



## TO ASSESS THE AVAILABILITY OF HEALTH CARE FACILITIES AT NUTRITIONAL REHABILITATION CENTRES IN UDAIPUR ZONE

### Community Medicine

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### ABSTRACT

Nutrition Rehabilitation Centre (NRC) is a unit in a health facility where children with Severe Acute Malnutrition (SAM) are admitted and managed. so this study has been conducted to assess the availability of health care facilities at Nutritional Rehabilitation Centres in Udaipur Zone. This was a cross-sectional study conducted in NRCs at tertiary and secondary level health institution of Udaipur zone. There are six district in Udaipur Zone. Fifty percent of districts i.e. 3 districts were included in the study. A total number of six NRC were included in study. One each at district level and one at CHC level. To select these NRC a two stage random sampling was done. Study shows that there is an improvement in infrastructure and up scaling of Nutritional rehabilitation centres from district and CHC level.

### KEYWORDS

#### INTRODUCTION

Nutrition rehabilitation centres (NRCs) were first proposed by Bengoia in 1955.<sup>1,2</sup> Children are admitted as per the defined admission criteria and provided with medical and nutritional therapeutic care. Once discharged from the NRC, the child continues to be in the nutrition rehabilitation program till she/he attains the defined discharge criteria from the program (described in technical guidelines). In addition to curative care, special focus is given on timely, adequate and appropriate feeding for children; and on improving the skills of mothers and caregivers on complete age appropriate caring and feeding practices. In addition, efforts are made to build the capacity of mothers/caregivers through counselling and support to identify the nutrition and health problems in their child. In-patient management of SAM children is highly effective in reducing case fatality rates, but even under the best circumstances inpatient management will not be able to handle the entire caseload of children with SAM in a given district. Other issues may include problem of access to the health facility and long hospital stay requiring caregivers to stay away from home and work for many days.

India is one among the many countries where child malnutrition is severe and also malnutrition is a major underlying cause of child mortality in the country. In India, it is expected that 9 million children, are suffering from severe acute malnutrition. This is almost 50 percent of children with severe acute malnutrition (SAM) worldwide.<sup>3</sup> According Global Hunger Reports malnutrition directly or indirectly results in deaths of 5 million children every year, which transits into one child death every 10 second.<sup>4</sup> However, these deaths can be prevented with appropriate nutritional and clinical management. Therefore, Under National Rural Health Mission, Nutrition Rehabilitation Centres have been set up with the intention to improve the quality of care being provided to children with SAM and to reduce child mortality.

According to Food Security Atlas of Rural Rajasthan (study by Institute for Human Development and World Food Programme), India's western state of Rajasthan is under the grip of severe food insecurity with 22 of its 32 districts being labelled as 'most food insecure'.<sup>5</sup>

#### METHODOLOGY

- I. Study Area- The present study was conducted in Udaipur zone
- II. Study design- This was a cross-sectional study conducted in NRCs at tertiary and secondary level health institution of Udaipur zone.

- III. Sampling- There are six district in Udaipur Zone. Fifty percent of districts i.e. 3 districts were included in the study. A total number of six NRC were included in study. One each at district level and one at CHC level. To select these NRC a two stage random sampling was done.
- IV. Method- It was a facility based survey.
- V. Tools and Technique- Data were collected through –
  - A. Observation by using standardized check list given in operational guidelines such as: checklist of Human resource, list of equipment and supplies, Supervisory checklist for NRC, Checklist for monitoring ward procedure, check list of monitoring indicators.
- VI. Data entry and analysis- collected data were entered in MS Excel and analysed by using MS Excel, SPSS 16.0 version. Tests of significance were applied for both qualitative and quantitative data i.e. student t-test, chi-square test and ANOVA were applied as per need.

#### OBSERVATION

**Table 1. Status of required facilities at NRCs in Udaipur District**

Indicators	NRHM Norms	Availability at 6 NRCs	
		Yes	No
Patient Area (as per norms*)	Yes	6(100%)	0(0%)
Play and counselling area	Yes	4(67%)	2(33%)
Nursing station	Yes	6(100%)	0(0%)
Kitchen and food storage	Yes	6(100%)	0(0%)
Attached toilet and Bathroom Facility	Yes	4(67%)	2(33%)

\*About 150 square feet per bed plus 30% for ancillary area

**Table 2. Status of availability of human resources**

S.No.	Human resources	NRHM norms	Availability at 6 NRC	
			Yes	No
1	Medical officer	1	6(100%)	0(0%)
2	Nursing staff	4	4(67%)	2(33%)
3	Nutrition counsellor	1	0(0%)	6(100%)
4	Cook cum care taker	1	2(33%)	4(67%)
5	Attendant/cleaner	2	2(33%)	4(67%)
6	Medical social worker	1	0(0%)	6(100%)

**Table 3. Deficiency of Human Resources at Different NRCs**

Name of centres	NRHM Norms	Available	Deficiency
Udaipur	10	7	3 (30%)
Mavli	10	3	7 (70%)
Rajsamand	10	5	5 (50%)
Nathdwara	10	5	5 (50%)
Chittor	10	7	3 (30%)
Kapasan	10	3	7 (70%)

**Table 4. Status of availability of Kitchen equipments in NRC**

Kitchen equipments	NRHM norms	Availability at 6 NRC	
		Yes	No
Cooking gas	Yes	6 (100%)	0
Dietary scales (to weight to 5 gms)	Yes	4(67%)	2(33%)
Measuring jars	Yes	6(100%)	0
Electric blender (or manual whisks)	Yes	3(50%)	3(50%)
Water filter	Yes	4(67%)	2(33%)
Refrigerator	Yes	4(67%)	2(33%)
Utensils (large containers, cooking utensils, feeding cups, saucers, spoons, jugs, etc.)	Yes	6(100%)	0

**Table 5. Status of availability of kitchen and other supplies in 6 NRC**

Kitchen Supplies	NRHM norms	Availability at 6 NRC	
		Yes	No
Supply for making starter and catch up diet	YES	6(100%)	0
Dried skimmed milk	YES	2(33%)	4(67%)
Whole dried milk	YES	2(33%)	4(67%)
Fresh whole milk	YES	6(100%)	0
Puffed rice	YES	6(100%)	0
Vegetable oil	YES	6(100%)	0
Home based food items	YES	6(100%)	0
<b>Other supply</b>	YES		
Stationary (printing of formats, Growth charts, registers, etc.), display Material	YES	4(67%)	2(33%)
Cleaning and Bathroom supplies	YES	3(50%)	3(50%)

**Table 6. Status of availability of essential ward equipments**

Essential ward equipments	NRHM norms	Availability at 6 NRC		Completeness meeting criteria at 6 NRC	Partially meeting criteria at 6 NRC	Not meeting criteria at 6 NRC
		Yes	No			
Glucometer	1	6	0	6	0	0
Thermometer	2	6	0	0	6	0
Weighing scale	3	6	0	0	6	0
Infantometer	2	6	0	0	6	0
Stadiometer	1	6	0	6	0	0
Resuscitation equipments	1	6	0	6	0	0
Suction equipments	1	6	0	6	0	0

**Table 7: Status of bed availability at different NRCs**

Name of NRCs	NRHM norms	No. Of beds available	Availability Percent %
Udaipur	10-20	10	100
Mavli	6-10	5	83
Rajsmand	10-20	10	100
Nathdwara	6-10	7	100
Chittor	10-20	10	100
Kapasan	6-10	5	83

**RESULT**

Table 1 shows adequate patient area, nursing station, kitchen and food

storage was available at all the centres. Play and counselling area, and attached toilet and bathroom facility was not available at 33% centres.

As it is evident from the study that there was an actual shortage of man power at NRCs except medical officer which were meeting the NRHM norms. All the centres' were not having nutrition counsellors and medical social worker. 67% of centres were not having Cook cum care taker and Attendant/cleaner and 33% of centres were not having adequate nursing staff (table-2).

Table-3 shows that the NRCs at medical college & district level centres (Udaipur, Nathdwara, Chittor and Rajsamand) have comparatively better Human Resources than FRU/CHCs centres (Mavli and Kapasan).

Table-4 shows kitchen equipments like cooking gas, measuring jars, utensils were available at all the centres and dietary scales, water filter, refrigerator were not available at 33% centres. Electric blenders were not available at 50% centres.

Table -5 shows no deficiency was observed like supply for making starter and catch up diet, fresh whole milk, puffed rice, vegetable oil, home based food items. Dried skimmed milk, whole dried milk were not available at 67% centres, cleaning and bathroom supplies were not available at 50%, stationary and display material were not available at 33% centres.

Table-6 shows that Glucometer, Stadiometer, Resuscitation equipments and Suction equipments were available at all the centres as per norms. Thermometer, Weighing scale and Infantometer were available at all centres but not meeting the norms.

Table- 7 shows 66% NRCs centres have 100% bed availability and 33% NRC have 83% bed availability. Medical college and district level NRCs are having 100% bed availability but there is a deficiency at peripheral level NRCs.

**DISCUSSION**

SAM is an important preventable and treatable cause of morbidity and mortality in children below five years of age in India. A number of state governments have taken the lead and are in the process of scaling up the establishment of NRCs with the intention to improve the quality of care being provided to children with SAM and to reduce child mortality. (Sharma R. working of malnutrition treatment centres an assessment of MTCs in Rajasthan may 2013 new Delhi, India)

**Require facilities at NRC****1. Patient area**

In our study we found that the nursing station and patient area i.e. about 150 square feet per bed plus 30% for ancillary area, was available as per norms in all the studied NRCs (100%).

**2. Play and counselling area:**

In our study play and counselling area was available at 67% centre contrary to our study **Sharma et al found<sup>6</sup>(2013)** that play area and toys were not available in any centre.

**3. Kitchen and food storage:**

In our study well maintained Kitchen and food storage were found at all 6 NRC (100%). Contrary to our study **Sharma R. ET al<sup>6</sup> (2013)** found that there was no kitchen area attached to any of the centre visited and food is prepared in common kitchen of the hospital

**4. Attached toilet and Bathroom Facility:**

Attached toilet and Bathroom Facility was available at 67% NRC centres in our study while in a study by **Sharma ET al<sup>6</sup> (2013)** found mother reported that Attached toilet and bathroom is well maintained by hospital staff in all centres.

**5. Status of civil work:**

In our study, clean walls, water Supply (24 hrs), Power Supply (24 hrs), well lighting, well ventilation were assured in the entire centre. The results of other study conducted by **Sharma ET al<sup>6</sup> (2013)** are in congruence with our study.

**6. Status of availability of human resources:**

In our study there was an actual shortage of man power at NRCs except medical officers which were meeting the NRHM norms. All the

centres' were not having nutrition counsellors and medical social worker. Due to unavailability of nutritional counsellor, planning of the therapeutic diet for each child was affected and this was carried out by the medical officer itself. All other function i.e. counselling mothers on various topics like nutrition and malnutrition, hygiene and sanitation, infant and young child feeding practices, immunization, family planning etc., detect the feeding problem in children and counsel mothers accordingly and also to demonstrate the preparation of low cost nutritious energy dense child food. 67% of centres were not meeting the norms of Cook cum care taker and cleaner and having only 1 Attendant/cleaner at each centre. Due to this deficiency, preparation of F-75 and F-100 diet preparation was affected and so the cleaning activity. 33% of centres were not having adequate nursing staff due to this treatment and nursing care was affected. The NRCs at medical college & district level centres (Udaipur, Nathdwara, Chittor and Rajsamand) have comparatively better Human Resources than FRU/CHCs centres (Mavli and Kapasan).

Similarly study conducted by Sharma et al<sup>6</sup> (2013) has also concluded by actual shortage of man power specially for nutrition counsellors (except in Baran district). Separate cook was not present at all of the visited centres.

#### **7. Status of availability of essential ward equipments:**

In our study, Glucometer, Stadiometer, Resuscitation equipments and Suction equipments were available at all the centres as per norms i.e.6 (100%). Thermometer, Weighing scale and Infantometer were available at all centres but not meeting the norms completely i.e. 2 Thermometer, 2 Infant meter and 3 Weighing scale at each centre. These are the basic minimum required equipments for the monitoring of the children under treatment and follow up.

#### **8. Status of availability of other ward Equipments:**

In our study we found that Almiraha, Toys for structural play, Clock, Reference height and weight chart were available at all the centres. Other wards equipment like IV stand, Shoes rack and dustbin, Room heater, Calculator were not available at 33% centres and IEC-Audio/Visual materials were not available at 50%.

#### **9. Status of availability of Kitchen equipments in NRC:**

In our study, kitchen equipments like cooking gas, measuring jars, utensils were available at all the centres. Dietary scales, water filter; refrigerators were not available at 33% centres which are necessary for storage of consumables, milk etc. Electric blenders were not available at 50% centres.

#### **10. Status of availability of kitchen and other supplies:**

In our study, no deficiency was observed like supply for making starter and catch up diet, fresh whole milk, puffed rice, vegetable oil, home based food items. Dried skimmed milk, whole dried milk were not available at 67% centres, cleaning and bathroom supplies were not available at 50%, stationary and display material were not available at 33% centres.

### **CONCLUSION**

1. In last few years (2013-2015) study shows that there is an improvement in infrastructure and up scaling of Nutritional rehabilitation centres from district and CHC level. But study found play and counselling area and attached toilet and bathroom facility not available at some centres.
2. Bed availability is according to norms at all the district level NRCs but still there is scarcity of beds at few CHC level NRCs.
3. Peripheral NRCs (district and CHC) level are underutilized.
4. Through the medical officer are present at all NRCs. But none of NRCs in Udaipur zone is having adequate number of staff (10/NRCs as per norms).counsellor, medical social worker is not available at any of the centres.

### **REFERENCES**

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