from an approved institution	2
ANM/Staff Nurse	1
Pharmacist* with proficiency in computer for data management 1	1

***In case a Pharmacist is not available, other paramedics – Lab Technician or Ophthalmic Assistant with proficiency in computer for data management may be considered .**

These teams will screen registered children with the Anganwadi Centres up to 6 years of age And all children registered in Government and aided schools. In order to simplify the Carrying out of the health screening procedure, vehicles will be rented for mobility of the teams to Anganwadi Centres, Government and aided schools. A tool kit with necessary equipment for screening of children will also be given to the Mobile Health Team members .

“Composition of Tool Kit for Mobile Health Team	
6 weeks to 6 years	6-18 years
1. Equipment's for Screening including Developmental Delays	
- Bell, rattle, torch, one inch cubes, small bottle with raisins, squeaky toys, coloured wool	- Vision charts, reference charts - BP apparatus with age appropriate calf size
Manual and a card specific to each age with age appropriate developmental check list to record milestones to identify developmental delays (6 weeks -9 years)	
2. Equipment's for Anthropometry	
<i>Age appropriate-</i> • Weighing scale (mechanical new-born weighing scale , standing weighing scale) • Height measuring – Stadiometers/Infantometers • Mid arm circumference tape/ bangle • Non stretchable measuring tape for head circumference	

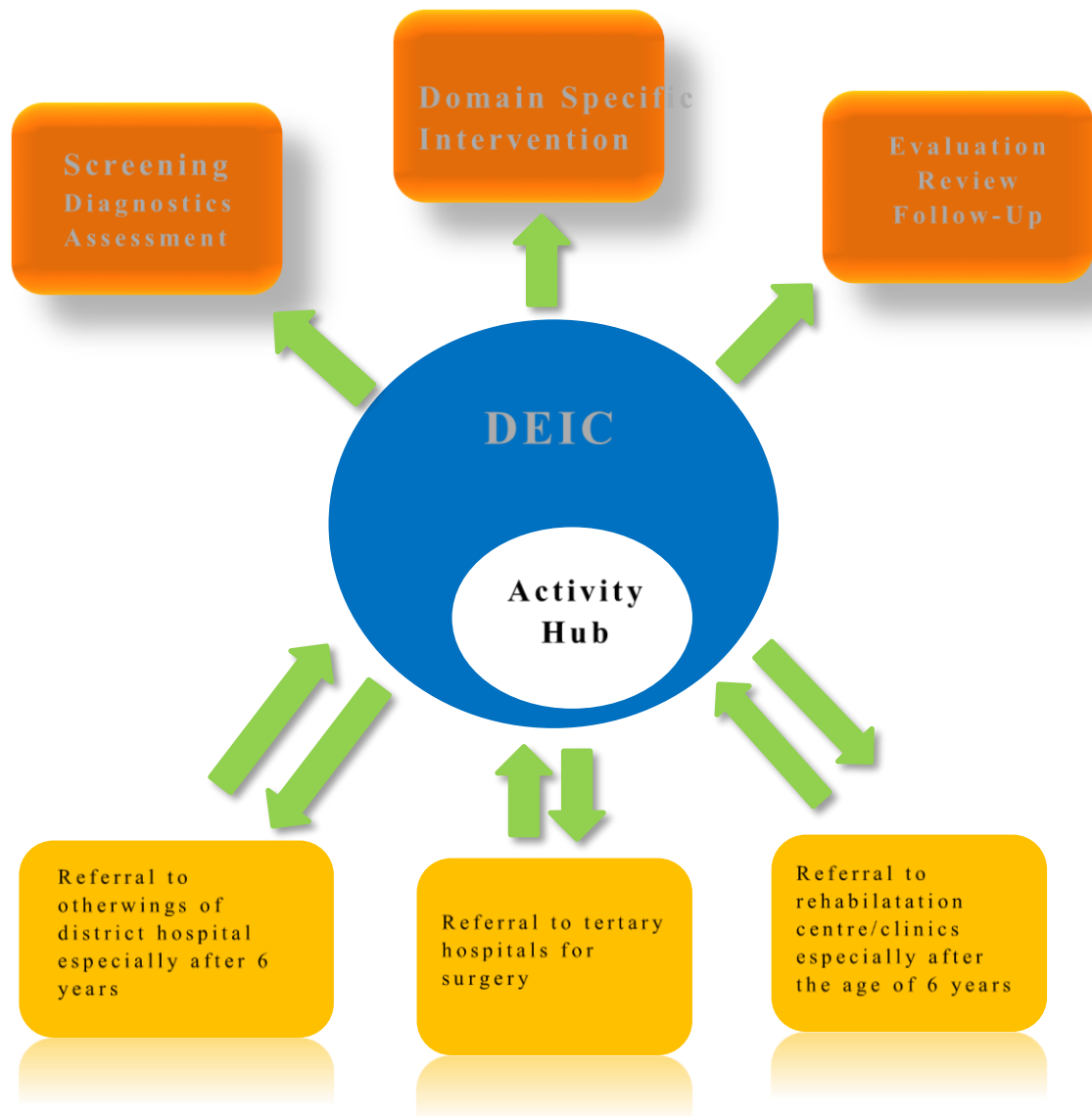
District Early Intervention Centre (DEIC):

An Early Intervention Centre would be established at the District Hospitals. The purpose of the Centre is to deliver referral support to children identified with health disorders during health screening. The DEIC has a team consisting of Paediatrician, Medical officer, Staff Nurses, Paramedics will be involved to provide services. There is also a provision for engaging a manager who would carry out mapping of tertiary care facilities in Government institutions for guaranteeing adequate referral support. The funds will be provided under NHM for management at the tertiary level at the fixed rates by the State Governments in discussion with the Ministry of Health and Family Welfare .

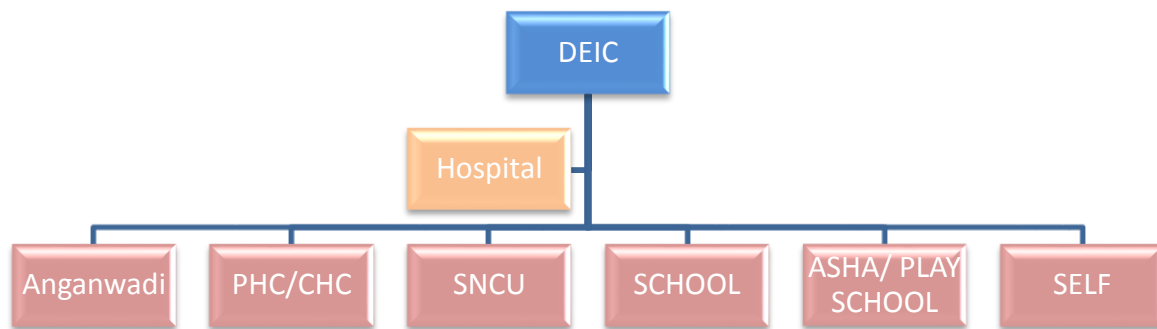
Role of District Early Intervention Centre:

1. Providing referral services to referred children for confirmation of diagnosis and treatment
2. Screening children at the “District Early Intervention Center”
3. Visit all newborns delivered at the District Hospital, including those admitted in SNCU, postnatal and children wards for screening all newborns 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 the District Early Intervention Center
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 the District level depending upon the logistics and local epidemiological situations
7. Ensure linkage with tertiary care facilities through agreed MOU .

Students and Children presumptively identified to have a disease/ deficiency/disability/ defect and who require confirmatory tests or advance examination would be referred to the nominated tertiary level public sector health facilities through the DEICs .



Showing flow chart of referral system



Roll-Out Steps for Child Health Screening and Early Intervention Services

- Identification of State level Nodal Officer for the Child Health Screening and Early Intervention Services.
- Distribution of 'Operational Guidelines' to all Districts.
- Assessment of the State/ District magnitude of various diseases, defects, deficiencies and Disabilities.
- State level co-ordination meeting.
- Appointment of District Nodal Officers.
- Approximation of the total necessity of dedicated Mobile Health Teams & recruitment of the teams .

Mobile Health Teams.

- Charting of facilities/institutions (public and private).
- Establishing of DEIC at the District Hospital.
- Procurement of equipment for the Mobile Team and District Hospital.
- Conversion of tools, preparation packages, printing formats and training material.
- Training of Master Trainers.
- Micro-plan for school and anganwadi visits monthly outreach plan based on the Charting of school institutions and Anganwadis and enrolment in them.
- The schedule of visits of the Mobile Teams should be conversed to the school, Anganwadi Centres, ASHAs, WCD, Other government agencies, students, parents and Local Administration well in advance so that essential arrangements can be made.
- Anganwadi Centres and school authorities should organize for prior communication with Guardians/Parents and stimulate them to participate in the process .

Rationale:

[1, 3] Child health and wellbeing is influenced by multiple factors, all of which can impact on early childhood development. Adverse early life experiences can have lasting effects across the life course, sustaining inequalities and resulting in negative consequences for the health and wellbeing of individuals and society. [2]The early intervention services have the potential to influence future outcomes and these considerable improvements in overall outcomes are widely accepted. There are numerous policy initiatives, programmes and interventions clustered around the early interventions theme, an important program among them is the Rashtriya Bal Swasthya Karyakram (RBSK). The Factors affecting the program should be identified and duly addressed for proper functioning and getting expected results .

Research Question:-

- What is the magnitude of various health conditions (Disease, deficiency, delays and Deformities) under 4Ds approach of RBSK in the District?
- What are the knowledge, attitude and practices among the RBSK Mobile Health Teams of Burhanpur and Khandwa district?

Objective:-

- 1) To assess the knowledge, attitude and practice among the RBSK teams of Burhanpur district.
- 2) To mobilise the positive case between 1 year to 18 years of age of Cleft lip and cleft Palate for surgical intervention and To declare Burhanpur district free from Cleft lip/ Cleft Palate patients ,

Review of Literature:-

The early intervention and management of childhood conditions is a widely discussed and thought after topic for budding public health professionals and researchers. The importance of early detection and management has been long stated and proved by many researchers like Michael J. Guralnick, Ramey, Craig T, Sharon Landesman, Emma Coles, Helen Cheyne and Brigid Daniel etc. Among them Prof. Guralnick's work for more than 40 years towards early intervention is commendable.

^[1] For 4 decades, vigorous efforts have been based on the premise that early intervention for children of poverty and, more recently, for children with developmental disabilities can yield significant improvements in cognitive, academic, and social outcomes. This integrative perspective predicts that fragmented, weak efforts in early intervention are not likely to succeed, whereas rigorous, high-quality, cost-effectively pervasive interventions can do a great deal in working towards children in need of early intervention. The public policy challenge in early intervention is to restrain costs by more

specifically targeting early interventions to those who most need and get benefitted from these interventions .

^[13]Accordingly, a systematic approach to early intervention is desirable that can provide a framework for incorporating this knowledge and ultimately translating it into a coherent and comprehensive early intervention program at the individual child and family level. Perhaps most impressive is the diversity of intervention approaches taken to enhance the development of vulnerable children; some addressing relatively narrow aspect of development, whereas others design and implement more complex and comprehensive sets of intervention strategies. Never the less, the vast array of models and intervention strategies that are continually emerging are signs not only of the complexity of the issues that the early intervention field confronts, but also indicate the vigour, commitment, and energy of those seeking to find the most effective means of supporting children's development.

^[5] Child health and wellbeing is influenced by multiple factors, all of which can impact on early childhood development. Adverse early life experiences can have lasting effects across the life course, sustaining inequalities and resulting in negative consequences for the health and wellbeing of individuals and society. The potential to influence future outcomes via early intervention is widely accepted; there are numerous policy initiatives, programmes and interventions clustered around the early year's theme, resulting in a broad and disparate evidence base .

A vital part of early intervention and management of children are the teams that reach up to them and screen them for identified disease/defect/ deficiency conditions i.e. the Mobile Health Teams (MHTs). But it is sad to know that not many studies have been done on the knowledge, attitude and practices of the involved teams, which form the back bone of Early Intervention and management of children. The knowledge of the teams should be updated with the latest disease conditions (methods & practices). Their attitude and practices should be up to mark when dealing with children.

^[8]A recent comparative study was done between Indore and Ujjain district on Knowledge, attitude and Practice of MHTs was done .It showed following results In the interviewed Mobile Health Teams the requirement of Medical Officers were fulfilled with AYUSH doctors in both the districts. All the medical officers were graduate in AYURVEDA (BAMS) other stream of AYUSH is missing from the team and most of them were working with Rashtriya Bal Swasthya Karyakram for two years. All of them were trained for RBSK except

one. Data entry operator cum pharmacist and nurses were deficient in MHTs under study, in the absence of data entry operator cum pharmacist the doctors were overburdened with work of reporting and data entry. In absence of nurse it's difficult to facilitate screening of children in orderly manner. Vehicle and Driver were available with all MHTs as there is MOU with the private sector transporter which is their strength.

All Mobile Health Teams were deficient in tools and equipment as per the norms of Rashtriya Bal Swasthya Karyakram as there was no regular replacement of tools and equipments.¹ The kit was replaced only once a year. The tools used by MHTs are essential for the screening of children. The Knowledge Attitude and Practices of medical officers of all Mobile health Team was assessed using a pretested questionnaire which was prepared from RBSK resource material. Scores of MHTs doctors were excellent regarding the knowledge of 4Ds. Most of the Mobile Health Team doctors work according to pre decided micro plan, few doctors wash their hands before examining the children and very few wash after completing the examination because it depends on availability of soap and water at Anganwadi Kendra and school. Most of the doctors never wear gloves while examining a child with skin disease because only 5 pair of gloves was available in kit and most of doctors never wear mask while examining a child with respiratory disorders because there was no provision of mask in kit. They try to maintain privacy during adolescent girl examination but there is no partition/curtain available for it with the Mobile Health Teams and most of them were aware about checking expiry date of drugs before providing it to the client. In Indore district 71.4% were having 2 years' experience of working in RBSK, while 1 doctor was untrained as she had recently joined while in Ujjain district 75% were having 2 years' experience of working in RBSK. The Knowledge Attitude and Practices of medical officers of all Mobile health Team was assessed using a pretested questionnaire which was prepared from RBSK resource material. Average score of MHT doctors of Indore and Ujjain districts 100 and 98% respectively for various aspects of birth defect, for various deficiency disorder doctors of Indore and Ujjain districts scored 91% and 90% respectively, while in common childhood disease average score was 94% and 90% for Indore and Ujjain district respectively and in various developmental delays and disability average score of Indore and Ujjain district was 94% and 95% respectively.

Since the studies on Knowledge, Attitude and Practices of Mobile health team members are very rare, so there was really a need for this study to be carried on KAP in two districts namely Burhanpur and Khandwa. The result of this study can be further utilized by

the district or state level unit for arranging Training workshop for the team members if they lack adequate knowledge and for improving attitude and practices, counselling and other tools may be used by the higher authority for making the team members realize the importance of their work and how much difference their work makes to the society, if they follow correct practices and with correct attitude towards their work.

Materials and Methods

PURPOSE OF THE PROJECT

The motto behind conducting such project is to understand the micro level functioning of RBSK project and its successful implementation.

It also gives the idea of:

- Functioning of RBSK programme in Burhanpur district
- How many children out of these positive cases of 4D are getting surgical interventions?
- To assess the knowledge, attitude and practise of RBSK Mobile Health Teams which form the backbone of the programme.

This project helps organisation to find out various gaps between the two district and its implementations. It will also help in decreasing the backlogs of surgeries and also provide help to beneficiaries.

STUDY PERIOD: 8 WEEKS (6th February 2017 to 5th May 2017)

PLACE OF STUDY : District Burhanpur and few field visits to nearby Khandwa District of Madhya Pradesh

Research Design- The research design selected for this study was Descriptive cross sectional type of study and the sampling was Non-probability Convenient type of sampling. It included collection of information and data directly from the subjects of the study through a predesigned questionnaire .

Target Population – Health Screening Teams of RBSK (the backbone of RBSK)

Censes-

(AYUSH Doctors Male& Female, Pharmacists, ANM)

Instrument

1. Knowledge questionnaire
2. Individual Interview/ discussion

Data Analysis

Analysis of the collected data using MS Excel Software.

Outcome

Identification of Knowledge, Attitude and Practices of Health Screening teams of both the districts and evaluating the differences.

Figure No-2 Schematic representation of research design variable

The variables identified in the studies were follows-

Study variable: Knowledge, Attitude and practice of current system of health screening and proper intervention amongst the Health screening teams.

Baseline Variable: The baseline variables in this study were age of the health care personnel, sex, background, years of experience and RBSK training/workshop/module attended, compatibility with software's of team member.

Population:

The population for this study includes RBSK health team members of different background. (AYUSH Doctors, , pharmacist , ANM'S)

Population Size- 60

Method of developing instrument-

The following steps were carried out in developing instrument-

- RBSK Literature developed by NHM MoHFW.
- Discussion with health personnel.
- Discussion with experts (CM&HO Sir, DPM Sir and Nodal Officers of the Program at the district level).

Description of instrument

Structured questionnaire to assess the knowledge, attitude and Practise of health care personnel regarding Rashtriya Bal Swasthya Karyakram:

This consists of 60 questions. The items/questions are based on the RBSK Operational guideline, job aids, knowledge about the program, Child Health Awareness, Attitude towards work, Sense of Responsibility and Standard practices followed. Each right answer was given a score of 1 and wrong answers a score of 0.

Total Score – 60

<50 % (<30) - Inadequate knowledge

50-75 %(31-44) - Moderately adequate knowledge

>75% (>45) – Adequate Knowledge

SOURCES OF DATA COLLECTION :

There are basically two sources of data collection. These are :

- Primary
- Secondary

Primary sources of data:

- By interacting with employees of the MHTs.
- Questionnaire.
- Through direct observations during field visits while Monitoring the MHTs.

Secondary sources of data:

- Through registered records.
- Through website of the organization.
- Literature available about the organization like pamphlets, brochures, written documents guidelines of RBSK etc.

Data collection process :- Primarily the data i.e. the questionnaire was filled by the study objects during the extensive field visits done by the investigator in Burhanpur as well as Khandwa district.

- The investigator introduced him and briefed to the participants about the study and its methodology.

- The structured questionnaire was administered to all the health care personnel at a time under the supervision of the investigator.
- Personal discussion and Interview was conducted to explore more details.
- Time taken by the health care personnel to answer the questionnaire was around 20 and for interview is 10-15 minutes.

Operational Definitions-

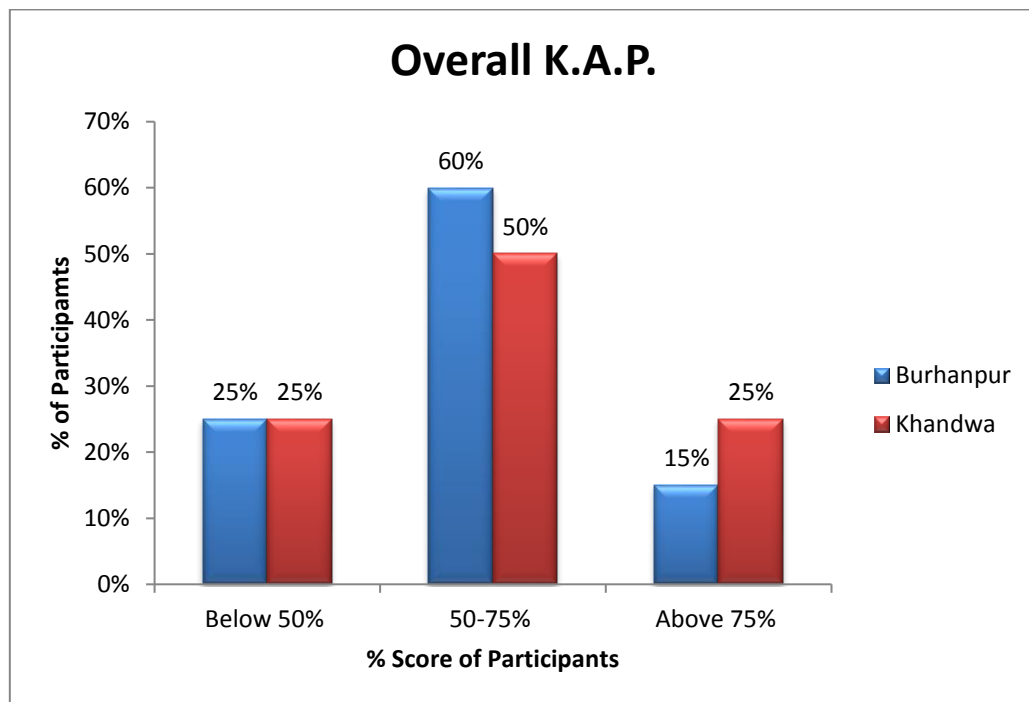
- **Knowledge-** Refers to the understanding about the Health screening of the children under RBSK that has been achieved through training and experience.
- **Attitude-** refers to the way in which the team members think, feel or behave regarding the 4 D's of RBSK and Screening.
- **Practice-** Refers to actions regarding 4 D's of RBSK and Screening and referral practice for intervention, which are actually put at work by RBSK Team in the field.
- **Selected demographic variables –** Refers to the variables like age, gender, qualification, marital status, designation and length of service.
- **Doctors:** Refers to the qualified AYUSH doctors responsible for primary screening of children.
- **ANM-** Refers to the qualified auxiliary nurse with ANM diploma.

The current system of practice of health screening was observed using the observation checklist following which the knowledge questionnaire under supervision. Personnel interview/interaction was also conducted to explore more details.

The collected data was tabulated and analysed with MS Excel Software.

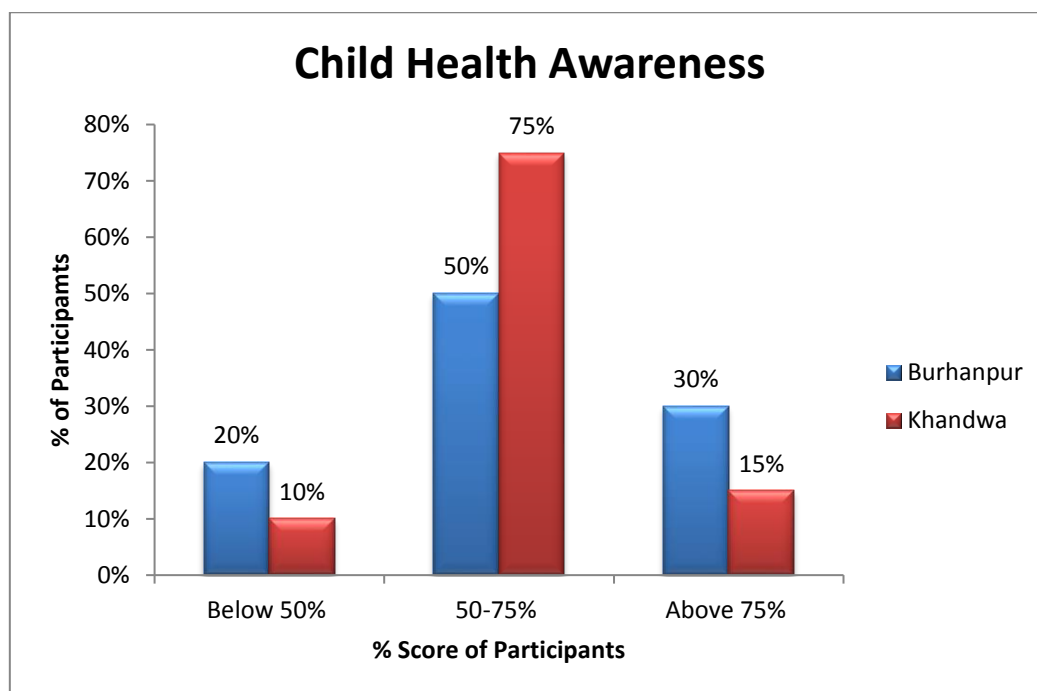
Observation & Result

Graph 1:- Showing Knowledge attitude and practice study of RBSK among team members of Burhanpur and Khandwa district.



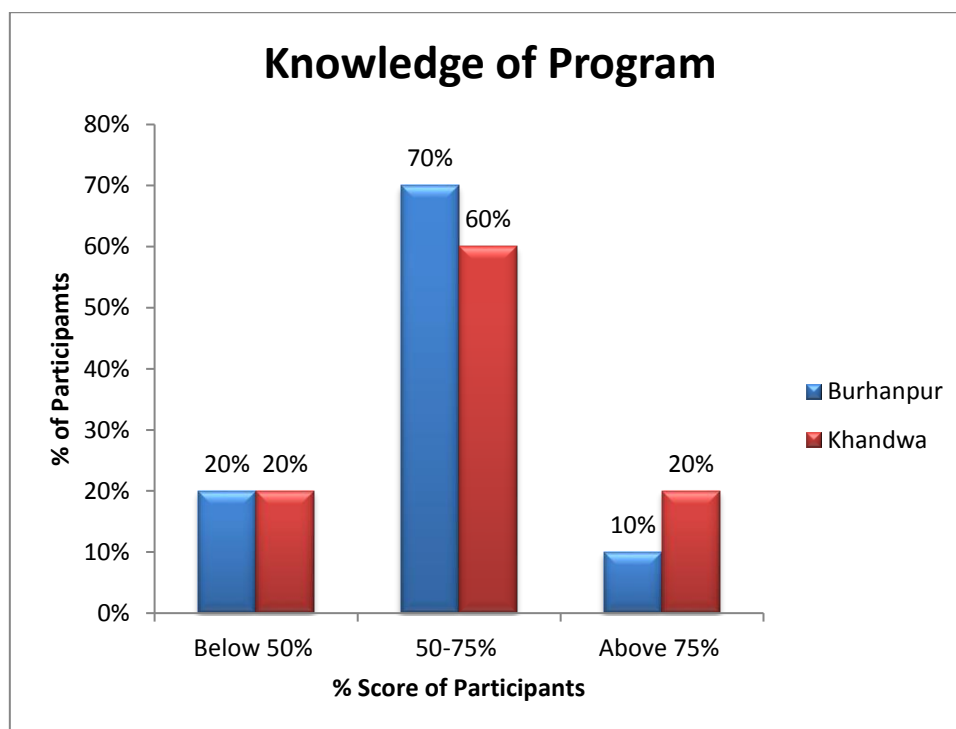
The above graph shows the comparison of Knowledge, Attitude and Practices of MHTs staff of Burhanpur and Khandwa districts. It further shows that One fourth participants from each districts scored below 50% marks i.e. Inadequate knowledge whereas 60 percent and 50 percent participants respectively from Burhanpur and Khandwa have scored between 50% to 75% marks i.e. Moderately adequate knowledge. It is also seen that very few participants i.e. One Fifth and One Fourth participants respectively have got above 75% which means adequate knowledge.

Graph 2:- Showing Child Health Awareness among MHT members of Burhanpur and Khandwa district.



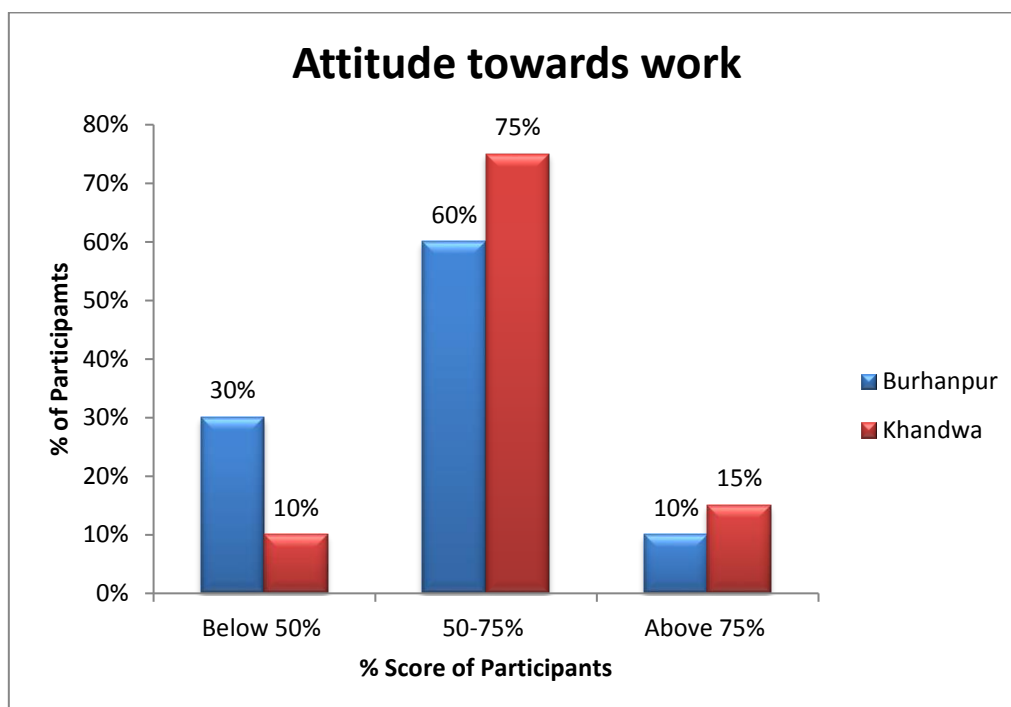
The below graph shows the comparison of Child Health Awareness among MHTs of Burhanpur and Khandwa districts. It further shows that One fifth ($1/5^{\text{th}}$) participants from Burhanpur and One Tenth($1/10^{\text{th}}$) participants from Khandwa district scored below 50% marks i.e. Inadequate knowledge whereas Half of the participants from Burhanpur and $2/3^{\text{rd}}$ participants from Khandwa have scored between 50% to 75% marks i.e. Moderately adequate knowledge. Interestingly it was seen that participants with 75% or more marks were twice in Burhanpur than in Khandwa.

Graph 3:- Showing knowledge of the Program among MHT members of Burhanpur and Khandwa district.



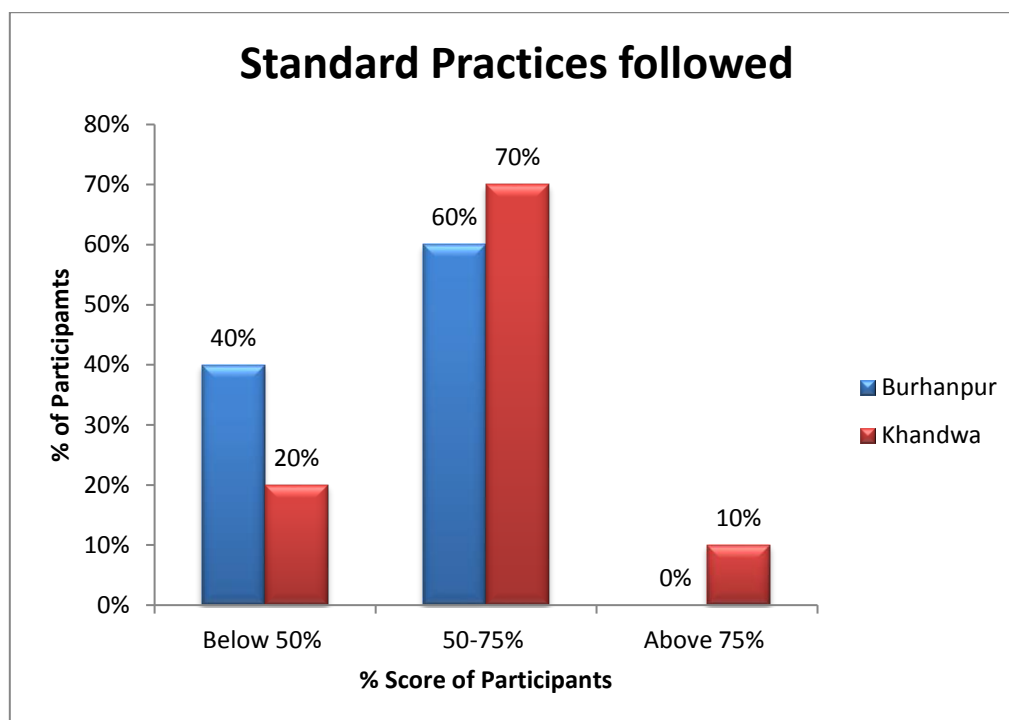
The above graph shows the comparison of Knowledge of the program among MHTs staff of Burhanpur and Khandwa districts. It shows that same proportion of participants i.e. one Fifth ($1/5^{\text{th}}$) from each districts scored below 50% marks i.e. Inadequate knowledge whereas participants with Moderately adequate knowledge i.e. between 50% to 75% were quite more than half of the participating individuals from both districts. The participants who scored above 75% i.e. adequate knowledge about the programme were very few, In case of Burhanpur it was $1/10^{\text{th}}$ of the total participants and in Khandwa the proportion was $1/5^{\text{th}}$ of the participants.

Graph 4:- Showing Attitude towards work among MHT members of Burhanpur and Khandwa district.



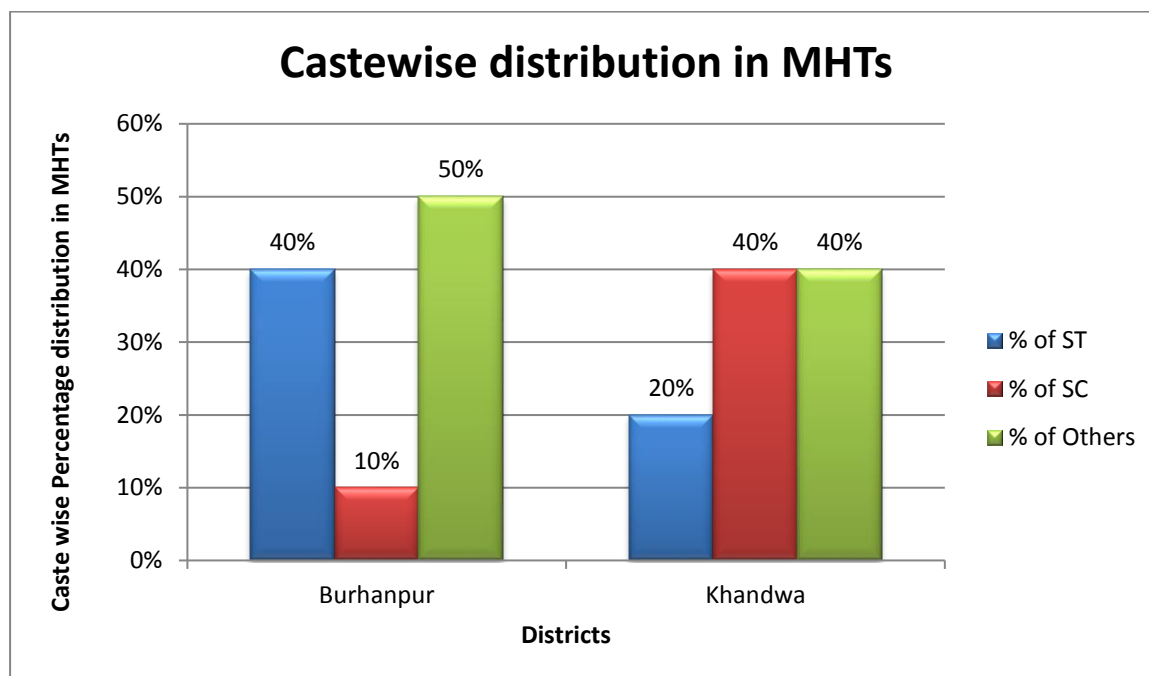
The above graph shows the comparison of Attitude towards work of MHTs staff of both the districts. The results gave a critical figure that One Third ($1/3^{\text{rd}}$) of the total participants from burhanpur lacked in attitude towards work and It further shows that only One tenth ($1/10^{\text{th}}$) participants from Khandwa district scored below 50% marks i.e. Inadequate knowledge Whereas $3/4^{\text{th}}$ participants from Khandwa have scored between 50% to 75% marks i.e. Moderately adequate knowledge. It is also seen that only few participants i.e. $1/10^{\text{th}}$ and nearly $1/6^{\text{th}}$ participants from both districts respectively have got above 75% which means adequate knowledge.

Graph 5:- Showing Standard practices followed by MHT members of Burhanpur and Khandwa district.



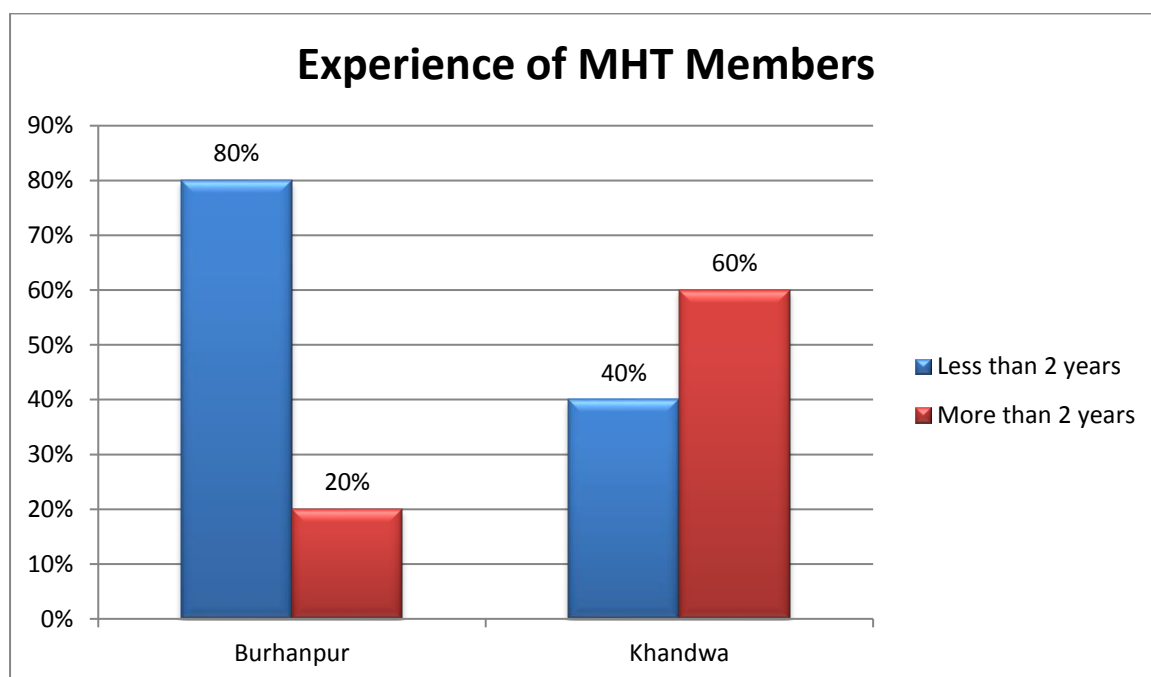
The above graph shows the comparison of Standard Practices followed by MHTs staff of Burhanpur and Khandwa districts. The graph depicts that $\frac{2}{5}$ th participants from Burhanpur scored less than 50% in case of Standard practices followed and in case of Khandwa the proportion of participants was $\frac{1}{5}$ th. While moderately adequate knowledge participants were more in number in both the districts i.e. nearly $\frac{2}{3}$ rd proportion of participants from both the districts. No participant from Burhanpur district scored above 75% for Standard practices followed and for Khandwa district the proportion was also very less i.e. $\frac{1}{10}$ th of the participants.

Graph 6:- Showing Caste wise distribution of Mobile Health Team members of Burhanpur and Khandwa district.



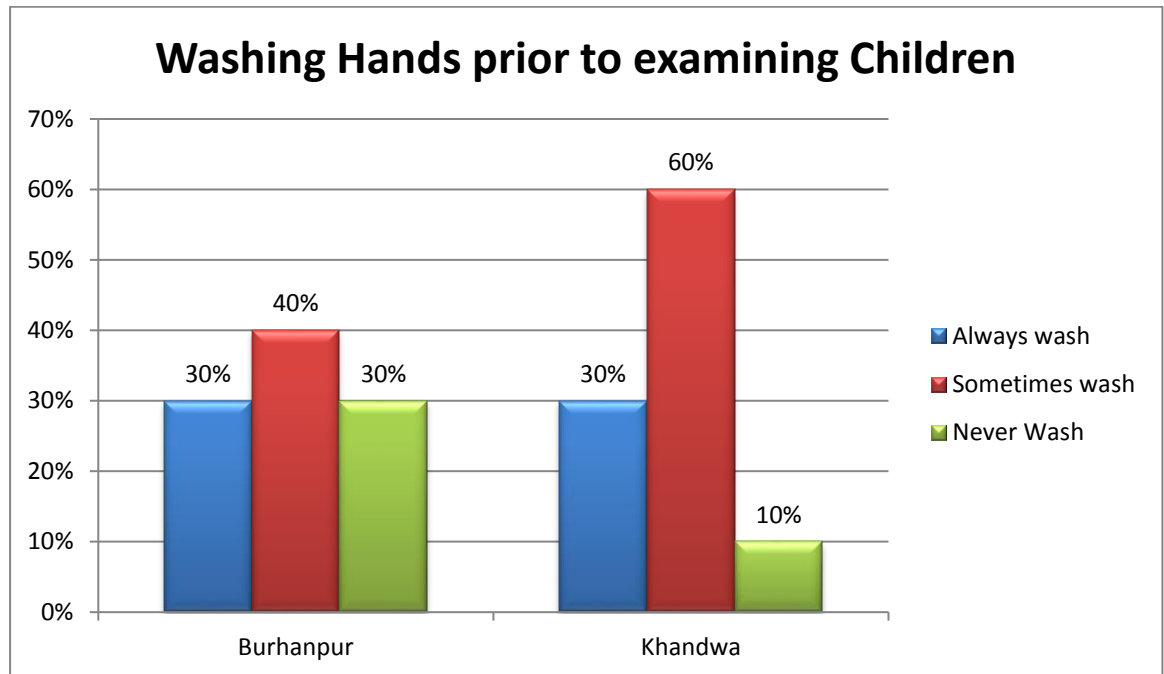
The above figure shows the Caste wise distribution of members of Mobile Health Teams in both Burhanpur and Khandwa districts. The proportion of Scheduled Tribe (ST) members in both the districts are equalled i.e. $\frac{2}{5}$ th of the total members in the team. While the Major chunk i.e. every second member come from others category i.e. OBCs and General in Burhanpur whereas in Khandwa the proportion of members belonging to Scheduled Caste and Others Category are equal i.e. $\frac{2}{5}$ th out of total members of MHTs.

Graph 7:- Showing Experience wise distribution of Mobile Health Team members of Burhanpur and Khandwa district.



The above graph shows the experience wise distribution MHT members of both districts. In Burhanpur $\frac{4}{5}^{\text{th}}$ proportion of MHT members have less than 2 years of experience while in Khandwa the proportion is $\frac{2}{5}^{\text{th}}$. It was also seen that more proportion of members of Khandwa had experience more than 2 years i.e. $\frac{3}{5}^{\text{th}}$ while in Burhanpur it was only $\frac{1}{5}^{\text{th}}$.

Graph 8:- Showing Hand washing practice among Mobile Health Team members of Burhanpur and Khandwa district



The graph shows practice of Hand washing by Members of MHTs before examining Children. It was shocking to know that about $\frac{1}{3}^{\text{rd}}$ members in Burhanpur Never washed their hands before examining while in Khandwa the ratio was $\frac{1}{10}^{\text{th}}$. Major proportion of members in both the districts i.e. $\frac{2}{5}^{\text{th}}$ and $\frac{3}{5}^{\text{th}}$ respectively for both districts. Never take hand washing seriously means they wash sometimes and sometimes not.

DISCUSSION

The KAP assessment shows that the RBSK team of both Burhanpur and Khandwa is performing well. (Score>75 % - Adequate knowledge category), The screening practice of both the district comes under the category under moderately adequate and attitude towards RBSK is adequate in Khandwa whereas moderately adequate in Burhanpur.

- Surgeries and reporting was poor in Khandwa (60) as compared to Burhanpur (83).
- **Successful 35 surgery for cleft lip and cleft palate done at Burhanpur and the District Magistrate declared it Free from Cleft lip and Cleft Palate patients(Between age group of 1 year to 18 year).**
- The Reason for Poor performance were-
 - No District Early Intervention Centre (DEIC) at Khandwa and Burhanpur.
 - Lack of convergence with WCD department and Education department.
 - Most of the teams are facing human resource problem.
 - No regular induction programme to motivate them to organise camp for surgery.
 - Lack of communication with hospitals that are providing surgical assistance for RBSK.
 - No clear cut awareness for surgical treatment, team members not having knowledge about proper referral for surgeries.

SUMMARY & CONCLUSION

Rashtriya Bal Swasthya Karyakram (RBSK) is a new initiative by National Health Mission (NHM) aimed at screening over 27 crore children from 0 to 18 years for 4 Ds - Defects at birth, Diseases, Deficiencies and Development Delays including Disabilities. Children diagnosed with illnesses will receive follow up including surgeries at tertiary level, free of cost under NRHM. The task is gigantic but quite possible, through the systematic approach that RBSK envisages. Implemented in right earnest, it would yield rich dividends in protecting and promoting the health of our children .

It is concluded from this study that there are few loopholes in Implementation of RBSK and if we correct these the programme will be highly successful.

Needless to say, those dividends of early intervention would be huge including improvement of survival outcome, reduction of malnutrition prevalence, enhancement of cognitive development and educational attainment and overall improvement of quality of life of our citizens. Bringing down both out of pocket expenses on belated treatment of diseases / disabilities (many of which become highly debilitating and incurable) and avoidable pressure on health system on account of their management are among obvious benefits. 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)

RECOMMENDATIONS

Obviously it's a wonderful programme with a huge mission to achieve, we have to have make extra efforts and make some of the changes and additions to this programme to make it a successful edition of the National Rural Health Mission.

1) Monitoring OF Mobile health team (MHT)- Regular monitoring of mobile teams are very necessary on weekly or daily basis , to check they are screening children and students properly according to guideline s. In Madhya Pradesh GPS is fitted in RBSK vehicles to track their locations. But beside locations, there are many other important things which should be monitored like punctuality, presence and screening procedure. . The monitoring is not an easy task; every time state headquarters can't make a vigil on the working of field. The DEIC staff (DEIC manager and project coordinator) should be engaged in this activity.

2) More and More on the Spot Treatments- We cannot wait for every detected screened child to come to DEIC and receive treatment, because there are many factors associated with it. The students we screen in the government schools are so poor to bear travel expenses to the DEIC, parents of children are daily wagers who cannot miss a single day of their work as they earn their daily bread from it, we have to bridge up that gap. On the spot treatments by DEIC staff should be made available on monthly basis, like organising DEIC camp in the area where most number of diseased children is found.

Mobile dental van should be deployed in every district, the mobile dental vans from nearest dental colleges can be hired on weekly or monthly basis, because on the spot dental treatment for dental patients is nearly impossible without proper setup. And number of dental patients is highest among screened children. Roadways buses can be hired to transport students from their areas to DEIC. Students who can be treated in a single visit and could not bear travel expenses can be filtered out and they should be taken to DEIC.

3) Take Private Medical and Dental Colleges on Panel of RBSK- Our government hospitals and Government institutes already remain packed with patients, but our goal is to treat every child with care and on first preference basis. We have large number of private medical and dental colleges, in which under the supervision of expert staff medical and dental students provide treatment to the public and too at very low cost or sometimes free of cost. In

the present system suppose a child has fluorosis, the treatment is capping of teeth. But in RBSK now we don't arrange the cosmetic treatment for the patient, but if we will take the private dental colleges on the panel the child can be referred there and treatment can be done without any charges or minimal charges. The treatment in these colleges is done by students under supervision of the senior professors. The same can be done in the case of medical treatments. The child can be referred to nearby empanelled private medical colleges for smaller and prosthetic treatments.

4) By Changing the Objective Diseases and Format of Reporting- The present format contains only 29 or 30 diseases and also the diagnosis cannot be made on the spot by Mobile Health Team, because a pain in ear cannot be said Otitis Media on the spot. Also there are vast numbers of diseases which also need to be included in the screening format. The formats for the DEIC and mobile health teams need to be changed, instead going into complications of males females columns, age group columns, the main objective should be how many total are diseased and referred to DEIC and how many of them are treated or under-treatment. The format of the mobile health team should be in the form of organ systems, like we have in physiology and medicine subjects. There should be a list of organs systems, like if any child complains of weak eyesight the disease should be noted as provisional diagnosis in the neurosensory system. Later on the disease should be diagnosed in the DEIC. This will help in thorough screening of children's organ systems and full body and will simplify the procedure and chief complaint of the child can be more properly understood and a final diagnosis is reached. The reporting format of DEIC should be disease wise because here the final diagnosis is made. In the above example the disease will come as refractive error. I cite you a loophole in the present format of reporting. There is a point in format Dental Conditions or Dental Diseases. This point slips the other oral health problems. The child is only screened for dental caries. A child with fluorosis is referred to the DEIC because the MHTs can't properly diagnose and differentiate between extrinsic and intrinsic stains of teeth, in a normal child with erupting teeth they may diagnose as malocclusion, a proper orientation and training in this regard should be made. These cases are false positives and only create hindrance in detecting and following up the true positives. The column name can be changed to Oro-Dental System, so that the screening can be done much better because the chief complaint will be much better addressed. Most important is, in present system child is screened physically by the mobile health teams, many serious diseases which are blood borne and students may be carrier of such diseases goes undetected, like Hepatitis B and C, HIV,

typhoid etc. A blood sample collection arrangement should also be made in the Mobile Health Team a lab technician post can be created in MHT

LIMITATIONS OF THE STUDY

- As the study duration was less, a large sample size could not be attempted and the patient part could have been also included in the study which would have given us more insight about the actual status and utilization of the services provided and accessed by the Rashtriya Bal Swasthya Karyakram.
- Number of study district could have been increased in order to ensure more representation and generalization of the findings.

References:-

- 1) Early intervention and early experience. Ramey, Craig T.; Ramey, Sharon Landesman American Psychologist, Vol 53(2), Feb 1998, 109-120.<http://dx.doi.org/10.1037/0003-066X.53.2.109>
- 2) Michael J. Guralnick (1997) Effectiveness of Early Intervention for Vulnerable Children: A Developmental Perspective. American Journal on Mental Retardation: August 1997, Vol. 102, No. 4, pp. 319-345.
- 3) Hirokazu Yoshikawa , Long-Term Effects of Early Childhood Programs on Social Outcomes and Delinquency - The Future of Children Vol. 5, No. 3, Long-Term Outcomes of Early Childhood Programs (Winter, 1995), pp. 51-75
- 4) <https://www.fic.nih.gov/News/GlobalHealthMatters/january-february-2014/Pages/brain-disorders-vietname-disabled-children.aspx>
- 5) Emma Coles, Helen Cheyne and Brigid Daniel Early year's interventions to improve child health and wellbeing: what works, for whom and in what circumstances? Protocol for a realist review Systematic Reviews 2015
- 6) <http://familystudies.uconn.edu/prevention-and-early-intervention/>
- 7) Tiwari J, Jain A, Singh Y, Soni AK. Estimation of magnitude of various health conditions under 4Ds approach, under RBSK Programme in Devendranagar block of Panna District, Madhyapradesh, India. Int J Community Med Public Health 2015;2(3):228-33.
- 8) Parmar S, Bansal SB, Raghunath D, Patidar A. Study of knowledge, attitude and practice of AYUSH doctors, evaluation of MHTs working in RBSK and client satisfaction. Int J Community Med Public Health 2016;3: 2186-90.
- 9) Resource Material – Rashtriya Bal Swasthya Karyakram (October 2013) Child Health Screening and Early Intervention Services.

10) OPERATIONAL GUIDELINES: Rashtriya Bal Swasthya Karyakram (RBSK)
Ministry of Health & Family Welfare Government of India (FEBRUARY, 2013)

11) http://www.censusindia.gov.in/2011census/dchb/DCHB_A/23/2350_PART_A_D_CHB_%20BURHANPUR.pdf

12) Guralnick, M.J. (Ed.), (1997). The effectiveness of early intervention. Baltimore: Brookes.

13) Guralnick, M.J. (Ed.), (2017). Early intervention for young children with developmental delays. In H. Sukkar, C.J. Dunst, & J. Kirkby (Eds.), Early Childhood Intervention (pp.17-35). Oxen, UK: Routledge.