Prabhu S et al. GAIMS J Med Sci 2022;3(1) (Jan-Jun):33-39
Online ISSN: 2583-1763

Original Research Article

External Evaluation of Rashtriya Baal Swasthya Karyakram (RBSK) in Chhattisgarh & Practical Recommendations

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ABSTRACT

Context: Government of India launched the Rashtriya Bal Swasthya Karyakram (RBSK) for screening children from 0 to 18 years for 4 D's (Defects, Diseases, Deficiency and Developmental Delays including disabilities) for timely referral and treatment. There are few studies published evaluating the implementation of this programme.

Aims: To evaluate implementation of RBSK programme in Chhattisgarh state, problems in RBSK referral-to-treatment process.

Methodology: One good performing district (Raigarh) and one poor performing district (Raipur) were selected, one block was randomly selected by lottery method from one rural and one urban area of each district respectively and all Mobile Health Teams (MHTs) of selected block were included for assessment. Since there are two MHTs allotted in each block, total 8 MHTs were evaluated. A pretested questionnaire was used to assess Knowledge, Attitude and Practice (KAP) of MHT doctors. Evaluation plan included health check-up of randomly selected students, interview with beneficiaries and visit to DEIC. Data analysis was done using Microsoft excel and SPSS.

Results: There is shortage of manpower, screening equipment and reporting formats. KAP assessment of MOs shows below average information about paediatric conditions especially group A & D. Limited higher government centres for treatment of group A & D conditions (e.g. CHD, vision impairment, disability, etc.) leads to long waiting list, demotivation and loss to follow up.

Conclusions: RBSK programme has its inherent strengths. Troubleshooting of vital issues will help in its smoother implementation. Introduce separate window/desk "CHIRAYU KHIDKI" at Medical College to fast-track service provision to children referred through RBSK. Provide specialised investigations free to beneficiary. Establish referral to centres providing rehabilitation to children with special needs and their care-givers.

Key-words: RBSK, Audit, Children, Chhattisgarh, Evaluation, Mobile Health Team, Chirayu

INTRODUCTION

The National Rural Health Mission, Government of India launched the nationwide Rashtriya Bal Swasthya Karyakram (RBSK), a Child Health Screening and Early Intervention Services Programme to provide comprehensive care to all the children in the community[1].The objective of this initiative is to improve the overall quality of life of children through early detection of birth Defects, Diseases, Deficiencies, Development delays and Disability. For negating the impact of early adversities on the development and ensuring a healthy, dynamic future for all children, this program aims to improve the quality of life with special focus on improving cognition and survival outcomes for "at risk" children[2]. It has a systemic approach of prevention, early identification and management of 30 health conditions distributed under 4Ds: Defects at birth

(group A), Diseases (group B), Deficiencies (group C) and Developmental delays including Disabilities (group D)[2].

The high burden of these childhood conditions contributes significantly to child mortality, morbidity and out of pocket expenditure of the poor families. Child Health Screening and Early Intervention Services covers 30identified health conditions for early detection, free treatment and management through dedicated Mobile Health Teams (MHTs) placed in every block in the country. These teams carry out screening of all children in the pre-school age enrolled at pre-school (Anganwadi) centres at least twice a year besides screening of all children studying in Government and Government aided schools. District Early Intervention Centres are set up as first referral point for further investigation, treatment and management[3]. Tertiary care centres provide management of complicated cases requiring high-end medical care and treatment.

There are few studies published evaluating the implementation of this programme or reflecting the feedback from beneficiaries. External evaluation of RBSK program in Chhattisgarh was performed to assess performance of MHTs, KAP assessment of medical officers, random cross-check examination of 10 students per visit site, potential roadblocks in the referral mechanism and feedback from beneficiaries.

METHODOLOGY

The evaluation was conducted in December 2021. Around this time, Chhattisgarh government had undertaken an exercise for assessment of its few health programs including RBSK. National Health Mission, Government of Chhattisgarh invited Department of Public Health, Sri Sathya Sai Sanjeevani Hospital, Nava Raipur as an external organization to conduct assessment of its RBSK program. This manuscript is a sub-part of the detailed report. Since this assessment was conducted as a directive from NHM, Chhattisgarh Government due to its felt need, their office had sent approval letters and instructions to the district nodal agency for co-operation to the evaluation team for this exercise. Ethics Committee approval (reference number SSSSH/IEC/2021/10) for publication of this manuscript was received.

Selection of Districts: A fair representation of RBSK performance and rural/urban area was considered for selection of districts. Purposive sampling was used for selection of districts for assessment of RBSK performance. Since the National Health Mission, Chhattisgarh Government office had requested the assessment to be completed within 3 weeks for prompt implementation of recommendations; hence a rapid assessment was planned involving two districts - best performing district and poor performing district, to identify the best practices and gaps in RBSK implementation in respective districts. All districts were assessed for RBSK performance till date from data available online on RBSK e-portal and list of good and poor performing districts was drawn from the report[4]. One good performing district Raigarh and one poor performing district Raipur were selected. Table 1 denotes comparison of performance indicators of best performing district (Raigarh) and poor performing district (Raipur). Each district has DEIC at District hospital.

Two blocks were randomly selected by lottery method from each district and all MHTs of the selected block were included for assessment. Total 8 teams were evaluated. Two MHTs were working in each block hence total 8 MHTs, and each MHT is comprised of 2 doctors one male and one female, one pharmacist, one nurse, and one laboratory technician hence ideally 16 doctors, 8 nurses and 8 pharmacist cum computer operator and 8 laboratory technicians must be available. A pretested questionnaire was used to know the field of specialization, training status, knowledge, attitude and practice of MHT doctors, in which knowledge questions were taken from the resource material of RBSK, attitude and practice questions were framed by keeping the guidelines of programme in mind[1,3]. An observational checklist drawn from RBSK guidelines[1,3] was used for assessing availability of tools and equipment. Random cross-checking of 10 students each was performed in one school and one Anganwadi centre previously examined by each MHT. Thus, in total 160 children were randomly examined for the 8 MHTs evaluated in this exercise.

Two beneficiaries from each school and AWC, who availed the services and were referred in past one year, were interviewed for their experience regarding the RBSK referral and treatment process. Thus, in-depth interviews were conducted for total 16 beneficiaries and parents regarding their experience of availing treatment through RBSK program. Interviews were also conducted for several stakeholders like MHT team members regarding difficulties they face during service delivery and taking patients and their parents to District hospital or medical college for consultation for complex morbidities especially Category D patients. School principal and teachers, Nodal RBSK Officers, Block Medical Officer were also interviewed to get their feedback about RBSK process thus getting a comprehensive view and understanding of the overall process.

Data was entered in Microsoft excel sheet for analysis and appropriate tests were applied by SPSS version 20.0 wherever required.

RESULTS

In Raipur district, 7 out of 8 (87.5%) doctors were available, 1 female MO position in Arang block MHT had not been recruited for want of ST candidate since last 3 years & in Raigarh district, 7 out of 8 (87.5%) doctors were available and 1 female MO position was vacant since the start of RBSK in rural Raigarh (Kharsiya), reason being female MO unwilling to work in that area for safety concerns. One ANM in Raipur and 2 ANMs were not available in Raigarh district. Pharmacist-Data entry operator was available with all MHTs and 1 Lab technician was not available in Raigarh district. For Arang block, Raipur district, based on population and no. of schools & AWC, 4 MHTs are required and as per information received from MHT, 3 are sanctioned. However, only 2 teams are recruited leading to increased workload for available teams, with possibility of compromising quality of screening.

For Raigarh block, having 2 rural teams, one Urban MHT is approved and sanctioned but not recruited yet. One team in Kharsiya, Raigarh district is lacking female MO and ANM, and one team in Raigarh city is lacking ANM and LT, thereby grossly limiting the team's performance.

Essential equipment like stethoscope, weighing scale, BP apparatus, MUAC tape, measuring tape is not available with 50% of the teams. They share equipment from nearby CHC or AWC/schools. No improvement despite giving repeated written communication for the same.

All MHTs were having vehicle because there is a Memorandum of Understanding with the private transport service provider for providing transport to Mobile Health Teams for their scheduled field visits. Reporting formats, *i.e*. individual student cards, Chirayu daily registers, category A form (referral form for congenital defects) and Chirayu paper, were not available with any MHT since last year. Despite giving repeated indents & written complaints, formats have not been made available. Only one team (Abhanpur MHT) had made an alternate register and were being provided Xerox copies of Student cards/Chirayu forms through CHC.

Teams have not maintained data, date wise; hence it is difficult to assess the work done by teams on a daily basis.

Majority of doctors (5/8 *i.e*. 63.0%) have 3 to 4 years of experience in RBSK. Only 50% had an Induction training for 5 days, which was theoretical without practical inputs. Refresher training is recommended regularly (at least every 2 years) for continuing education and motivation of team members. Random cross-checking of 160 children revealed 2 CHD suspects, 4 cases of severe anaemia and 2 cases of disability.

Knowledge Attitude and Practices of medical officers of all MHTs was assessed using a pretested questionnaire which was prepared from RBSK resource material[1](Table 2). In Raipur district, 54.3% medical officers answered correctly about congenital defects, 40.0% had correct information about common childhood diseases, 25.7% answered correctly about deficiencies and 51.4% answered correctly about various developmental delays & disability. Whereas in Raigarh district, 60.0% medical officers answered correctly about congenital defects, 40.0% had correct information about common childhood diseases, 40.0% answered correctly about deficiencies and 63.0% answered correctly about various developmental delays & disability. The below average scoring indicates need for training the MHT teams.

Assessment of Attitude: Regarding the necessity of micro plan, 13 of 14 doctors (92.8%) agreed, while one MO was neutral with regards to the necessity of micro plan. Regarding effectiveness of working as per micro plan, 12 of 14 doctors agreed, 2 were neutral. 100% doctors of both the districts strongly agreed with the necessity of emergency referral arrangements.

Assessment of Practice: In open ended questions for co-ordination with AWC, sending message through Mithanins to parents in the village regarding screening was the preferred method for all MHTs, despite this there are difficulties faced on ground. All MHTs ensured privacy while examining adolescent girls and checked for expiry of medicines before dispensing to children.

None of the teams had First Aid box with them. It is recommended that every MHT should carry one for emergency use.

Feedback from Mobile Health Team (MHT) Doctors: Monthly targets are high and difficult to achieve, leaving only 4 minutes examination time for each child, often achieving the desired quantity compromises quality of health screening. Presence of medical officer is required for every small aspect in RBSK process; other team members should fill in wherever appropriate – like completing paperwork, taking signature from higher officials, co-ordinating

follow-up visits. Presence of MO should not be mandatory in tasks where other team members can do the needful. There should be effective utilisation of other MHT team members for supporting MO in reporting, documentation and patient counselling. This will be possible through their regular review, training and capacity building.

Feedback from parents of beneficiaries gave important insights into the struggles they faced during referral and accessing treatment at higher centres. When enquired about the difficulties faced at higher centres, 76.0% parents mentioned long waiting time and too much paperwork whereas 65.0% felt that since specialised tests or treatment were not available at government centres, the whole exercise was futile. 73.4% parents said loss of daily wages was a deterrent to go to DH/medical college repeatedly for follow-up.

Table 1: Comparison of Performance Indicators of best performing district (Raigarh) and poor performing district (Raipur)

District Name	Total Schools allotted	School visited	Percentage (Schools visited) (%)	Total Students Inspected	Total Students Inspected (%)	Disease Found in Students	Total Treated Students
RAIGARH	3087	1651	53	207110	62.31	18149	17574
RAIPUR	1462	549	37	178953	26.7	14045	13679

Table 2: Knowledge Assessment of Medical Officers of Mobile Health Teams (MHTs) in Raipur and Raigarh in group A to D conditions

	RAIPUR		RAIGARH		OVERALL	
	Average score	Percentage	Average score	Percentage	Average score	Percentage
Knowledge about various aspects of 4Ds						
Knowledge about various aspects of birth defects (A)	2.7	54.3%	3.3	65.7%	3.0	60%
Knowledge regarding common childhood diseases (B)	2.0	40.0%	2.0	40.0%	2.0	40%
Knowledge about various childhood deficiency disorders (C)	1.3	25.7%	2.6	51.4%	2.0	40%
Knowledge about various developmental delays & disability (D)	2.6	51.4%	2.6	51.4%	3.14	63%
Total score	7.5	37.5%	11.5	57.5%	9.0	45.0%

Table 3: Issues identified during RBSK External Evaluation and Recommendations for the same.

Issues identified		Recommendations
A. Patient centric	1. Need for fast tracking Chirayu referrals at Medical College/District hospital	Introduce separate window/desk **"CHIRAYU KHIDKI"** at Medical College to fast-track service provision to children referred through RBSK
	2. Unavailability of higher investigations/diagnostic tests in govt. Facilities 3. Limited higher government centres for treatment of group A & D (*e.g.*: CHD, vision impairment, disability, etc.) conditions leading to long waiting list, demotivation and loss to follow up	Introduce mapping of tertiary care services for both diagnosis and treatment (NGO, not-for-profit, private, etc.), provide service at govt. fixed rates and free to beneficiary: **Public Private Partnership model**
B. Mobile Health Team	4. Lack of Appropriate training of RBSK for MHT MOs and other staff	Appropriate Induction training and regular refresher training for MHT team members
	5. Need for effective utilisation of other MHT team member	Effective utilisation of other team members
	6. Revisiting daily screening targets for MHTs	Ambitious daily targets, compromising quality. Targets should be modified based on terrain and population.
C. RBSK process	7. Need to upgrade and strengthen DEIC with relevant Manpower and services	**DEIC**: Upgrade and fill all vacant positions Develop DEIC RAIGARH as "MODEL DEIC" for Chhattisgarh state
	8. Lack of co-ordination with other National health programmes	Co-ordination with other National health programmes Regular co-ordination and review meetings with Medical college, Dist. Education Officer and ICDS nodal agency
	9. Need of more MHTs in densely populated areas	Additional MHTs teams in densely populated areas

DISCUSSION

In the interviewed Mobile Health Teams the requirement of Medical Officers were fulfilled with AYUSH doctors in both the districts. Three medical officers were graduate in Ayurveda (BAMS) and five in Homeopathy (BHMS) and most of them were working with Rashtriya Bal Swasthya Karyakram for two years. All of them were trained for RBSK except one. 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 (RBSK) as there was no regular replacement of tools and equipment. The kit was issued when the team was constituted but was not replaced even after repeated reminders. There was a need for more teams in densely populated areas and all vacant positions should be filled. In a study by Panigrahy et al in Odisha,[5] understaffing was identified affecting quality of service provision.

The below average scoring in KAP assessment indicates need for training the MHT teams. In a study by Parmar S et al[6]in Madhya Pradesh, India however found that MHT medical officers had good knowledge about the four groups of conditions.

MHT medical officers gave feedback that they had difficulty in diagnosing group A & D conditions (congenital defects, developmental delays and disability). Teams have requested more detailed training which is Practical oriented for Birth defects and Developmental delays/Disability, to equip them with skills for suspecting/diagnosing these conditions. Induction training was not conducted for 3/8 MOs from MHT.

Majority of children especially category A & D, require consultation/treatment at Medical College (MC) or higher centres. Due to the enormous patient load at medical college, patient-families have to spend considerable time at the registration and other areas in MC, despite having relevant approved documents from DH Nodal officer or DEIC and have already undergone many levels of screening prior to reaching MC. This demotivates many families from further follow up. This concern has never been addressed so far since inception of the program. Thus, the authors suggest provision of a separate window/desk "CHIRAYU KHIDKI" to be introduced at Medical College to fast-track service provision to children referred through RBSK. After issuing the registration paper, children should be directly referred to the relevant speciality OPD. At the end of each month, person manning the Chirayu Khidki can send report (hard copy/email) to DEIC.

Higher investigations like CT scan prior to case selection for Cochlear implant are not available within government facilities in Raigarh, children are referred to Raipur MC for CT scan. Therefore, in places where higher investigations are not available in government facilities, there should be a provision to get it done in private facilities at government fixed rates, paid through RBSK Chirayu and free of cost to the children.

Regarding feedback from parents, similar concern was voiced in a Delloitte report[7]wherein parents ended up waiting for extended periods of time, had to undertake repeat visits and still did not receive the 'benefits of free treatment and care' as envisioned in the program. During such episodes, they usually tend to give up on the government health system and try treatment from the private sector. Tiwari J et al[8]also identified dissatisfaction amongst the beneficiaries and need for strengthening the RBSK program in their region.

Violence (physical, mental, sexual) against children is a known entity[9-11] and RBSK program can help such children access help or rehabilitation services. It is important to develop a referral system to relevant centres/NGOs for children who need help for domestic abuse or mental health issues and also develop a list of government centres or NGOs working for this cause and circulate to all RBSK MHTs across the state.

CONCLUSION

The RBSK program has its inherent strengths with the capacity to reach the underserved population. But the program implementation requires major revamping in making services accessible to those for whom the program is designed. Regular capacity building of MHT staff and filling vacant posts is required on an urgent basis. Provision of a separate window/desk "CHIRAYU KHIDKI" to be introduced at Medical College to fast-track service provision to children referred through RBSK. Mapping of rehabilitative/tertiary care centres offering higher diagnostic tests like CT/MRI/Audiology and specialist treatment facilities in private/NGO/other departments like Social Justice or civil society organisations working for children with special needs and their care-givers should be empanelled under RBSK at government approved rates and free to the beneficiaries/patients referred through RBSK.

RECOMMENDATIONS

Appropriate Induction training and regular refresher training for MHT team members is required for capacity building of staff and as indicated through the KAP assessment in this study. For common morbidities drawing high referrals to DEIC/MC like vision

impairment, disabilities, developmental delays, other centres (private, NGO, not-for-profit, etc.) offering services should be explored to reduce time lag and waiting time. Government may inspect such centres and fix rates for services. Beneficiaries can then avail treatment at government approved centres and prices.

DEIC is the referral point for all Category D cases. It is important for upgrading DEIC for providing quality service and motivating beneficiaries for regular follow-up.

It is important to develop a referral system to relevant centres/NGOs for children who need help for domestic abuse or mental health issues and also develop a list of government centres or NGOs working for this cause and circulate to all RBSK MHTs across the state.

Swapping of teams after couple of years can be considered to break monotony and avoid casual approach in dispensing their duties.

LIMITATION

Due to shortage of time, a rapid assessment was performed and best & poor performing districts were selected. This can be considered as a limitation as only extremes were selected.

ACKNOWLEDGEMENT

The authors sincerely acknowledge and thank senior officials of National Health Mission, Chhattisgarh, nodal officers, program managers and field workers of Rashtriya Baal Swasthya Karyakram (RBSK)program Chhattisgarh for their support in this evaluation exercise. We thank Sri Sathya Sai Sanjeevani Hospital management and administration for its support and encouragement in all initiatives undertaken by the department.

REFERENCES

1. Operational guidelines. Rashtriya Bal Swasthya Karyakram Child Health Screening and Early Intervention Services under NRHM. Ministry of Health and Family Welfare, Government of India, February 2013.

2. Singh AK, Kumar R, Mishra CK, Khera A, Srivastava A. Moving from Survival to Healthy Survival through Child Health Screening and Early Intervention Services Under Rashtriya Bal Swasthya Karyakram (RBSK). Indian J Pediatr. 2015;82(11):1012-8.

3. Rashtriya Bal Swasthya Karyakram. Setting up District Early Intervention Centers- Operational Guidelines. 2019. Available from: http://nrhmharyana.gov.in/WriteReadData/RBSK/OPERATIONAL%20GUIDELINES%20DEIC.pdf. Accessed on 18November 2021.

4. http://cg.nic.in/health/rbsk/AllReport.aspx

5. Panigrahy BK, Swain A. A cross-sectional study to evaluate the functioning and infrastructure of mobile health teams and DEIC at Koraput district of Odisha under RBSK. WJPMR 2019;5: 165-172.

6. 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.

7. Deloitte. Formative Research Report on RBSK: From "Survival to Healthy Survival", July 2016; 17-19.

8. 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, Madhya Pradesh, India. Int J Community Med Public Health 2015;2(3):228-33.

9. Choudhry V, Dayal R, Pillai D, Kalokhe AS, Beier K, Patel V. Child sexual abuse in India: A systematic review. PLoS One. 2018 Oct 9;13(10):e0205086. doi: 10.1371/journal.pone.0205086.

10.https://www.savethechildren.in/resource-centre/articles/child-abuse-in-india-and-how-it-can-be-prevented

11. Loveleen K, Srinivas V, Kumar P. Study on Child Abuse: India 2007. Ministry of Women and Child Development, Government of India, 2007.

Source of support: Nil

Conflict of interest: None declared

How to cite: Prabhu S, Shukla N, Mandala SR. External Evaluation of Rashtriya Baal Swasthya Karyakram (RBSK) in Chhattisgarh & Practical Recommendations. GAIMS J Med Sci 2022;3(1):38-39. https://doi.org/10.5281/zenodo.7695385