



ASSESSMENT OF ICDS PROGRAM PERFORMANCE OUTCOME BY DATA VALIDATION AS A TOOL OF MONITORING IN CHHATTISGARH

Community Medicine

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ABSTRACT

Background: Government of Chhattisgarh has launched initiatives under the banner 'Kuposhan Mukti Abhiyaan' through state wide innovative intervention i.e. "Nawa-Jatan" means 'New way of Care'. It is a time bound, result oriented, and community based program for addressing under-nutrition. It was bare essential to validate statewide outcomes of it so that it will act as tool for program implementers and policy makers to be judgmental, policy makers to take corrective actions.

Methods: Cross sectional survey was planned across the state during May-June 2017. It was decided to conduct validation exercise in 9,197 children Anganwadi Centers (AWCs) of randomly selected 370 Gram panchayats (GPs). Survey teams were trained for validation process and data collection was done in pre-designed proforma at field level.

Results: A total of 9197 children distributed in identified Gram Panchayats across 27 districts were covered during survey. About 3.42% (284 out of 8306) children showed gap in reporting as they were reported normal grade of nutrition. reported normal (3.42%) children were actually either moderately (0.6%) or severely (2.82%) underweight. Our analysis reveals 2 districts fall in poor performing districts, followed by below average performing 14 districts and average performing 11 districts.

Conclusion: Nawajatan program was operational in all visited Gram Panchayats/Anganwadis. Study highlighted gap in recorded result as normal children against the observation which was actually in the field level (i.e. Anganwadi register). This may be probably either due to wrong data entry, over reporting, and or incorrect weighing. Further significant proportion of disagreement were also evident showed change in their nutritional grade might be possibly due to poor monitoring of weighing activity.

KEYWORDS

Malnutrition, NawaJatan, Validation, ICDS, Gram Panchayats, AWCs

INTRODUCTION:

Malnutrition is a major public health problem. Malnutrition is an abnormal physiological condition caused by deficiencies, excesses or imbalances in energy, protein and/or other nutrients. **One in four** of the world's children are **stunted**, because of malnutrition and is an underlying cause of the death of **2.6 million** children each year – one-third of the global total of children's deaths'. Malnutrition was the primary reason behind 69 per cent of deaths of children below the age of five in India, according to a UNICEF's The State of the World's Children 2019 report'. The National Health and Family survey 3, which was conducted in 2005-06, reported that 48 per cent of children under the age of five, were stunted, 42.5 were underweight and 19.8 per cent children were wasted. However The NFHS 4 recorded an improvement of 9.6 percent in the cases of stunting (low height for age). Government of Chhattisgarh has launched initiatives under the banner 'Kuposhan Mukti Abhiyaan' – notably the weighing of all children in the state in a campaign mode called Wajan Tyohar or Weighing Festival, and 'Nawa Jatan' to address the issue of under – nutrition in the state. **Wajan Tyohar:** This is a community based intervention which ensures that all under 5 children of the state are weighed in the Anganwadi Centre over a period of maximum one week across the state. Through Wajan Tyohar Rounds the state reported a level of under-weight above what was being reported in the ICDS reporting. 2012 Underweight status was 40.05 %, 2013 Underweight status was 36.89 %, 2014 Underweight status was 32.16 %, 2015 Underweight status was 29.87 %. Above finding helped to accelerate efforts under the Kuposhan Mukti Abhiyaan to focus on areas or pockets with high levels of under nutrition. **Nawa Jatan:** Chhattisgarh, launched a scheme called "Nawa Jatan", translated as 'New Care' in the State is a time bound, result oriented, and community based program for addressing under-nutrition in the State. Under Nawa Jatan, moderately and severely under-weight children are identified and targeted through focused counseling delivered at the household level through frontline functionaries as well as through a community volunteer – either a Suposhan Mitra or a members of a local Self Help Group. Effective monitoring is about collecting the right data at

the right time and at the right level of measurement. Growth monitoring is most important tool for community diagnosis for cross sectional community nutritional assessment of all children makes basis for Nawa Jatan program target. Data validation by 'External technical support group' can be valuable tool for program managers as well as for stakeholders to execute strategic tactical and operational planning and effective implementation by Dept. WCD Govt. of Chhattisgarh. UNICEF requested Department of Community Medicine to validate the data of end line Nawajatan Phase V across the state.

Objective:

1. To validate 5th Phase Nawajatan results.
2. To validate the data of ICDS for March 2016 on the basis of actual weighing.

Methodology:

All the stakeholders (i.e. DWCD, UNICEF and NGO Representatives) of Nawajatan Validation met in the Dept. of Community Medicine before initiating survey in the state during May-June 2017. It was decided to conduct a Hands- on training for validation of Nawajatan Phase-V for survey team. Department of Community Medicine agreed to cover 9197 children (10%) out of all Nawajatan Targeted Children. Out of all 3727 Gram Panchayats (GPs) 370 GPs (to maintain pre decided 10% norms) were randomly selected through systematic random sampling methodology. It was decided that this exercise will be done in all AWCs of randomly selected Gram Panchayat. One day Hands-on Demonstration cum Training of Survey Teams was organized. Two member Team who were mix of Interns, Demonstrators, post-graduate scholars, volunteers of different districts were trained for such survey work. Survey Teams used pre-designed proforma for data collection. We instructed all team members that AWWs and representatives from Panchayat / Ward should endorse the field survey format by signing it for ownership of results and transparency. Supervision of survey teams was carried out by representatives of DWCD and Faculties/PG Scholars of Department of Community medicine.

Observations:**Table 1. District wise distribution of children covered under Nawa-Jatan phase V End line validation.**

S. No.	District	Total no. of Panchayats	No. of Sampled Panchayats	Target Children	Children covered for Validation	% Children Covered for Validation	Total Children Validated	% Children Validated
1	Kawardha	146	14	385	332	86.23	331	85.97
2	Kanker	197	20	307	233	75.90	230	74.92
3	Kondagaon	195	19	604	420	69.54	417	69.04
4	Korba	78	8	385	275	71.43	275	71.43
5	Koriya	94	9	169	118	69.82	118	69.82
6	Gariyabandh	157	16	378	252	66.67	218	57.67
7	Jaspur	148	15	470	340	72.34	324	68.94
8	Janjgir-Champa	146	14	312	192	61.54	185	59.29
9	Dantewada	84	8	193	177	91.71	175	90.67
10	Durg	82	8	54	43	79.63	42	77.78
11	Dhamtari	239	24	203	183	90.15	182	89.66
12	Narayanpur	67	7	115	71	61.74	64	55.65
13	Bemetra	81	8	191	141	73.82	135	70.68
14	Balrampur	91	9	383	255	66.58	252	65.80
15	Balodabazar	197	20	384	250	65.10	227	59.12
16	Bastar	262	26	886	566	63.88	498	56.21
17	Balod	179	18	389	324	83.29	317	81.49
18	Bilaspur	104	10	349	261	74.79	244	69.91
19	Bijapur	91	9	169	115	68.05	91	53.85
20	Mungeli	89	9	233	162	69.53	162	69.53
21	Mahasamund	189	19	356	262	73.60	247	69.38
22	Rajnandgaon	251	25	596	511	85.74	488	81.88
23	Raigarh	178	18	371	181	48.79	145	39.08
24	Raipur	157	16	622	304	48.87	285	45.82
25	Sarguja	76	7	291	163	56.01	163	56.01
26	Sukma	75	7	177	142	80.23	141	79.66
27	Surajpur	74	7	225	157	69.78	157	69.78
	Total	3727	370	9197	6430	69.91	6113	66.47

Map of Chhattisgarh showing geographical distribution of surveyed Gram Panchayats covered during Validation depicted below as follows:

GEOGRAPHICAL DISTRIBUTION OF SAMPLED GRAM PANCHAYAT

Table 2. Age (at baseline) and Sex wise distribution of children covered under Nawa-Jatan phase V End line validation.

S. No.	Age group	Male	%	Female	%	Total	%
1	6-11 months	151	3.59	155	3.78	306	3.68
2	12-23 months	1229	29.25	1112	27.10	2341	28.18
3	24-35 months	1531	36.44	1477	35.99	3008	36.21
4	36-50 months	1291	30.72	1360	33.14	2651	31.91
	Total	4202	50.59	4104	49.41	8306	100.00

Table 3. Comparison of Nawa-Jatan Software data vs. Anganwadi Register for March 2017 through grade of under nutrition (i.e. Normal, Moderate and Severe) of Nawa-Jatan targeted children

covered for validation.

S. No	Grade of Children	Children reported in WCD Software (March-End line Data)		Children reported in AWWs Register (March-End line Data)		Deference in Observation	
		No.	%	No.	%	No	%
1	Normal	3740	45.0	3456	41.6	284	3.42
2	Moderate	3340	40.2	3390	40.8	-50	-0.60
3	Severe	1226	14.8	1460	17.6	-234	-2.82
	Total	8306	100.0	8306	100.0		

Table 4. District wise gap in Comparison of Nawa-Jatan Software data Vs Anganwadi Register of MUAC for March 2017 children covered under Nawa-Jatan phase V End line validation.

S. No	District	Children reported in WCD Software (March End line Data)				Children reported in AWWs Register March End line Data)						Difference in proportion of Normal Grade	
		N	M	S	N%	N	M	S	Data not available	N%	NA%	TOTAL	%
1	Balod	184	166	4	51.98	212	73	5	64	59.89	18.08	354	-7.91
2	BalodaBazar	345	31	5	90.55	244	44	10	83	64.04	21.78	381	26.51
3	Balrampur	71	118	11	35.50	61	51	7	81	30.50	40.50	200	5.00
4	Bastar	680	174	2	79.44	469	96	11	280	54.79	32.71	856	24.65
5	Bemetara	75	26	15	64.66	30	7	0	79	25.86	68.10	116	38.79
6	Bijapur	31	116	1	20.95	49	17	2	80	33.11	54.05	148	-12.16
7	Bilaspur	194	67	1	74.05	191	25	11	35	72.90	13.36	262	1.15
8	Dantewada	131	14	0	90.34	95	8	0	42	65.52	28.97	145	24.83
9	Dhamtari	156	24	2	85.71	144	22	10	6	79.12	3.30	182	6.59
10	Durg	46	8	0	85.19	47	0	0	7	87.04	12.96	54	-1.85
11	Gariyaband	213	56	5	77.74	171	17	4	82	62.41	29.93	274	15.33
12	Janjgir-champa	246	59	0	80.66	259	21	5	20	84.92	6.56	305	-4.26
13	Jaspur	327	130	10	70.02	300	68	3	96	64.24	20.56	467	5.78
14	Kanker	280	15	0	94.92	259	18	5	13	87.80	4.41	295	7.12
15	Kawardha	363	11	8	95.03	344	27	5	6	90.05	1.57	382	4.97
16	Kondagaon	470	29	2	93.81	388	55	14	44	77.45	8.78	501	16.37
17	Korba	347	14	17	91.80	267	35	10	66	70.63	17.46	378	21.16
18	Koriya	109	54	6	64.50	97	34	10	28	57.40	16.57	169	7.10
19	Mahasamund	247	106	0	69.97	231	37	11	74	65.44	20.96	353	4.53
20	Mungeli	138	93	1	59.48	153	36	9	34	65.95	14.66	232	-6.47
21	Narayanpur	101	13	0	88.60	68	7	1	38	59.65	33.33	114	28.95
22	Raigarh	264	94	7	72.33	202	44	14	105	55.34	28.77	365	16.99
23	Raipur	553	14	1	97.36	263	15	0	290	46.30	51.06	568	51.06
24	Rajnandgaon	463	98	0	82.53	402	47	32	80	71.66	14.26	561	10.87
25	Sarguja	39	97	0	28.68	102	16	3	15	75.00	11.03	136	-46.32
26	Sukma	165	11	0	93.75	137	18	1	20	77.84	11.36	176	15.91
27	Surajpur	141	2	1	97.92	126	13	3	2	87.50	1.39	144	10.42
	Total	6379	1640	99	78.58	5311	851	186	1770	65.42	21.80	8118	13.16

Figure No 2. District wise distribution of disagreement of weight of children covered for actual field validation March 2016 data.

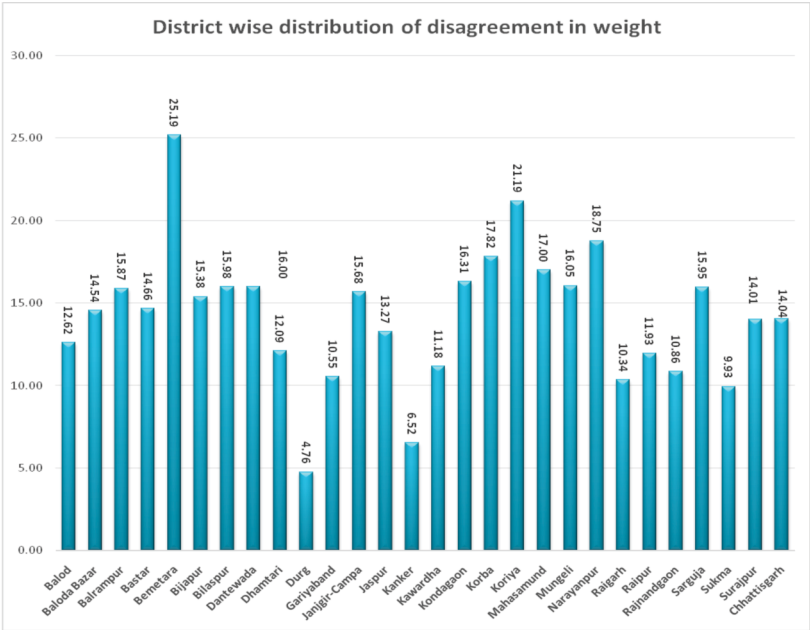
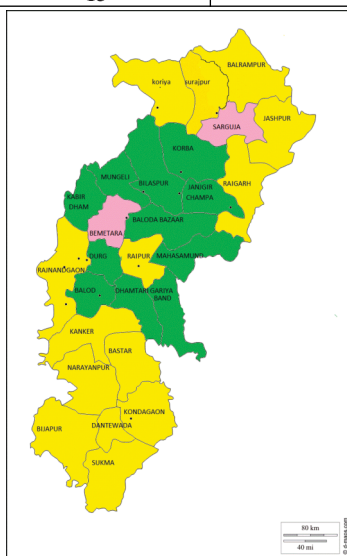


Table 5. Distribution District categorization and performance based on difference in observation and disagreement in weighing and MUAC measurement of Phase V Nawajatan data validation exercise.

S.No.	District	Difference in observation in Nutritional grade WCD software to Anganwadi Record (March End line)						Disagreement status AWW record of April vs. Validation data						Total Score
		Weight			MUAC			Weight			MUAC			
		<1-3%	3-5%	>5 %	<10%	10-20%	>20%	<10%	10-20%	>20%	<10%	10-20%	>20%	
1	Balod	A			A				B				C	10
2	Baloda Bazar	A					C	A			A			8
3	Balrampur			C	A			A				B		10
4	Bastar			C			C	A			A			12
5	Bemetara	A					C			C			C	16
6	Bijapur		B			B							C	12
7	Bilaspur		B		A			A			A			6
8	Dantewada			C			C	A				B		14
9	Dhamtari		B		A			A				B		8
10	Durg			C	A			A			A			8
11	Gariyaband	A				B		A			A			6
12	Janjgir Champa	A			A			A					C	8
13	Jashpur			C	A			A				B		10
14	Kanker		B		A				B			B		10
15	Kawardha		B		A			A			A			6
16	Kondagaon	A				B		A					C	10
17	Korba	A				B			B		A			8
18	Koriya			C	A				B			B		12
19	Mahasamund	A			A				B		A			6
20	Mungeli	A			A				B			B		8
21	Narayanpur		B				C	A			A			10
22	Raigarh			C		B		A				B		12
23	Raipur		B				C	A			A			10
24	Rajnandgaon		B			B			B		A			10
25	Sarguja			C			C		B				C	18
26	Sukma		B			B		A			A			8
27	Surajpur	A				B			B				C	12
	Composite score grade range	No. of districts falling in the category				Interpretation of performance of district based on composite score				Color code showed in map				
A=1	0 - 9	11				Average				Green				
B=3	10 - 15	14				Below Average				Yellow				
C=5	>15	2				Poor				Pink				

**Fig 3: Map showing categorization of district performance based on difference in observation and disagreement in weighing during validation.****RESULTS:**

A total of 370 Gram Panchayats (approximately 10% of Nawa-Jatan phase V target) with 9197 children distributed in these Gram Panchayats across 27 districts were covered during survey. While the Nawa-Jatan software data for March 2017 (end-line) reported that 45.0% of targeted children were normal, the ICDS records of the same month reported 41.6%. About 3.42% (284 out of 8306) children showed gap in reporting as they were reported normal grade of nutrition. The reported normal (3.42%) children were actually either

moderately (0.6%) or severely (2.82%) underweight. Out of all children covered for actual field validation there were 14.04% disagreement in weight as well as recording of grade of malnutrition in the state. We allocated discredit score to the district. Our analysis reveals 2 districts fall in poor performing districts, followed by below average performing 14 districts and average performing 11 districts.

DISCUSSION:

Monitoring and evaluation is essential tool to judge any community base program to monitor changes in the status of any community based initiative or intervention. Nawa Jatan is one of the community based target oriented initiative to assess nutrition after field intervention in an intention to overcome malnutrition among under five children. Current study observed gaps of 3.42% in reported and validated data similar observation made by Sinha et al in Chhattisgarh which was (9.8%) less than that of current study³ and Jitendra Kumar Meena *et al* in urban slum of Delhi⁴. In this study we highlighted that there were 14.04% disagreement in weight as well as grade of malnutrition recorded at the field level noted by validation team against recorded data by AWWs. These kind of poor reporting and irregular monitoring was also reported by past evaluation surveys witnessed by mis-utilisation of existing resources⁴. By field validation above two findings pointed out gaps in recording and reporting field data can't rely cent percent for future planning implementation and rationale allocation of resources. Same kind of remark also made by other researchers that monitoring tools guides all stakeholders to allocate resources judiciously including financial as well as human and technical resources^{6,7}. Lesson learned by this study is that there is immense need of optimal monitoring of any community based program for better inferential outcome for future policy making and planning and should be integral component of any program progress and must be included as tool of assessment of ICDS services. Few districts were showing various grade of performance ranging from Poor to average may be due to improper supervisory mechanism added with irrational allocation of resources and ill trained manpower (i.e. Frontline functionaries) viz. AWWs. Similar issues had been pointed out by other observers that

program performance can be affected by aforementioned challenges needs alternate method of monitoring could be a data validation for effective outcome^{8,9}. Current study depicted that 2 districts fall in poor performing, followed by below average performing 14 districts; similar study done by Sinha et al which was more no of district fallen in poor performing, followed by below average performing with lesser no of district with average performing districts¹⁰ in a similar kind of study settings.

CONCLUSION:

We found that Nawa-Jatan program was in track to achieve objectives of it in all surveyed district of the state with little gap in recorded result as normal children against the observation which was actually in the field level (i.e. Anganwadi register). This may be probably either due to wrong data entry, over reporting, separate weighing for register entry and software entry (which still should not lead to such high difference) and/or incorrect weighing. Since we were involved in previous validation survey and in current survey observed lot of improvement in field situations and performance of district notably improved. But in some district still there is chance for the improvement. Out of all disagreement more than one third children showed change in their nutritional grade. Above observations might be possibly due to poor monitoring of weighing activity leading to significant level of gap in observation in grade of malnutrition as well as recording of weight.

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