ORIGINAL ARTICLE

Evaluation of the Implementation of the Reaching Every District Approach in Routine Immunisation in Lusaka District, Zambia

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ABSTRACT

Background: In 2003, the Government of Zambia in collaboration with implementing partners in immunisation introduced the Reaching Every District (RED) strategy to improve immunization coverage. The aim of this study is to evaluate the implementation of the RED strategy in Lusaka district.

Methods: A questionnaire was administered among health centres in charge of all governmental health clinics in Lusaka districts (N = 27). RED implementation was quantified by calculating a RED implementation score (IS) for each of the RED components on a scale of 0 (low implementation score) to 5 (high implementation score).

Results: The mean overall RED implementation score was 3.5. The RED component of linking services with community and re-establishing outreach were the two weakest components.

Conclusions and recommendations: This evaluation showed that there are a number of elements of the RED strategy which are well implemented; however, some elements need further improvements. There is need for more research on the implementation of the RED strategy in Zambia in order to identify bottlenecks for improving immunization coverage at larger scale and a wider participation.

INTRODUCTION

Every year, more than 10 million children in low and middle income countries die before reaching the age of five.[1] This high infant mortality rate is mainly due to lack of access to effective interventions that would combat common and preventable childhood illnesses.[2] Disease prevention by immunization is considered essential for improving child survival.

Factors holding back routine immunization in Zambia are the lack of trained staff and the sparsely populated districts, which make reaching the unreached populations throughout outreach services a challenge.[3]

The current immunization coverage is below the expected standard with 38% of the districts reporting DTP3 coverage between 50% to 79% and only 44% of the districts reported DTP3 coverage of greater or equal to 90%[4]. Recent outbreaks of measles in Zambia with 15,754 reported cases of in 2010 and 13, 234 in 2011 raise the question on the efficiency of the current immunization system.[4]

In 2003, the Government of Zambia adopted the Reaching Every District (RED) Strategy as an effective way or approach to reach the un-reached and missed opportunities.[3] The RED approach aims to build capacity of the districts and health facility level to address common obstacles to improving immunization services. This district planning and monitoring approach promoted by the World Health Organisation is based on five operational approaches or components that all specifically aim at improving coverage in every district;

- Re-establishing outreach vaccination – regular outreach for communities that are under-served.
- Supportive supervision – on-site training by supervisors.

Key words: *RED, Immunization, training, outreach, community links, monitoring, planning, supportive supervision.*

- Links between community and service – regular meeting between community and health staff.
- Monitoring for action – chart doses, map populations for each health facility.
- Better planning and management of resources – better management of human and financial resources.[5]

A two multi country evaluation among some African Country evaluation, including the Northern Sudan showed that the implementation of the RED strategy resulted in significantly more infants being reached.[6] An important finding of these evaluations was that service delivery works best when health facilities make their own micro plans. The RED strategy may be used as the basis for delivering other interventions beyond immunization, to strengthen the health system.

On the other hand an evaluation of the RED strategy approach in the African Region showed that there were various constraints in its implementation, such as low actual funding of RED strategy budget, late delivery of micro plan implementation, power shortages affecting refrigeration equipment and potentially harming vaccines.[7]

The need for effective scale-up of the RED strategy necessitated the need for evaluations. This study therefore was conducted to evaluate the implementation of the RED strategy at health facility level to inform effective implementation of the strategy in Zambia.

METHODS

All the twenty seven (27) government health facilities in Lusaka district participated in the study. A self-administered questionnaire was used to collect qualitative and quantitative data from health centre staff in charge of the health facilities. This questionnaire was adapted from the WHO tool evaluating the RED strategy implementation in the African Region. The questions were focused on each of the five operational components of the RED strategy.

Indicators for evaluation of the implementation for the RED strategy have been described before.[6] Table 1 shows the individual indicators and their weight factor on the various indicators per component indicator.

In brief, each operational component of the RED strategy was evaluated by a number of individual indicators and a component indicator was calculated by summing the weights which were assigned to each individual indicator. Health facility immunization coverage was determined by dividing the health facility cumulative doses administered at the health facility by health facility denominators projected by census data or headcounts. The overall RED implementation score was determined by summing the five RED component indicators. The maximum overall RED implementation score is for a fully implemented RED strategy. Existence of significant differences in the RED implementation scores between health facilities was tested using Chi square at $p<0.05$. Data was analysed using SPSS version 10.1 .Descriptive statistics were used to classify the responses of the participants. (See table 1).

RESULTS

Twenty three out of the twenty seven respondents completed the questionnaire giving a response rate of 85%.

Table 2 shows the mean score of each component evaluation of the RED strategy in Zambia. The overall RED strategy implementation score is 3.50 (range: 1.85-4.31). The supportive supervision with a score of 0.08 had the highest score, i.e., was the best implemented whereas re-establishing outreach services to link communities with a score of 0.63 was the least well implemented. (See table 2).

Table 3: presents p-values of the RED implementation comparison among the various health facilities in Lusaka. The results show that "the use of data for action component" was the only component indicating significant differences in implementation (P=0.03). (See table 3).

Table 1: Component and individual indicators with their respective weight factor used in the study.

Component indicator	Individual indicator	Individual indicator weight	Level for achieving high RED is	%
Planning & Management of resources (n=10)	Micro plan available at health facility	0.10	Yes	91.3
	HC in charge involved in planning of micro plan	0.10	Yes	52.4
	Annual work plan for 2013 available at health facility	0.10	Yes	90.9
	HC in charge involved in planning of annual work plan	0.10	Yes	55.0
	Vaccine stock out experienced in last 12 months	0.10	No	73.9
	Syringe stock out experienced in last 12 months	0.10	No	0.0
	Tally sheet stock out experienced in last 12 months	0.10	No	26.1
	Vaccine cards stock out experienced in last 12 months	0.10	No	9.5
	Transport for vaccine and material distribution available during past 12 months	0.10	Always	65.2
	Refrigerator worked throughout the year	0.12	Yes	100.0
Use of data for action component (n=8)	Monitoring chart displayed in health facility	0.12	Yes	90.9
	Monthly data flow from health facility to district	0.12	Yes	100.0
	Last month in which the data were collected	0.12	February	86.4
	Default tracking system in place	0.12	Yes	70.0
	Quarterly meetings hold by district to review performance	0.12	Yes	72.2
	Able to provide complete and timely reports to district	0.12	Yes	100.0
	Receiving feedback on monthly reports	0.12	Yes	36.8
	Refrigerators monitored twice daily	0.12	Yes	100.0
Supportive supervision (n=2)	Supervisory visits received from national/provincial or district level	0.50	Yes	86.6
	Checklist available for supervisory visits	0.50	Yes	70.0
Outreach (n=3)	Outreach visits conducted	0.33	Yes	91.3
	Number of outreach sessions	0.33	=>2 per month	47.6
	Strategy available on how to determine which mothers/ guardians to visit	0.33	Yes	61.9
Community links (n=4)	Number of different social mobilization activities carried out	0.25	>=2	1.57
	Communities involved in planning, place and timing of immunization sessions	0.25	Yes	100.0
	Information on new born in community received	0.25	Yes	30.4
	Links between health facility and community based organization established	0.25	Yes	95.0

Table 2: RED implementation score for component indicators for each RED strategy.

Component indicator	Minimum	Maximum	Mean
Planning and Management of resources	0.40	0.90	0.72
Use of data for action component	0.24	0.84	0.73
Supportive supervision	0.50	1.00	0.82
Re-establishing outreach services	0.00	0.99	0.63
Linking services with communities	0.25	1.00	0.64
Overall RED implementation score	1.85	4.31	3.50

Table 3: Differences in RED implementation score between health facilities

Component indicator	Chi-Square	Df	P value
Planning & Management of resources	7.000	5	0.221
Use of data for action component	8.826	3	0.032
Supportive supervision	1.636	1	0.201
Re-establishing outreach services	4.652	3	0.199
Linking services with communities	2.913	3	0.405
Overall RED implementation score	0.913	21	1.000

DISCUSSION

This study has shown that supportive supervision is best implemented component of the RED strategy. Availability of this supportive supervision at points of health care delivery has the potential to improve the quality of the RED implementation of services. The success of the RED strategy hinges on many aspects such as regular staff orientation, managerial capacity building, on the job training and training on immunizations. It is therefore vital that these are strengthened in tandem with supportive supervision in the RED strategy.

The weakest component of the RED strategy is the re-establishing outreach services. The limitation may be related with human resource coupled with logistical, or transport for outreach services needed to link communities. It is possible that at facility level, the available staff may have many other responsibilities which could limit their ability to undertake outreach activities stipulated in the red strategy. The Zambian government has recognized the lack of human resources at health facilities as a main barrier in the delivery of effective immunization services.[3]

No significant correlation was found between the immunization coverage and the RED implementation scores. Similar results were found in a RED evaluation conducted in North Sudan where vaccine coverage could not be attributed to RED implementation.[6]

The evaluation was conducted at health facility level only, whilst the district, provincial and national level do play an important role in the effective implementation of the RED strategy. Future evaluations should focus on these and measures should be taken to reduce self-reporting bias as was done during an evaluation in North Sudan.[6]

CONCLUSION

Outreach services and linking of communities components of the RED strategy should be strengthened in Lusaka to enable effective delivery of the RED strategy – vital for reducing vaccine preventable childhood illnesses.

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