Original Article

A Novel Approach to Promote Evidence-Based Development of District Maternal and Newborn Health Plans in Two States in India

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Abstract

Background: Maternal and child health implementation plan development in districts of India lacks systematic process and capacity resulting in suboptimal health improvements. There is ineffective and limited participation and lack of autonomy to effect changes in district priorities. **Objectives:** Primary objective was to demonstrate a systematic planning approach to develop evidence-based district implementation plans for mothers and children. **Methods:** A planning tool named RAASTA (RMNCH + A Action Agenda using Strategic Approach for evidence-based district work plans) adapted from WHO (World Health Organization) program review tools was used in the states of Uttarakhand and Jharkhand. The tool was implemented in the two states for the development of implementation plans in a 6-step process by prioritizing district health goals; reviewing maternal, neonatal, child, and family planning intervention coverage; and linking them with activity implementation status; assessing strengths, and weaknesses of previous implementation plans and developing solutions based on current gaps in intervention coverage's. **Results:** Tool was used for capacity building of 59 participants and also identification of prioritized activities based on their available data. Several newer activities were identified. The districts mainstreamed them as action plans, many of which were incorporated in the state Program Implementation Plan for budgetary provisions under state NHM (National Health Mission) funds. **Conclusion:** The use of a tool facilitated the systematic development of evidence-based district implementation plans.

Keywords: Capacity development, district health planning, health information data, India

Introduction

The maternal and child health (MCH) health implementation plan development in India has both centralized and decentralized components. National health goals are based on the Sustainable Development Goals and health gaps identified by national surveillance data and country-wide national health survey. India's federal structure entails states to have a larger responsibility for healthcare provision, and consequently, much of the health planning and budgeting occurs at the state level. States are responsible to implement public health programs and schemes through central grants, which have activity-specific budget codes for tracking progress. This is reflected in state program implementation plan (PIP).

Preparation of the PIP of the states is initiated at the planning division of the Ministry of Health and Family Welfare (MoHFW) with a standard set of instructions and template. Thereafter, the states start planning with orientation of all the stakeholders followed by involvement of the district and block level managers in preparation of the District Health Action Plans (DHAPs), thus bringing in the decentralized aspect. The implementation plan thus developed mainly provides numbers to activities such as recruitment of human resources, trainings, and procurement based on Financial Management Report code of the Ministry which guides activity and its implementation level.

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The next step consists of collating these DHAPs at the state level by the State Program Management Unit. This activity is guided by the budget envelop of the state which is a fixed financial amount decided by the program division of MoHFW, leading to curtailment of certain activities. The PIP once made is reviewed by the planning and other technical divisions of the MoHFW and goes through a final review by the National Program Coordination Committee and approved as Record of Proceedings for a particular state.

Despite the provision of guidelines and templates, planning at the district level is mostly ad hoc with limited and ineffective participation.[1] Arriving at the work plans is more or less based on perception of priorities of key functionaries at the district and state level-a widely common finding.[2-4] Furthermore, determination of health interventions that are necessary for the district is guided by previous plans. Contributing factors to ineffective district level planning found in the literature include (i) lack of capacity among health program managers in strategic planning which often manifests in poor reflection of local health needs,[3,5,6] (ii) inadequate or poor quality data, used for monitoring rather than decision making,[7,8] (iii) poor capacity to use and interpret data,[9] (iv) lack of autonomy despite decentralization.[10,11]

Studies have pointed to the need to develop capacity for planning, prioritizing, transparency, and accountability among decision makers at the district level.[6] In Kenya, the use of a decision support tool for analyzing and presenting data showed an improvement in planning.[12] In India, variation in capacity among district planners was found in a study to be based on perceived lack of autonomy or "decision space" in matters related to budget and financing and performance monitoring.[13] However, efforts to increase capacity are few. One such strategy was shown to have positive results in evidence-based planning proposals among block-level functionaries in Maharashtra.[1] Knowledge about health planning was found to increase in the same study with increased access, understanding, and use of evidence.[9]

A tool for preparing evidence-based implementation plans was developed and was adapted using a WHO Child Health Programme Management and Review tool.[14] The workbook on Planning Implementation formed the basis for the RAASTA tool. It helps develop evidence-based RMNCH + A (Reproductive Maternal Newborn Child and Adolescent Health) action plans for district in a systematic way. The state governments of Uttarakhand and Jharkhand implemented the tool.

Methods

The RAASTA tool provides the basis for an evidence-based approach to planning. It uses survey data like the National Family Health Survey (NFHS), Annual Health Surveillance, Comprehensive National Nutrition Survey in addition to Health Information Management System and district program data. It was implemented through a state-level capacity building workshop involving aspirational districts (AD) to prepare DHAPs. AD is poorly performing districts that are currently a focus of the Government of India.[15] The tool was shared with the state health department. The state MCH departments supported the project team in obtaining district-level data.

Objectives

Primary objective was to demonstrate a systematic planning process using the RAASTA tool. Through this approach, district health functionaries would be enabled to:

1. Measure progress toward RMNCHA goals and objectives using available data on reproductive, maternal, new born, child, and adolescent health status
2. Identify interventions with low coverage and the causes of low coverage
3. Identify key problems and develop solutions and recommendations with special focus on vulnerable population
4. Decide steps for incorporating recommendations into the next PIP.

Preparatory work

National health policies, surveys, research reports, and available program and activity-related implementation data from districts were collected and collated through a desk review. National health goals and objectives were collated from key health policies of the country, NFHS data, Sample Registration Survey data as well as large population survey reports. District data were collected with the support of state and district program officials.

Participants included state and district program officers from the divisions of Maternal Health, New born and Child Health, Family Planning and Adolescent Health, working development partners, professional bodies, and key technical persons including medical college faculty members. District personnel also included data managers and health workers from all levels. A total of 28 state, district, and block level functionaries from 5 AD participated in Jharkhand. A total of 31 functionaries representing 2 AD participated in Uttarakhand.

The capacity building cum planning workshops were conducted in October 2019 in the two states which coincided with the preparation of state PIP. The timing was selected with the aim of including recommendations derived from the workshop for inclusion in the PIP. The workshop was conducted as a six-step process encapsulated in the following illustration [Figure 1].

Results

The immediate outputs from the districts (totaling 40) were documented during the workshop. The results of implementation in two states are presented in the article. PIP inclusion results or the outcomes are shown of the two states as district plans are ultimately enmeshed into state plans.

All 7 districts in the 2 states drafted separate problems, strengths, and solutions related to their district. We are

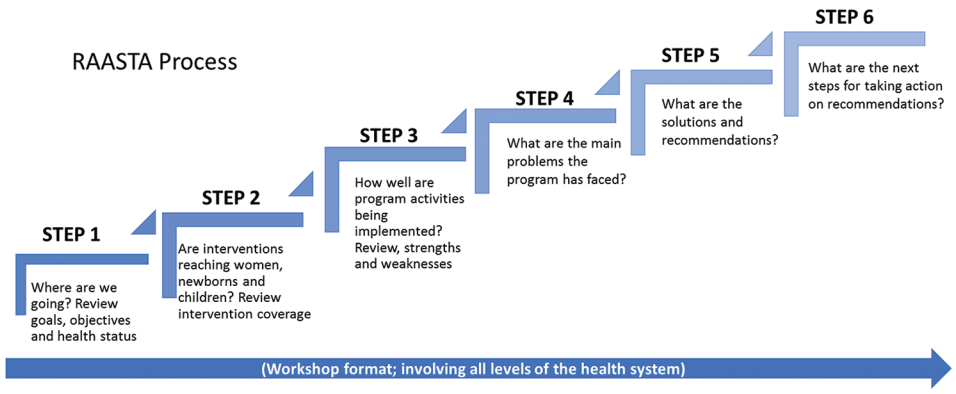

Figure 1: RAASTA process

showcasing results of only two districts as an example. Following the steps of RAASTA, the states developed health priorities [Table 1]. The districts, working in individual groups, reviewed coverage and identified interventions for strengthening based on the causes of low coverage [Table 2]. In the next steps, the districts identified their strengths, weaknesses, opportunities, and threats based on last year implementation statements.

Key activities addressing the problem statements became action plans with enumerated activities and were discussed and agreed by the state mission director/state health director general. The following shows the number of new activities derived from the RAASTA approach and included in PIP [Table 2]. The second table presents the difference in financial outlay on key existing activities [Table 3].

Table 1: Prioritization of thematic areas and key bottlenecks

State	Prioritized thematic areas for improvement	Key problem statements in both states
Jharkhand	Accelerate reduction of NMR and MMR Increase institutional deliveries Focus more on IMR to reduce U5MR Reduction of TFR in vulnerable population (poverty and illiteracy) in select areas	Low KMC rates due to mothers not allowed inside newborn units High asphyxia mortality due to lack of capacity of health functionaries attending birth High pneumonia and diarrhea mortality due to lack of capacity of ANM
Uttarakhand	NMR/perinatal/still birth reduction Infant mortality rate/ U5MR reduction Accelerate childhood illness (diarrhea, pneumonia, wasting, anemia) management TFR reduction in select identified blocks - Reduce unmet need of FP MMR reduction in select identified blocks - increase institutional delivery	Lack of capacity for care at birth Supplies shortage due to nonimplementation of FPLMIS in select identified areas ANC low coverage and quality due to lack of monitoring and supervision Weal capacity for provision of skilled birth attendance and management of complications

NMR: Neonatal mortality rate, MMR: Maternal mortality rate, IMR: Infant mortality rate, U5MR: Under 5 mortality rate, TFR: Total fertility rate, FP: Family planning, KMC: Kangaroo mother care, ANM: Auxiliary nurse midwife, FPLMIS: Family planning logistics management information system, ANC: Antenatal care

Discussion

This article sought to describe an example of an evidence-based and systematic process of developing health implementation plans at the district level. The tool and its implementation process demonstrate an alternative approach of planning by bringing district and block functionaries together to use the available data and capacitating them to analyze local problems jointly and arrive at solutions. Several new activities prioritized at the workshop were included, signifying a willingness of state health authorities to be guided by evidence.

The strength of the tool and accompanying process was that it took the participants through each step in a systematic way such that they learned (i) how to prioritize activities, (ii) how the steps were linked, and (iii) how to use the available information. The structured format of examining available data on human resource, training, supplies, etc., and linking them with service and coverage data was a new way of approaching resource planning at the district level. In this regard, our work bears similarity with a similar capacity-building exercise in the Philippines in which local planners found the structured process helpful in identifying problems and solutions.[16] The RAASTA workshop culminated in finalizing district-level implementation plans which were presented by the district personnel to key state health planners. New insights from the districts were appreciated by state health planners and approved for future action.

However, there were several challenges. Due to the busy schedule of district functionaries key state officials agreed to a 3-day workshop which provided only limited time for discussions. In future, introductory activities should be limited and more time allotted for group work. In addition, prior analysis of data through the use of a digital tool may provide more time for developing recommendations.

Table 2: New or reintroduction of intervention packages/activities after RAASTA workshop across reproductive maternal newborn child and adolescent health + A thematic areas

Intervention for scale up	Intervention package/ activity	Activities	
		Jharkhand	Uttarakhand
KMC	FPC	1 ToT and facility level trainings	1 batch of refresher training for SNCU staff
Resuscitation for asphyxiated newborn	NSSK	2 batches of state level ToT	
Identification and management of sepsis	3-day NBSU training	State level trainings	2 batches for training of medical officers and staff nurses from NBSU's
Antibiotic for pneumonia and ORS for diarrhea	3-day IMNCI roll out of SAANS guideline	1 ToT and 8 batches divisional training	2 batches (3-day training) for management of pneumonia and diarrhea in infants and children and introduction of multimodal pulse oximeter
Breast feeding complementary feeding	Strengthening HBYC	Refresher training	
Immunization	Review of VHSND sessions by state and district	Monitoring and review (new activity)	
ANC	Antenatal screening of PW for hemoglobinopathies	Capacity building and procurement (new activity)	
Management of gestational diabetes	OGTT for PW	Capacity building (new activity)	
SBA	Training orientation on safe delivery App	Capacity building (new activity)	Trainings approved for State and District level
Management of PPH	Daksh skill lab package	Refresher training	For capacity building on ANC and care around birth interventions approved for 3 batches (6-day training) for ANMs and SNs (staff nurses) in Haridwar
Modern contraceptives	FPLMIS training for ANM/ ASHA	Capacity building	Block level FPLMIS training for ANMs and ASHAs
Injectable contraceptive	Antara training for MOs and staff nurses	Capacity building	District level antara training for medical officer and staff nurses

KMC: Kangaroo mother care, ANC: Antenatal care, PPH: Postpartum hemorrhage, FPC: Family participatory care, NSSK: Navjaat Shishu Suraksha Karyakram, NBSU: Newborn stabilization unit, IMNCI: Integrated management of neonatal and childhood illness, SAANS: Social awareness and actions to neutralize pneumonia, HBYC: Home based young child care, VHSND: Village health, sanitation and nutrition day, PW: Pregnant woman, OGTT: Oral glucose tolerance test, FPLMIS: Family planning logistics management information system, ANM: Auxiliary nurse midwife, ASHA: Accredited social health activist, MOs: Medical officers, ToT: Training of trainers, SNCU: Special newborn care unit, ORS: Oral rehydration solutions, SBA: Skilled birth attendant.

A second challenge was lack of available data for some indicators. In many places, health information data is found to be fragmented and complex[17] without being used for planning.[18] We circumvented this challenge by using state-level data for these indicators. Some other activity-related indicators at the district level were not available as seen in the results of the two districts, in which case the districts made manual calculation to arrive at estimates through consensus. Another limitation noted by the groups was that the district-level data collected by NFHS was out of date and did not match their current data on which they had greater reliance. In Tanzania, similar difficulty was faced in assembling the large amounts of data sources with the district functionaries maintaining that they did not really reflect the real situation of the district.[17] It is suggested that in the future, participants should be provided with the indicator list before the workshop so that they can ensure its collection and collation and come prepared with the district data.

Advantage of our approach was that since it was participatory and a range of stakeholders were involved, there were active discussions, while joint data review and on the spot reconciliation of differing data sources helped. Participation, thus, had a central role in the RAASTA workshop. In various settings, participation has been found to be a key factor in decision-making.[1]

Much has been written about empowerment in the priority setting process[3,10,13] Central prioritization is in general found to be a limiting factor in decentralized planning.[19] However, in this case, it was found that national and state goals aligned with district priorities. The challenge was in targeting vulnerable groups. To give an example, reduction in total fertility rate is a priority in India although it has lost much of its previous focus due to improvement. Nevertheless, teenage pregnancy and lack of access to family planning have been identified as a district priority for identified vulnerable sub-district geography in both the states, which we recognize as a strength of our approach.

Not all the recommendations could be included in the state PIP due to budget constraints. This has been highlighted in other studies. In Tanzania, district planners were found to lack financial autonomy at the time of approval of PIP.[20] Health budgets and planning generally do not contain larger structural improvements like infrastructure development. Fixed resource envelop earmarked for each state was another limitation as activities had to be decided as per the earmarked financial

Table 3: Difference in outlay for activities after RAASTA workshop (program implementation plan 19-20 versus program implementation plan 20-21)

	Name of package/intervention/activity	Outlay PIP 19-20 (lakhs)	Outlay PIP 20-21 (lakhs)	Remarks
Jharkhand	PMSMA	286	622	Toward improvement of ANC
	Emergency obstetric care (blood transfusion)	62.82	264	For improved C-Caesarian rates
	LaQshya (Labor room and quality improvement initiative)	31.13	102.04	For improved quality care in labor rooms and maternity operation theatres
	VHSND	4.32	9.12	As per new VHSND guidelines
	HBYC quarterly visits	401	1453	For supportive supervision
	Skill lab	5.42	8.13	For skilled delivery
Uttarakhand	Hiring of staff nurses for health facilities	585.05	708.91	Human resource strengthening with priority for delivery points
	Hiring of lab technicians for health facilities	218.1	431.94	Human resource lab technicians strengthening with priority for level 2 and level 3 facilities
	LaQshya related activities (including Procurements of FHR monitoring devices)	42.54	148.56	For improving quality of care at birth at delivery points
	Procurements of essential commodities for well-being of mother and newborn (IFA, Calcium, Iron Sucrose etc.)	291.31	719.41	For improving quality of ANC
	Procurement of AHSA kits, HBYC kits	17.48	31.42	For improving quality of HBNC
	Printing of LR register and case sheets/LaQshya related printing	13	26	IEC/BCC and printing related activities for improving MNH care
	Printing cost for MAA program	0	31.2	
	Awareness building of community on healthy behaviors related to maternal and newborn health under SUMAN	0	17	

PIP: Program implementation plan, PMSMA: Pradhan Mantri Surakshit Matritva Abhiyan, VHSND: Village health, sanitation and nutrition day, HBYC: Home based young child care, FHR: Fetal heart rate, LR: Labor room, SUMAN: Surakshit Matritva Aashwashan, ANC: Antenatal care, HBNC: Home based newborn care, IEC: Information education communication, BCC: Behavior change communication, MNH: Maternal and newborn health, IFA: Iron and folic acid, ASHA: Accredited social health activist, MAA: Mothers' absolute affection.

envelope. Other funding sources are certainly available in India but advocating and mobilizing these resources depend on the capacity of district program officers.

Tool developed and the approach undertaken is a step toward systematic planning which will become more efficient with time. The success of implementation can be gauged by the fact that evidence-based interventions with low coverage were identified for implementation with matching activities as per the continuum of care across the life cycle including the life stages from adolescent and youth, prepregnancy, pregnancy, through birth, the postnatal period, newborn period, infancy and childhood and inter-pregnant period for women in order to maximize impact. National and State financial resources were sought for the identified activities. The state government of Uttarakhand has also included a separate budget for RAASTA workshop in 2020–2021 PIP as a hands-on practice for continuing capacity development of the district officials. A limitation is that, an immediate test to find whether the officials' capacity increased was not included. This was done later through a qualitative study, the results of which have been submitted for a publication. Meanwhile, plans to upgrade the methodology and use a blended approach by using a digital tool for data collation and analysis are underway.

Conclusion

The use of a tool facilitated the systematic development of evidence-based district implementation plans. Creating Evidence based work plans is the need of the hour if India has to achieve Sustainable Development Goals (SDG). This will help also optimal utilization of available financial resources.

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Conflicts of interest

There are no conflicts of interest.

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