STUDY ON IMPROVEMENT OF DIETARY SERVICES AND MANAGEMENT IN MEDICAL COLLEGE HOSPITALS AND SELECTED DHHS OF DEPARTMENT OF HEALTH & FAMILY WELFARE, GOVERNMENT OF ORISSA

DEPARTMENT OF HEALTH & FAMILY WELFARE
GOVERNMENT OF ORISSA

Commissioned by
Technical and Management Support Team
Orissa

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Health & Family Welfare Department
Government of Orissa

CONTENTS

TABLE OF TABLES

Executive Summary

Diet for the patients is treated as an integral part of treatment and both public and private health institutions have been catering to the patient's need as per their provision. Different diet preparation and service systems are used at health institution level to cater to the need of the patients based on the diagnosis of disease. In-spite of different initiatives, there is continuing concern over the lack of attention to the nutritional needs of indoor patients, more particularly in the public health institutions. The Technical and Management Support Team for Orissa Health Sector Plan commissioned a rapid assessment to understand the present dietary practices in public health institutions and identify areas of improvement. Specific objectives were to compare the diet provision and its management in selected public and private health institutions and understand patient's preference with regard to present management practices.

Approach & Methodology: The study employed a combination of both quantitative and qualitative research methods for collection and analysis of information/data. In order to collect data / information, interview and consultation made with in-door patients, medical staff and other service providers. The study also employed observation method to experience the overall approach to dietary management in the public & private health institutions. Different tools, both structured and semi-structured, were used to capture information such as structured schedule for in-door patients, dieticians and other medical staff, secondary information checklist for in-door patient load and diet provision etc.

Catchment Area & In-door patient Load: Medical college hospitals are having catchment area from all over the state and neighbour states, DHHs are having catchment area from all over the district and adjoining places of other districts also. Catchment areas for CHCs varies between 25 Km to 85 Km. For private health institutions placed at capital, patients come from all over the state and also from nearby states. In Public health institutions, indoor patients are from wide catchment areas which are not confined to the service area. Better quality of service and behaviour of the medical staff is attributed to the patient load at the sub-district level. In-door patient load by different health institution shows a fluctuating trend. The admitted patients are generally of two types i.e. patients admitted against the available bed and patients admitted without any bed. In public health institutions, diet provision is made only for the patients with bed. It was also observed, based on the patient list that percentage of women in-door patient is relatively high than that of male in last six months, irrespective of the health institution types.

Dietary Norm & Practices: Health institutions normally follow different dietary norms which is more in practice in big medicals with high in-door patient turnover. DHH Bolangir and Kalahandi also follow different dietary norms for different category of patients. At DHH level, Patients are normally categorised as TB and non-TB patients. While in DHH, Cuttack, patients are provided with dry food [bread and milk without any lunch and dinner], in DHH-Bolangir and Kalahandi, parboiled Rice, Dal and Curry is provided to the in-door patients suffering from T.B and Milk, Bread and Egg as per patients choice is provided to the non-T.B patients. At the CHC level, no such diet provision is there. The medical college hospital has different dietary practices for diabetic patients, patients suffering from cardiac problem, patients with T.B and patients with other diseases. Capital hospital is also having two patient categories i.e. diabetic patients and non-diabetic patients. Diet menu is followed same like that of SCB medical college hospital. The private health institutions normally follow different dietary norms for different category of patients

which is wider than public health institutions. The cost of diet is charged to the patients contrary to the public health institutions.

Cost Norm: All the public health institutions follow the same cost norm of Rs.20/- per non-TB patient and Rs.25/- for TB patients. The cost norm varies at the private health institution level which varies between Rs.75/- per day to Rs.300/-. In the private health institutions, there is no different cost norm for different category of patients as it is observed in public health institutions. Inadequate financial provision in public health institutions affects the quality of diet.

Diet Menu: The diet menu being followed by public and private health institutions vary widely. Where private health institutions are having special focus on diet of the patients, it is comparatively less focused in public health institutions due to cost factor. The basis of providing different diet menu is dependent upon diagnosis of the disease and in case of private health institutions; it is aligned with the preference of the patient adhering strictly to prescribed diet menu for different category of diseases.

Availability of Dietician: Many public health institutions are not having dietician even at the district headquarters hospital. But the capital hospital and SCB medical college hospital are having dietician. In the absence of the dietician, normally doctors / Assistant Matron prescribe diet for the patient Contrary to public health institutions, the private health institutions are having dietician for prescribing diet.

Adequacy of Diet: Because of well devised indent process, normally there is no shortfall or surplus of diet both in public and private health institutions. If more number of patients takes admission in the morning hour, diet is provided to such patients during dinner only because of the present indent process. But this practice is not observed in private health institutions.

Diet Preparation / Procurement: Dry food like Bread and Egg is supplied by the enrolled private body during evening hour for its distribution in the next day while packet milk is procured every day in the morning hour. Like dry foods, vegetables and raw materials for cooking is supplied by the enlisted agency in the evening hour for the next day cooking. Kitchen facility is available in all the DHHs, medical college hospital and capital hospital whereas such facility is not available in CHCs as they do not prepare cooked food. All the private health institutions have their own kitchen but cooking is either outsourced [AYUSH] or managed directly by the hospital administration [APOLLO]. In case of outsourcing, overall monitoring and supervision is done by hospital personnel.

Monitoring: Dietician normally monitors the diet preparation and its quality wherever they are available. Where dietician is not there, the designated in-charge / doctor / matron monitor the procurement and distribution. During cooked food preparation and receiving the dry food, concerned persons monitor the overall process. In private health institutions, normally the dietician monitors and checks the quality.

Hygienic Measures: All public and private hospitals are taking hygienic measures during preparation and distribution of diet to the indoor patients. But, the hygienic measures taken by private hospital is more systematic and guideline based than the public health institutions. Food preparation process is more general and not so systematic in public health institutions including the SCB medical college and DHHs.

Diet Serving Procedure: During service the diet, different health institutions follow different service methods such as; in the SCB medical college hospital, food is kept in the food trolley and it is locked before serving at the patient's end. Food trolley is also used in Capital Hospital but without any lock. The food trolley is having lid to keep the food items covered. The diet is serviced in the tray / plate of the patient and no separate serving

plate are provided to the patients by the health institution. In private health institutions, it is served to the patients with tray / plate. During serving, food is served hot / warm and in case, if patient wishes to take the diet in delay, it is kept in the hot case and served later. But such types of provisions are not there in public health institutions.

All the public health institutions are facing problem in managing dietary services due to less financial provision and inadequate infrastructural base. While the prescribed cost norm is inadequate to provide quality diet to the indoor patients, the administration of health institutions is compelled to compromise with the quality and quantity of supplied diet.

Recommendations:

Hiking the Diet Cost: The public health institutions find it difficult to manage the prescribed dietary norm with required quality and quantity with the existing cost norm. So, in order to adhere to the prescribed standard of diet, it is important that the cost of diet need to be increased. Based on the present market value, if the price of the recommended diet is calculated with 5% inflation from the present price, the cost of diet per day per patient would be around Rs. 46.30 for male and Rs.31.54 for female of the same working category. As dietary requirement for the lactating mothers is comparatively high, accordingly the cost norm is suggested to be fixed at the higher level. As per the prescribed diet menu for lactating mothers, the estimated cost is around Rs.57.00.

Differential Diet: It is suggested to institutionalise differential diet menu for different category of patients by gender, age and disease type. A weekly menu for different type of patients would also add value.

Outsourcing: Preparation and distribution of diet can be outsourced to the private agencies at the DHH, sub-divisional hospitals and public hospitals where there is well developed market and catering services are available. But it may not be a feasible option at the CHC and PHC level as most of the CHCs and PHCs are located in less urbanised areas. In such cases, canteen system could be promoted within the campus in the collaboration of private agency. Another option could be use of “Diet Coupon” for accessing food from open market but it would be difficult to ensure the quality of the food required during therapeutic condition.

Provision of Dietician: The study also recommends that it should be made mandatory to have one dietician or nutritionist at each DHH initially and gradually at the sub-divisional headquarters level.

Cost Sharing: Government may think of promoting cost sharing norms in big hospitals such as medical college hospitals, capital hospitals etc. whereby some part of the cost can be paid by the patients who prefer to have separate diet within the diet norm. In such cases, on 50-50% or75-25% level cost can be shared with the persons who prefer substitute / additional diet.

Monitoring & Vigilance Committee: As it is recommended to increase per day cost of diet for meeting the recommended dietary requirement, every public health institution should have a diet vigilance committee comprising different persons. The committee would monitor and supervise the overall diet management process and quality assurance system. The local RKS may function as the monitoring &vigilance committee.

Improving Kitchen Facility: The present facilities at the kitchens of the health institutions need to be improved along with hygienic practices. Each kitchen should have separate storage and cooking facility along with the provision of food preservation system.

Diet for Patients without Bed: It is suggested that instead of bed wise allotment of diet, there can be allotment by number of in-door patients admitted or special provision may be created for admitted patients without bed.

SECTION ONE: STUDY BACKGROUND

1.1 Introduction and Background:

The Government of Orissa [GoO] has developed a comprehensive Orissa Health Sector Plan [OHSP] 2005-2010. The OHSP aims to achieve equity in health outcomes and has a key focus on access and utilization of services by vulnerable and marginal groups including women, schedule caste [SC] and schedule tribe [ST] populations. It aims at delivering accountable and responsive health care to reduce maternal mortality; infant and child mortality; reduce the burden from infectious diseases; under-nutrition and nutrition-related diseases and disorders. The logical framework of health sector plan [OHSP] looks in to achieving following four outputs.

1. Improved Access to priority Health, Nutrition and water and sanitation services in underserved areas

2. Public Health Management Systems strengthened

3. Positive health, nutrition and hygiene practices and health seeking behaviour of communities improved

4. Improved use of evidence in planning and delivery of equitable health, nutrition and water and sanitation services

Under logical framework output-2, one of the objectives is to, "Ensure continuous improvement of health service delivery system." A number of milestones and indicators for OHSP have been identified for achievement in year 2008-09. In relation to this Objective various studies and interventions are being carried out. At the request of the Health and Family Welfare Department, Government of Orissa, the Technical and Management Support Team for OHSP commissioned a rapid study to understand the present dietary practices in public health institutions and necessity of bringing improvement of dietary services and management in public hospitals.

1.2 Study Objectives:

1. Provide a comparative analysis of diet provision in selected govt hospitals vis-a-vis selected private hospitals with respect to rate of diet, diet composition, patient and providers' perspective and preference on diet.

2. Provide a comparative analysis of diet provision in selected govt hospitals of various levels like MCHs, DHHs, SDHs, and CHCs with respect to rate of diet, diet composition, and patient and providers' perspective and preference on diet.

3. Data collection and analysis of how rate of diet is fixed, how diet services is being managed, quality of food, conditions of kitchen for various types of patients like general, TB and others

4. Provide recommendations on how to improve the dietary services and management system for public hospitals.

1.3 Study Approach and Methodology:

The study employed a combination of both quantitative and qualitative research methods for collection and analysis of information/data. In order to collect data / information, interview and consultation made with primary stakeholders [the target beneficiaries i.e. indoor patients] and various secondary stakeholders. The study also employed observation method to experience the overall approach to dietary management in the public health institutions. The overall methodologies

followed for the study were the followings.

1. Review of secondary literature on nutrition policy of the hospitals [current norms]
2. Collection of secondary information and analysis of cost structure
3. Interview / consultation with in patients and attendants
4. Interview with service providers and facilities survey
5. Focus group discussions
6. Participatory observation [if so required]
7. Dietary Intake Measurement

Methodology for assessment of Dietary Services and its Management encompassed the followings;

1. Discussion with hospital administration
2. Discussion with dietician and other responsible persons
3. Observing the methods and process
4. Collection and analysis of secondary information
5. Discussion with the sample inmates, indoor patients

1.3.1 Sampling Frame:

Table 1;Coverage of Samples

Tools	DHH, BLG	CHC, Turei-kela	SDH, Patna-garh	DHH, KLD	CHC, Jaipa-tna	SDH, Dhar-magarh	SCB-MCH	AYUSH Hosp-ital	Capi-tal Hospital, BBSR	Apollo Hosp-ital	DHH, Cutt-ack	Total
CDMO	1	1	-	1	1	1	1	1			1	8
Dietician	1	-	-	1	-	1	1	1	1	1	1	8
Participant observation	1	-	1	1	-	1		1	1		1	7
Indoor patient	11	-	9	10	5	5	17	10		2	10	79

1.3.2 Study Tools:

To collect information / data from various sources, different tools were developed. Each tool was having specific scope to capture different information / data types by stakeholder category. The tools that were;

1. Structured Interview Schedule for in-door patients
2. Structured Interview Schedule for Dietician
3. Structured Interview Schedule for Participant Observation
4. Structured Interview Schedule for Health Officials [CDMO/DPM etc.]

1.4 Study Administration Process:

Keeping in view the objectives of the survey, the survey team with the support of TMST and NRHM, reviewed the survey design and sampling after preliminary discussion with TMST. Accordingly, the design and sample frame for the study was finalised. The list of essential information needed to meet the survey objectives formed the basis of the designing the structured and semi-structured schedules / checklists. To capture different relevant information / data, four different tools were developed and shared with TMST for inputs. Based on the suggestion of TMST, required modification made in the tools and finalised for piloting.

Before the finalisation of the tool for indoor patients, the tool was field tested and piloted. Each framed question was verified at the public health institution and its information capturing ability was checked. In the pre-test, two to three interviews were conducted and the schedules were revised on the basis of the results and comments from the interviewees. All the researchers associated in the study were orientated in two days sessions of which one day was class room orientation on the study objective, tools and methodologies. The second day orientation was conducted at the field level in a practical manner. It helped the researchers to understand the overall study process and helped them to collect information accordingly.

After the finalisation of tools and orientation of researchers, field level study was conducted. Through interview and consultation, information / data gathered from different sources. All the collected information was validated by the field level supervisors and triangulated with health officials in the respective health institutions. Completed interviews were reviewed to make sure all the questions were asked and the answers were recorded clearly. All the data were entered in to the SPSS after coding for analysis. After data entry, data against all the variables were scrutinised again and key errors were minimised through filtration and cross checking. Available data were analysed using the developed database and based on the findings, conclusions were drawn.

1.5 Study Team:

The study methodology and tools was designed by Mr. Saroj Nayak with the guidance of Mr. Ashok Singha and with the support of Mr. Bijay Panda of TMST. Mr. Sangram Mohapatra and Mr. Gangadhar Acharya were supervising all the field level activities along with consultation with health officials and in-door patients. For completion of the study in time, a total of six researchers were associated.

1.6 Report Presentation Frame:

The report is presented in the following manner.

Section One:	Study Approach and Methodology
Section Two:	Dietary services and Management Practices
Section Three:	Recommendations

1.7 Limitations of the Study:

Apart from time factor, which constraints wider coverage of public and private health institutions for comparative analysis, the study team could not get the segregated data / information by cost norms adopted by different private hospitals for different type of meals. As the cost norm is not segregated at the health institution level, it was not possible to analyse the cost by meal type. Secondly, cooperation of Apollo Hospital was below the expectation who virtually denied providing required information in the name of official secrecy. Non-availability of secondary information affected the overall analysis.

SECTION TWO: DIETARY SERVICES AND MANAGEMENT PRACTICES:

2.1 Introduction:

Patient meals are an integral part of treatment hence the provision and consumption of a balanced diet, essential to aid recovery. A number of food service systems are used to provide meals. This seeks, through the application of a static, extended choice menu, revised patient ordering procedures, new cooking processes and individual patient food heated/cooked at ward level, to address some of the current hospital food service concerns. But, there is continuing concern over the lack of attention to the nutritional needs of indoor patients due to many reasons of which cost factor is most important.

2.2 Catchment area of the health Institutions:

The catchment area of the health institutions vary by type of institution. While medical college hospitals are having catchment area from all over the state and neighbour states, DHHs are having catchment area from all over the district and adjoining places of other districts also. Catchment areas for CHCs varies between 25 Km to 85 Km. For private health institutions placed at capital, patients come from all over the state and also from nearby states. So, indoor patients are expected from wide catchment areas which are not confined only to the expected service area but it exceeds depending upon the availability of services and its quality. Though, it was difficult to segregate the patients by stage of their disease and approachability to the health institutions, but it was evident that in urban areas, patients normally come during the initial stage of the disease while in rural areas, a mixed trend was observed.

2.3 In-Door Patient Load:

In-door patient load by different health institution shows a fluctuating trend. The admitted patients can be categorised in to two sections i.e. patients admitted against bed and patients admitted without any bed. As per the norm, diet provision is applicable only for the patients with bed and for others, no diet provision is there. Details of patients are reflected in the table below.

Table 2: In-Door and Out-Door Patients in last six months

Hospital	June'10		July'10		August'10		September'10		October'10		November'10		Total	
	IP	OP	IP	OP	IP	OP	IP	OP	IP	OP	IP	OP	IP	OP
SCB MCH	41624	-	50403	-	52141	-	51457	-	51488	-	53423	-	300536	-
DHH, Cuttack	608	12231	681	14160	700	18150	711	13506	590	12419	777	17776	4067	88242
Capital Hospital	3250	-	3421	-	3736	-	4416	-	3456	-	3747	-	22026	-
DHH, Bolangir	3209	16581	3430	20215	4018	23209	3780	18812	3249	19143	2937	19731	20623	117691
CHC, Tureikela	11	967	14	866	21	871	23	778	17	694	21	1705	107	5881
DHH, Kalahandi	1916	11053	2261	13686	2680	16410	2075	12016	2451	14133	2094	13753	13477	81051
CHC, Jaipatna	377	2786	334	2732	274	3502	398	2402	453	2345	386	1736	2222	15503
AYUSH Hospital	307	1159	292	1269	272	1441	314	1299	289	1166	290	1188	1764	7522
Apollo Hospital	Information not Available													

Note: IP-Indoor Patient, OP – Outdoor Patients; - for information not available; Source: Records of Respective Health Institutions

Table 3: Number of Indoor Patients by Gender in last six Months																		
	DHH, Bolangir			CHC, Tureikela			DHH, Kalahandi			CHC, Jaipatna			SDH, Patnagarh			SDH, Dharmagarh		
Month	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total	M	F	Total
Nov.	1250	1687	2937	8	13	21	998	1096	2094	145	241	386	632	1295	1927	251	340	591
Oct.	1542	1707	3249	7	10	17	1018	1433	2451	151	302	453	784	1229	2013	311	404	715
Sept.	1956	1824	3780	10	13	23	912	1163	2075	151	247	398	724	1145	1869	345	439	784
August	2276	1742	4018	6	15	21	1265	1415	2680	126	148	274	782	1586	2368	429	494	923
July	1808	1622	3430	8	6	14	915	1346	2261	92	242	334	735	1313	2048	352	389	741
June	1674	1535	3209	4	7	11	832	1084	1916	136	241	377	708	1288	1996	404	378	782
Total	10506	10117	20623	43	64	107	5940	7537	13477	801	1421	2222	4365	7856	12221	2092	2444	4536
Note: M-Male, F-Female; Source: Records of Respective Health Institutions																		

Segregation of in-door patients by gender reflects that altogether, percentage of women in-door patient is relatively high than that of male in all the months [last six months], irrespective of the health institution types. In comparison to DHHs, female in-door patient in CHCs and sub-divisional headquarters hospital is higher.

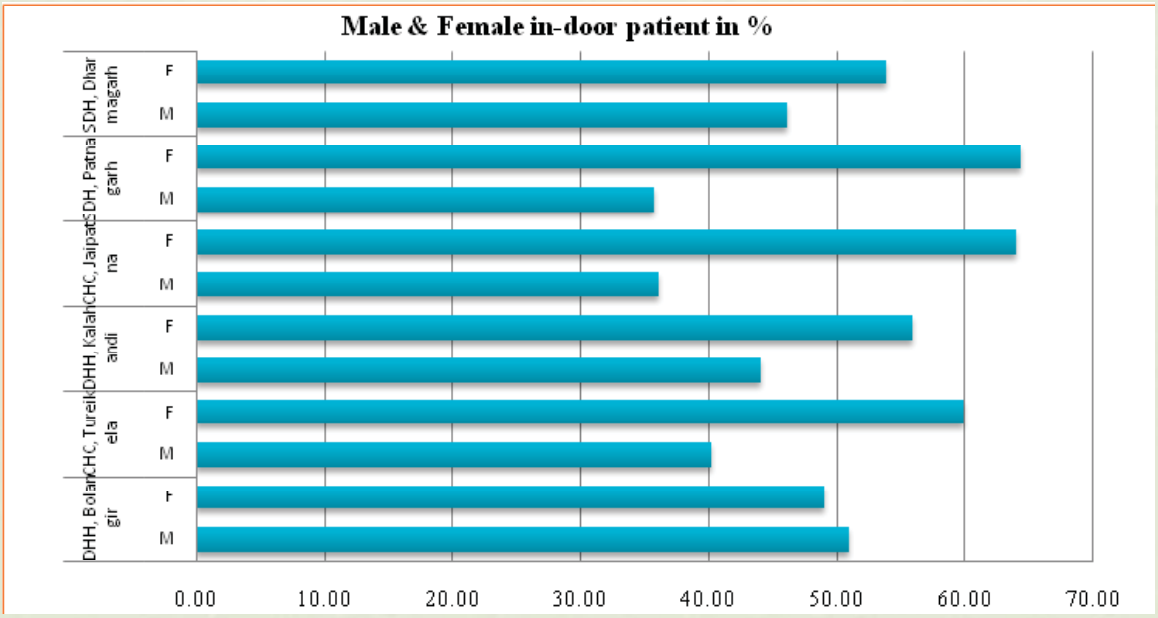


Table 4: Indoor Patients by Disease Type

		DHH, Bolangir						DHH, Kalahandi						Capital Hospital
SN	Diseases	Nov.	Oct.	Sept.	Aug.	July	June	Nov.	Oct.	Sept.	Aug.	July	June	Total
1	Diarrhoea	32	53	69	71	56	27	1o3	184	126	145	146	151	3250
2	Diphtheria													
3	Poliomyelitis													
4	Tetanus other than Neonatal				1		1				1	1		
5	Neonatal													
6	Whooping Cough													
7	Measles													
8	Acute respiratory Infection[ARI]	43	73	69	78	69	36	11	19	151	5	4	13	
9	Pneumonia	37	49	54	69	47	35	14	19	19	16	8	8	
10	Entri Fever		2	4	3	2	2	3	2	1	5	3	3	
11	Viral Hepatitis	1	3	3	3	2	1	5	5	5	6	3	7	
12	Japanies Ensafilitis		1											
13	Meningocoeal Meningitis				2	2	2							
14	Rabies								1	1			1	
15	Syphilis													
16	Gonococal Infection													
17	Pulmonary T.B.	4	2	2	4	2		5	3	2	3	6		
	Total of the diseases	117	183	201	231	180	3	38	233	305	181	171	183	
18	Renal Failure													5184
19	High BP& Anaemic													5408
20	Cardio-Vascular Disease													6351
21	Diabetic													1833
	All other diseases	2820	3066	3579	787	3250	3105	1953	2228	1820	2499	2060	1916	
	Grand Total	2937	3249	3780	4018	3430	3209	1991	2461	2125	2680	2231	2099	22026

Source: Records of Respective Health Institutions

2.4 Dietary Norms and Practices:

2.4.1 Public Health Institutions:

The health service providing institutions normally follow different dietary norms but it is more in medical college hospital, capital hospital and private hospitals. DHH Bolangir and Kalahandi also follow different dietary norms for different category of patients. In DHH Bolangir and Kalahandi, the patients are categorised in to two segments i.e. patients suffering from TB and patients not suffering from T.B which includes all other category of patients. But similar arrangement is not observed in DHH Cuttack. Patients in DHH, Cuttack are provided with bread and milk without any lunch and dinner facility. Contrary to this, DHH-Bolangir and Kalahandi provide parboiled Rice, Dal and Curry to the in-door patients suffering from T.B and Milk, Bread and Egg as per patients choice is provided to the non-T.B patients. At the CHC level, no such diet provision is there like that in CHC-Turekela and CHC-Jayapatna where patients arrange their own food at the CHC level.

The SCB medical college hospital has different dietary practices for diabetic patients, patients suffering from cardiac problem, patients with T.B and patients with other diseases. Diabetic patients are provided diet without sugar and potato, salt free diet for people with cardiac problem, high protein diet for T.B patients and common diet for all other category of patients containing Rice / Chapatti, Dal and Bhaji/Curry. Capital hospital is also having two patient categories i.e. diabetic patients and non-diabetic patients. Diet menu is followed same like that of SCB medical college hospital.

Table 5: Dietary Norm and Practices in Public Health Institutions

Indicators	SCB, MCH	CAPITAL HOSPITAL	DHH, CUTTACK	DHH, BOLANGIR	CHC, Tureikela, Bolangir	DHH, Kalahandi	CHC, Jayapatna, Kalahandi
Dietary norm followed	Different norms followed	Different norms followed	No different norms followed Only they are providing Dry food Milk and Bread, lunch and dinner facility is not there	Normally follow two types of dietary norm.	No provision of diet	Different norms followed	No provision of diet
Diabetics	without sugar and without potato	without sugar and without potato					
Cardioth-oracic	salt free diet						
TB	High protein diet			Parboil rice, Dal & curry		Parboil rice, Dal & curry	
Other categories	common diet [rice/ chapatti, Dal, Bhaji/ Curry]	common diet [rice/ chapatti, Ddal, Bhaji/ Curry]		Mostly milk, bread & egg as per patient's choice		Mostly milk, bread & egg as per patient's choice	
Diarrhoea		Barley, Chapatti					

Kidney with High BP, Nephritis		Without salt Rice, Dal, Fish					
Source: Participant Observation, Discussion with Hospital Administration, Discussion with Dietician and Doctors							

2.4.2 Private Health Institutions:

The private health institutions normally follow different dietary norms for different category of patients on cost basis which is wider than public health institutions. The cost of diet is charged to the in-door patients contrary to the public health institutions. Details of dietary practices followed by two important private health institutions at the state capital are presented in the table below.

Table 6: Dietary Norm and Practices in Private Health Institutions

Indicators	AYUSH HOSPITAL	APOLO HOSPITAL
Dietary norm followed	Different norms for different patients	Different norms for different patients
Diabetics	Carbohydrates, without sweet	Less oil, without root vegetable
Other categories	Low fat, low cholesterol,	
Diabetics [Renal]	Low potassium diet	
Renal, RTA	Liquid diet low potassium	less salt, potassium free
Hypertension cardiac		less salt
Surgery		semi solid, or liquid

2.5 Present Cost Norm:

As per the prescribed cost norm, all the public health institutions follow the same cost norm of Rs.20/- per patient per day while it varies at the private health institution level. At the DHH, capital hospital and medical college hospitals, separate provision of Rs.25/- is made for T.B patients due to the high protein requirement. But such dietary provision is not there in CHCs. Among the private hospitals, AYUSH has fixed the diet cost per bed rather than per patient which is similar to that of Apollo Hospital. For the general bed, AYUSH hospital charges Rs.75/- per day, Rs.100/- is charged per bed for 3-beded rooms, Rs.150/- for single bed room and Rs.200/- to Rs.300/- is charged per bed for double deluxe rooms [Figures of Apollo is not available for analysis]. In the private health institutions, there is no different cost norm for different category of patients as it is observed in public health institutions especially for T.B patients. Secondly, no such segregation by cost norm is observed by gender or by age of the patient in both public and private health institutions.

2.6 Managing with the Existing Cost Norm:

For the private health institutions, the charged cost norm is adequate to meet the dietary requirement of the patients and cover the cost incurred by the health institutions. But, public health institutions try to manage the cost by compromising with the quality of the diet and by reducing the quantum of diet per patient.

2.7 Present Diet Menu:

The diet menu being followed by public and private health institutions vary widely. Where private health institutions are having special focus on diet of the patients, it is comparatively less focused in public health institutions due to cost factor. The basis of

providing different diet menu is dependent upon diagnosis of the disease and in case of private health institutions; it is aligned with the preference of the patient adhering strictly to prescribed diet menu for different category of diseases. Preference of the patients for a particular type of diet for a particular disease type, among the recommended diet is not considered in public health institutions only because of cost factor.

2.7.1 Public Health Institutions:

In the DHH-Bolangir and Kalahandi, cooking food is only provided to the T.B patient during lunch and dinner but for the rest, dry food is provided. Dry food in shape of Bread and Milk is provided in the morning between 10-11 A.M and one egg is given in the afternoon. As the quality of the diet is very low, patients in Bolangir and Kalahandi DHH do not prefer to take cooked food. But DHH-Cuttack, SCB-Cuttack and Capital Hospital follow the same trend i.e. providing Milk, Bread and one Egg to the patient between 8 A.M to 9 A.M. Cooked food is also provided to the patients as per the advice of the doctor. Details of diet menu followed by different types of public health institution are reflected in the table for reference.

Table 7: Present Diet Menu Followed in Public Health Institutions

Indicators	SCB, MCH	CAPITAL HOSPITAL	DHH, CUTTACK	DHH, BOLANGIR	CHC, Tureikela	DHH, Kalahandi	CHC, Jayapatna
Type of food normally supplied during different times			For Meninzytes disease providing only Milk and all other patient Milk and bread is provided				
Breakfast	Milk, boiled egg/ biscuits & bread	Milk, boiled egg/biscuits & bread		No such type of break fast	No diet is provided	No	No diet is provided
Lunch	Rice, dal, veg curry	Rice, dal, veg curry/ fish curry		Milk & bread at 10.30 am			
Supper / Dinner	Chapati, dal, vegetable curry	Rice/ Chapatti, Dal, vegetable curry		One Egg			

Source: Participant Observation, Discussion with Hospital Authority & Dieticians

Health menus followed in different public health institutions are reflected below in matrix form.

Capital Hospital, Bhubaneswar:

Table 8: Times of diet for different Diet categories in Capital Hospital, Bhubaneswar

Sl. No.	NAME OF THE ITEMS	TIME / PER DAY
1	Diabetic	2 times per day
2	full Diet	2 times per day
3	Mixed	2 times per day
4	Salt free Diet	2 times per day
5	Mill Diet	1 times per day
6	Mill Biscuit Diet	1 times per day
7	Mill Biscuit Egg Diet	1 times per day
8	Mill Bread Diet	1 times per day
9	Mill Bread Egg Diet	1 times per day
10	Mill Bread Biscuit Diet	1 times per day
11	Bread, Biscuit, Egg Diet	1 times per day
12	Plain Barley Diet	1 times per day

Table 9: Quantum of diet provided to patients in Capital Hospital, Bhubaneswar

I	Diabetic [on Monday, Tuesday, Thursday, Saturday &Sunday]			
	Lunch & Dinner	Quantum	Rs.	P.
	Atta- [whole wheat]	300 gms Rs.20/kg	6	0
	Dal [arhar]	60 gms Rs. 84.00/kg	5	4
	Mixed Vegitables	275 gms Rs.16.00/kg	4	40
	Mustard oil [double Hiran]	10 gms Rs.81.00/kg	0	81
	Spices	10gms Rs90.00/kg	0	90
	salt [Tata]	10gms Rs.12.70/kg	0	13
	Egg [Two]	Rs.3.70/ each	7	40
			24	68
		Total Lunch & Dinner	24	68
		Fuel	0	32
			25	0
	On Wednesday & Friday		Rs.	P.
	Lunch & Dinner			
	Atta- [whole wheat]	300 gms Rs.20/kg	6	0
	Dal [arhar]	60 gms Rs. 84.00/kg	5	4
	Mixed Vegetables	150 gms Rs.16.00/kg	2	40
	Mustard oil [double Hiran]	10 gms Rs.81.00/kg	0	81

	Spices	10gms Rs90.00/kg	0	90
	salt [Tata]	10gms Rs.12.70/kg	0	13
	Fish	50gms Rs.120/kg	6	0
	Egg [Two]	Rs.3.70/ each	3	70
			24	98
		Total Lunch & Dinner	24	98
		Fuel	0	2
			25	0
II	Full Diet [on Monday, Tuesday, Thursday, Saturday &Sunday]			
	Rice [coarse boiled]	375gms Rs. 18.70/kg	7	1
	Dal [arhar]	50gms Rs. 84.00/kg	4	20
	Mixed Vegetables	150gms Rs. 16.00/kg	2	40
	Potato	150gms Rs. 11.00/kg	1	65
	Mustard Oil [Double Hiran]	10gms Rs.81/kg	0	81
	Spices	10gms Rs90.00/kg	0	90
	Salt [Tata]	10gms Rs.12.70/kg	0	13
	Egg-Two	Rs.3.70/ each	7	40
			24	50
		Total Lunch & Dinner	24	50
		Fuel	0	50
			25	0
	On Wednesday & Friday			
	Rice [coarse boiled]	375gms Rs. 18.70/kg	7	1
	Dal [arhar]	50gms Rs. 84.00/kg	4	20
	Mixed Vegetables	75gms Rs. 16.00/kg	1	20
	Potato	75gms Rs. 11.00/kg	0	83
	Mustard Oil [Double Hiran]	10gms Rs.81/kg	0	81
	Spices	10gms Rs90.00/kg	0	90
	Salt [Tata]	10gms Rs.12.70/kg	0	13
	Fish [Rohi]	50gms Rs. 120/kg	6	0
	Egg [hen]	Rs.3.70/ each	3	70
			24	78
		Total Lunch & Dinner	24	73
		Fuel	0	27
			25	0
III	Mixed diet [on Monday, Tuesday, Thursday, Saturday &Sunday]			
	Rice [coarse boiled]	200gms Rs.18.70/kg	3	74

	Atta- [whole wheat]	175gms Rs.20.00/kg	3	50
	Dal [arhar]	50gms Rs. 84.00/kg	4	20
	Mixed Vegetables	150gms Rs. 16.00/kg	2	40
	Potato	150gms Rs. 11.00/kg	1	65
	Mustard Oil [Double Hiran]	10gms Rs.81/kg	0	81
	spices	10gms Rs90.00/kg	0	90
	Salt [Tata]	10gms Rs.12.70/kg	0	13
	Egg [two]	Rs.3.70/ each	7	40
		Total Lunch & Dinner	24	73
		Fuel	0	27
			25	0
	On Wednesday & Friday			
	Rice [coarse boiled]	200gms Rs.18.70/kg	3	74
	Atta- [whole wheat]	170gms Rs.20.00/kg	3	40
	Dal [arhar]	50gms Rs. 84.00/kg	4	20
	Mixed Vegetables	75gms Rs. 16.00/kg	1	20
	Potato	75gms Rs. 11.00/kg	0	83
	Mustard Oil [Double Hiran]	10gms Rs.81/kg	0	81
	spices	10gms Rs90.00/kg	0	90
	Salt [Tata]	10gms Rs.12.70/kg	0	13
	Fish [Rohi]	50gms Rs. 120/kg	6	0
	Egg [one]	Rs.3.70/ each	3	70
		Total Lunch & Dinner	24	91
		Fuel	0	9
			25	0
IV	Milk Biscuit egg diet		Rs.	P.
	Milk Bread egg diet	500ml. Rs.21.00/ltr	10	50
	Biscuit [Tiger/ Parle-G Two	Rs.2.94/pkt, Rs.2.96/pkt	5	88
	Egg [hen] Two	Rs.3.70/each	23	78
		Total Lunch	23	78
		Fuel	1	22
			25	0
V	Milk Bread egg diet		Rs.	P.
	Milk Bread egg diet	500ml. Rs.21.00/ltr	10	50
	Bread [Sajitha]	150gms Rs.5.70/150gm	5	70
	Egg-Two	Rs.3.70/ each	7	40

		Total Lunch	23	60
		Fuel	1	40
			25	0

Diet Menu in DHH-Bolangir:

Table 10: Diet Menu in DHH-Bolangir

Diet Menu	Weight	Rs.	Diet Menu	Weight	Rs.	Diet Menu	Weight	Rs.
Rice	400 Gm	8.00	Milk	200 Ml	4.80	Atta	400 Gm	8.80
Dal	30 Gm	2.55	Loaf	200 Gm	9.00	Dal	50 Gm	3.07
Vegetables	100 Gm	2.00	Sugar	37 Gm	1.43	Firewood	400 Gm	1.24
Salt	17 Gm	0.10	Firewood	250 Gm	0.77	M. Oil	6 Gm	0.48
Spices	2 Gm	0.22	Egg	1 No	4.00	Salt	17 Gm	0.11
M. Oil	7 Gm	0.56	TOTAL		20.00	Meat	28 Gm	6.30
Firewood	500 Gm	1.55				TOTAL		20.00
Meat	25 Gm	5.02						
TOTAL		20.00						

2.7.2 Private Health Institutions:

Private health institutions are having a wide range of diet menu for diabetic and non-diabetic patients. Detail of the diet provision of two studied private health institution is presented in the matrix below.

Diet Menu in AYUSH [Private Hospital]:

Table 11: Diet Chart of AYUSH Hospital, Bhubaneswar

DAYS	LUNCH		DINNER	
	ND	SSD	ND	SSD
Monday	Mix dal Paneer Mater Mix Bhaji Curd/ Salad	Mix dal Paneer Bharta Allo/Brinjal Bharta	Dalma Brinjal Fry Kheer/ Chenna	Dalma Mix Bhaji[Soft] Kheer/Chenna
Tuesday	Dal Veg. Choolle Saag Salad	Dal Veg Jarni Santula	Dal Tadka Mix Bhaji Kheer/Chenna	dal Tadka Mix Bhaji Santula Kheer/ Chenna
Wednesday	Dal fry[Mung] Panner Matar kerala Curd	Dal Fry Panner Bharta Karela	Dalma Bhendi Fry Kheer/Chenna	Dalma Bhendifry Santula Kheer/Chenna

Thursday	Mix dal Mix tarkari Saaga Salad	Mix dal Mix veg/ Santula	Cholle Mix Bhaji Kheer/Cheena	Dal Fry Mix Bhaji Santula Kheer/Chenna
Friday	Veg Dal Ghanto Mix Bhaji Curd	Veg Dal Paneer Bharta Aloo/ Brinjal Bharta	Dal Fry Potal curry Kheer/ Chenna	Dal Fry Portal curry Santula Kheer/ Chenna
Saterday	Moong Dal Paneer Matar Brinjal Bharta Salad	Moong Dal Mix veg Santula	Dalma Mix Bhaji Kheer/Chenna	Dalma Mix Bhaji Santula Kheer/ Chenna
Sunday	Dal Fry Potal curry Karela Curd/ Salad	Dal Fry	Portal curry Bhendi Fry Kheeri/ Chenna	Dal Tadka Bhindi Fry Santula Kheer/ Chenna

2.8 Availability of Dieticians / Nutritionist:

While dieticians play a crucial role in suggesting dietary intake for different category of patients, many public health institutions are not having dietician even at the district headquarters hospital of Bolangir, Cuttack and Kalahandi . But the capital hospital and SCB medical college hospital are having dietician for prescribing diet for different category of patients. In the absence of the dietician, normally doctors prescribe diet for the patient at the DHH level and Assistant Matron suggests diets for the patients in DHH-Cuttack. The private health institutions are having dietician who recommends different diet for different category of patients based on the diagnosis.

2.9 Adequacy / Shortage of Diet:

Because of well devised indent process, normally there is no shortfall or surplus of diet both in public and private health institutions. In public health institutions, diet slip is provided by each ward mentioning the bed number of in-door patients which is submitted to the dietician / doctor / assistant matron in advance. Accordingly, diet provision is made by the concerned in-charge on day basis. If a patient got admitted in the morning hour, concerned authority / in-charge attempt to adjust it with the earlier indent. But this is applicable only for a very few patients. In case, if more number of patients takes admission in the morning hour, his/her food arrangement is made for dinner / supper only. For dry food, concerned in-charge of the ward comes to the dietician / in-charge in the morning [between 7.30 to 8 AM] and receives the food on behalf of the patients. Then it is distributed either through the attendant or received directly by the patient. In District Headquarters Hospital of Bolangir and Kalahandi, similar procedure is followed.

2.10 Diet Preparation / Procurement / Supply Process:

2.10.1 Public Health Institutions:

Dry food like Bread and Egg is supplied by the enrolled private body during evening hour for its distribution in the next day while packet milk [500 ml] is supplied by OMFED every day in the morning hour. After receiving the packet milk, the raw milk is supplied to the patients. No boiled milk is provided to the patient in SCB-Cuttack, DHH-Cuttack and DHH-Kalahandi and capital hospital, Bhubaneswar. Patients boil the milk as per their convenient.

However, in Bolangir DHH, they boil the milk and provide milk in glass after measuring it with a measuring rod. In Bolangir DHH, two persons are appointed as cook to prepare and serve the diet to the patients. However, the cost of fuel is included in the cost chart in DHH-Cuttack and DHH-Kalahandi though fuel is not used for boiling the milk.

Like dry foods, vegetables and raw materials for cooking is supplied by the enlisted agency in the evening hour for the next day cooking. Kitchen facility is available in all the DHHs, medical college hospital and capital hospital whereas such facility is not available in CHCs as there is no food provision. Though, DHH-Cuttack is having kitchen facility, but they are not providing cooked food to the patients. In the rest, cooked food is provided to the patients during lunch and dinner as per the diagnosis and suggestion of the dietician / doctor. In DHH-Bolangir and Kalahandi, cooked food is provided only to the T.B patients. All the kitchens are managed by the hospital administration and not outsourced to any private agency. However, in Bolangir, cooking outsourcing is being piloted in the sub-divisional hospital of Patnagarh through private run canteen.

2.10.2 Private Health Institution:

All the private health institutions have their own kitchen for preparing cooked food. While hospital administration of Apollo is managing the overall diet preparation activities, in AYUSH, it is outsourced to a private agency [GARIMA Catering] for the preparation and supply of diet to the patients as per the prescribed diet menu. But overall monitoring and supervision is done by AYUSH personnel.

2.11 Monitoring the Diet Quality:

In public health institutions, where dietician is there, she/he monitors the diet quantity and quality whereas in other places where dietician is not there, concerned in-charge / doctor / matron monitor the quality and quantity of diet. During cooked food preparation and receiving the dry food, concerned persons remain physically present. In Bolangir, ADMO is responsible to quality check whereas in DHH-Kalahandi, ADMO and Matron supervise the quality of the diet. In capital hospital, senior health administrator also monitor the quality of diet while in DHH-Cuttack, assistant matron along with staff nurse of respective ward supervise the diet quantity and quality.

2.12 Diet Based Hygienic Measures:

All public and private hospitals are taking hygienic measures during preparation and distribution of diet to the indoor patients. But, the hygienic measures taken by private hospital is more systematic and guideline based than the public health institutions. For example the private hospital, specifically Apollo hospital has taken measures like sterilisation of serving plates using boiled water for cleaning, using portable drinking water for preparing food, cleaning of kitchen in regular interval, using different utensils for preparing different food items, using head gear and globes, using insect killer machines [4 nos.] in the kitchen, washing the vegetables before keeping it in the store for kitchen use, using different chopping boards for different vegetables / food items etc. In AYUSH, though, it is not so systematic like that of Apollo; still it is far better than public health institutions. Food preparation system is more general and not so systematic in public health institutions including the SCB medical college and DHHs.

During service the diet, different health institutions follow different service methods such as; in the SCB medical college hospital, food is kept in the food trolley and it is locked before serving to the

[1] In DHH of Kalahandi, recently a nutritionist is appointed but s/he is yet to join the hospital

[2] Earlier, hospital was having the provision of providing serving plate but due to loss of plates, later such provision was withdrawn.

patients. In different wards, the lock of the trolley is opened and served to the patients. Food trolley is also used in Capital Hospital but without any lock. The food trolley is having lid to keep the food items covered. The diet is serviced in the tray / plate of the patient and no separate serving plate are provided to the patients by the health institution . In private health institutions, it is served to the patients with tray / plate. During serving, food is served hot / warm and in case, if patient wishes to take the diet in delay, it is kept in the hot case and served later. But such types of provisions are not there in public health institutions.

2.13 Problems in Present Management System:

All the public health institutions are facing problem in managing dietary services due to less financial provision. While the prescribed cost norm is inadequate to provide quality diet to the indoor patients, the administration of health institutions is compelled to compromise with the quality and quantity of supplied diet. Apart from cost factor, public health institutions are also facing other problems which are highlighted below in the matrix.

Table 12: Problems faced by Public Health Institutions

SN	Public Health Institution	Problems
1	SCB Medical College	1. Kitchen space is not sufficient 2. No support staff for dietician affect the quality monitoring
2	Capital Hospital	1. Less space available for cooking 2. Poor hygienic practices by the cooking & serving staff
3	DHH, Cuttack	1. Required person power is not available 2. No dietician 3. Assistant Matron, who is in-charge of diet is not a member of food committee which restricts her decision making
4	DHH, Bolangir	1. No required cooking staff 2. No dietician / nutritionist 3. No food to the patient in the first day of admission due to indent problem 4. Patients admitted without bed are not provided with diet
5	DHH, Kalahandi	1. No separate diet menu for different category of patients 2. No provision of diet for the first day of admission of patients

Source: Participant Observation and Discussion with Hospital administration

3.1 Revisiting the present cost norm:

As per the information, the dietary cost norm for in-door patient was revised during November 2007. But, still the public health institutions find it difficult to maintain the prescribed dietary norm with required quality and quantity with the existing cost standard. The public health institutions are not in a position to serve quality diet to the patients as the prevailing cost norm of Rs. 20/- per patient per day is not adequate. Different public health institutions have suggested different cost norm for meeting the dietary requirement of the patients which ranges from Rs.40/- to Rs.50/- per patient per day. However, attempt is made to calculate the cost of the diet per day per person based on the ICMR prescribed norm for a normal person engaged in sedentary work. The calculation is made with the existing retail price at the minimum level adjusted with 5% inflation from the present price. According to this calculation, the cost of diet per day per patient is estimated to be Rs. 46.30 for male and Rs.31.54 for female of the same working category.

Table 13: Balanced Diet for Adult Male

SN	Balanced Diet	Vegetarian Diet				Non-Vegetarian Diet			
		Weight [in Gram]	Amount Per Kg/Lt [in Rs]	Cost	Cost + 5%	Weight [Gram]	Amount Per Kg/Lt [in Rs]	Cost	Cost + 5%
A	Balance Diet for Adult Man								
A1	Cereal (Rice)	0.475	22	10.45	10.97	0.475	22	10.45	10.97
A2	Cereal (Wheat)	0.475	20	9.50	9.98	0.475	20	9.50	9.98
A3	Pulses (Moong)	0.080	75	6.00	6.30	0.065	75	4.88	5.12
A4	Pulses (Arhar)	0.080	65	5.20	5.46	0.065	65	4.23	4.44
A5	Green Leaf vegetables	0.125	25	3.13	3.28	0.125	25	3.13	3.28
A6	Other Vegetables	0.075	25	1.88	1.97	0.075	25	1.88	1.97
A7	Roots and Tubers	0.100	17	1.70	1.79	0.100	17	1.70	1.79
A8	Fruits	0.030	60	1.80	1.89	0.030	60	1.80	1.89
A9	Milk	0.200	22	4.40	4.62	0.100	22	2.20	2.31
A10	Fats n Oils	0.040	70	2.80	2.94	0.040	70	2.80	2.94
A11	Meat /Fish	0	0	0.00	0.00	0.030	150	4.50	4.73
A12	Eggs	0	0	0.00	0.00	0.030	3.75	3.75	3.94
A13	Sugars and Jaggery	0.040	35	1.40	1.47	0.040	35	1.40	1.47
A14	Fuel [3 times]		10.00	10.00	10.50			10.00	10.50
	TOTAL								
	Cereals (Rice)	1.165	361.00	43.55	45.73	1.11	504.75	48.48	50.90
	Cereals (Wheat)	1.165	349.00	41.80	43.89	1.11	492.75	46.88	49.22
	Average [Rice & Wheat]			42.68	44.81			47.68	50.06

	Average [Veg & N-Veg Rice]							46.01	48.31
	Average [Veg & N-Veg Wheat]							44.34	46.55
	Average [Veg & N-Veg Rice & wheat]							45.18	47.43
	Average								46.30

Table 14: Balanced Diet for Adult Female and its Costing

SN	Balanced Diet	Vegetarian Diet				Non-Vegetarian Diet			
		Weight [in Gram]	Amount Per Kg/Lt [in Rs]	Cost	Cost + 5%	Weight [Gram]	Amount Per Kg/Lt [in Rs]	Cost	Cost + 5%
B	Balance Diet for Adult Woman								
B1	Cereals (Rice)	0.350	22	7.70	8.09	0.350	22	7.70	8.09
B2	Cereals (Wheat)	0.350	20	7.00	7.35	0.350	20	7.00	7.35
B3	Pulses (Moong)	0.070	75	5.25	5.51	0.055	75	4.13	4.33
B4	Pulses (Arhar)	0.070	65	4.55	4.78	0.055	65	3.58	3.75
B5	Green Leaf vegetables	0.125	25	3.13	3.28	0.125	25	3.13	3.28
B6	Other Vegetables	0.075	25	1.88	1.97	0.075	25	1.88	1.97
B7	Roots and Tubers	0.075	17	1.28	1.34	0.075	17	1.28	1.34
B8	Fruits	0.030	60	1.80	1.89	0.030	60	1.80	1.89
B9	Milk	0.200	22	4.40	4.62	0.100	22	2.20	2.31
B10	Fats n Oils	0.035	70	2.45	2.57	0.040	70	2.80	2.94
B11	Meat and Fish	0	0	0.00	0.00	0.030	150	4.50	4.73
B12	Eggs	0	0	0.00	0.00	0.030	3.5	3.50	3.68
B13	Sugars and Jaggery	0.030	35	1.05	1.10	0.030	35	1.05	1.10
	TOTAL								
	Cereals (Rice)	0.990	351.00	28.93	30.37	0.940	504.50	33.95	35.65
	Cereals (Wheat)	0.990	339.00	27.53	28.90	0.940	492.50	32.70	34.34
	Average			**28.23**	**29.64**			**33.33**	**34.99**
	Average [Veg & N-Veg Rice]							31.44	33.01
	Average [Veg & N-Veg Wheat]							30.11	31.62
	Average [Veg & N-Veg Rice & wheat]							30.78	32.31
	Average								**31.54**

As dietary requirement for the lactating mothers is comparatively high, accordingly the cost norm is suggested to be fixed at the higher level. As per the diet menu prescribed by ICMR for lactating mothers, the estimated cost with conservative pricing is Rs.57.00. Details of the pricing of diet for lactating mothers, as per ICMR recommendation are reflected in the table below.

Table 15: Dietary Requirement of Lactating Mother

SN	Food Group	No. of Exchanges	Protein [Gms]	Energy [kcal]
1	Milk	6	30.0	600
2	Legumes & Pulses	3	18.0	300
3	Flesh Food	1	10.0	100
4	Vegetables	4		100
5	Fruits	4		200
6	Cereals	11	22.0	1100
7	Fats	5		500
8	Sugar	40 Gm.		160
	TOTAL		80.0	3060

Note: Requirements: Energy-2200+550=2750 kcal; Protein-45+25=70 Gms.
Source: ICMR Publication on Dietary Norms

Table 16: Diet Menu for Lactation Mothers & Pricing

SN	Timing	Items	Quantity	Rs.
A	Morning	Tea	1 Cup	2.00
B	Breakfast	Rawa Porridge	1 Bowl	3.00
		Boiled Egg	1 No.	3.00
		Banana / Orange	1 No.	1.50
C	Mid-Morning	Methi Laddoo	1 No.	1.00
D	Lunch	Chapati	2 No.	3.00
		Rajma-Urad Usal	1 Cup	3.50
		Methi Leaves Curry	1 Cup	3.50
		Dal	1/2 Cup	2.50
		Rice	1 Cup	1.50
		Curds	1 Cup	2.50
E	Afternoon	Tea	1 Cup	2.00

		Batata Pohe	1 Cup	2.50
		Chiku [Fruit]	1 No.	1.00
F	Late Evening	Fruit Milk Shake	1 Glass	3.50
G	Dinner	Chapatti	2 Nos.	3.00
		Pumpkin-Gavar Curry	1 Cup	2.50
		Mung usal	1 Cup	2.00
		Dal	1/2 Cup	1.50
		Rice	1 Cup	1.50
		Egg	1 No.	3.00
		Buttermilk	1 Glass	2.50
H	Bed Time	Hot Milk	1 Glass	5.00
	Total			57.00
Source of Data: ICMR Publication on Dietary Norms				

3.2 Dietary Norm / Menu by Disease Type:

As the dietary requirement of different patients differs by disease category, it is essential that dietary chart should be prepared separately for separate category of patients based on the disease they are suffering from.

3.3 Gender based Dietary Menu:

Discussion with different dieticians revealed that normally dietary requirement of pregnant women and lactating mother should be more than the normal diet consumed by them in general condition. To meet the additional 500-550 Kcal of the pregnant women, it is essential that separate dietary provision should be made for them, if they are admitted in the hospitals. Similarly, exclusive provision should be made for the women staying in the hospital after delivery.

3.4 Outsourcing Diet Preparation and Distribution:

Preparation and distribution of diet can be outsourced to the private agencies at the DHH, sub-divisional hospitals and public hospitals where there is well developed market and catering services are available. But it may not be a feasible option at the CHC and PHC level as most of the CHCs and PHCs are located in less urbanised areas. In such cases, canteen system could be promoted within the campus in the collaboration of private agency for in-door patients. As number of in-door patient turnover is quite less in CHC / PHC, for profitability point of view, the canteen may be used for out-door patients, hospital staff and other health personnel of the locality which will allure the private agency to take up the diet preparation and its distribution. Another option could be use of “Diet Coupon” for accessing food from open market but apprehension of availability of hygienic food will remain in this system.

3.5 Dietician at the DHH and sub-divisional hospital level:

Initially, it should be made mandatory to have one dietician or nutritionist in each DHH and gradually at the sub-divisional headquarters level ensure and

advice quality diet / nutrition to the patients.

3.6 Pricing the Diet and Cost Sharing Norm:

Though, it may not be accepted at the initial stage, but gradually, on pilot basis, it needs to be incorporated in the dietary services and management procedures at public health institution on cost sharing basis i.e. major part of the cost is to be borne by the public health institutions [say 75%] and some part [say 25%] of the cost by the patient. For example, if the cost of the meal is Rs.75/-, Rs.56.25 is to be borne by the hospital and Rs.18.75 by the patient. As per the cost sharing norm, patient's preference, within the prescribed dietary menu could be taken care of. But this provision should not be applicable for the families enrolled in the BPL list. The persons with authentic BPL card may show their entitlement during admission and get relaxation in this cost sharing norm. For such patients, normal cost provision will be applicable. So, overall there should be two cost norms i.e. standard cost norm applicable for all the in-door patients and preferential cost norm to accommodate the patient's diet preference within the prescribed diet menu on payment basis.

3.7 Diet Vigilance and Regulatory Committee:

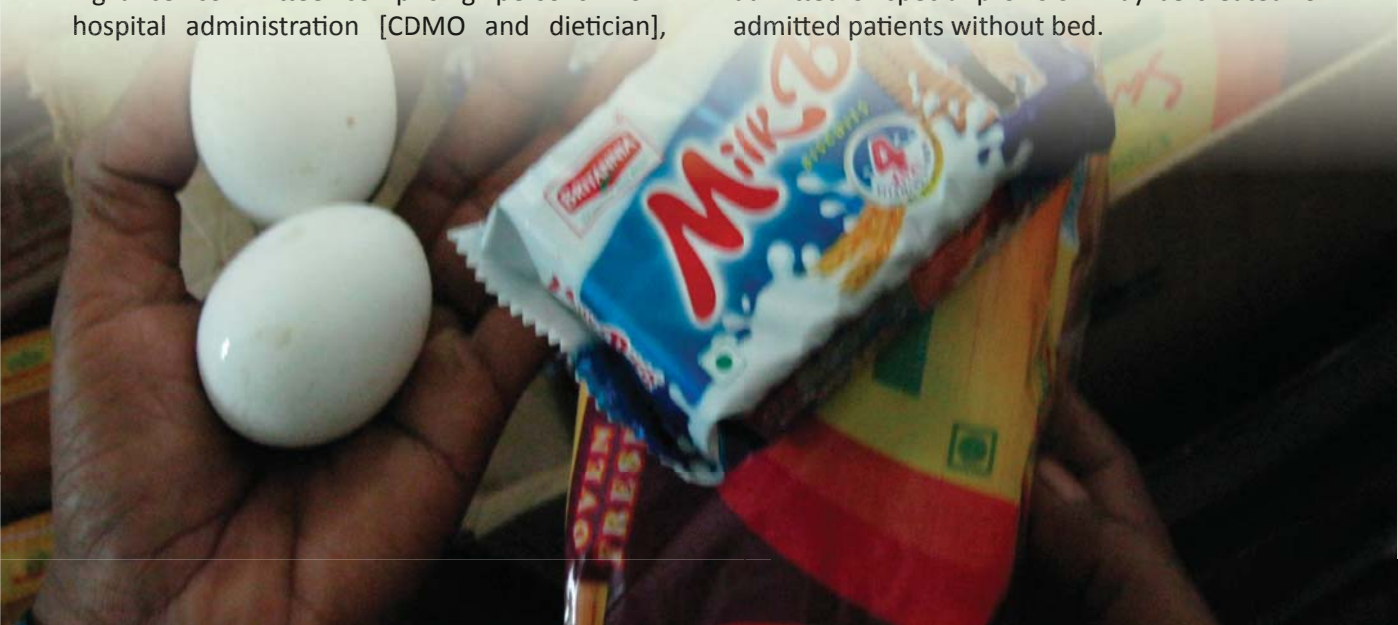
Every public health institution should have a diet vigilance committee comprising persons from hospital administration [CDMO and dietician], persons from civil society and other respectable persons and opinion leaders. Members from local PRI structure [Zilla Parishad, Panchayat Samiti etc.] may be incorporated in the committee. The committee members may take surprise visits and check the quality of the diet from time to time. Every quarter, the committee should meet and discuss on the quality of the food and ensure the quality. The meeting expenses of the Vigilance & Regulatory Committee could be met from the administrative expenses of the concerned health institution or separate provision may be made in this regard.

3.8 Improving Kitchen Facility:

The present facilities at the kitchens of the health institutions need to be improved along with hygienic practices. Each kitchen should have separate storage and cooking facility along with the provision of food preservation.

3.9 Diet Provision for In-Door patients without Bed:

As observed and revealed from discussions, diet provision in the public health institutions is only meant for patients allotted with bed. But patients admitted but not allotted with bed, due to bed shortage is not having any dietary provision. So, in such cases, instead of bed wise allotment, there can be allotment by number of in-door patients admitted or special provision may be created for admitted patients without bed.



Annexure 17: Overall Findings										
SN	Indicators	SCB, MCH	CAPITAL- H	DHH, CUTTACK	AYUSH	APOLLO	DHH, BLG	CHC, Tureikela	DHH, KLD	CHC, Jayapatna
SURROUNDING OF THE HEALTH INSTITUTION:										
1	Accessibility to Health Institution	Easy accessibility	Easy accessibility	Easy accessibility	Easy to access	Easy to access	Easy accessibility by bus	Poor accessibility	Easy to accessibility by bus only	Only access by bus or own vehicle
2	Nearby market area	Well market place	Well market place	Well market place	Well market place	Well market place	Well developed market yard	Poor facility, only in day time	Well developed market yard	Limited market yard
3	Catchment area of health institution (people come from)	People come from different location of Orissa and Bengal	People come from different location of Orissa	People come from different location of Orissa	People come from different parts of Orissa and nearby State	People come from different parts of Orissa and nearby State	100Km. (6569 sq. km.)	10 km.	85 km.	20-25 km.
4	Stage of patient admitted	Both initial and aggravated situation	both initial and aggravated	At initial stage more and in aggravated stage rare	both initial and aggravated	both initial and aggravated	Normally in aggravated stage of the disease. But those are treated in other hospital they admitted in acute stage. This figure is very less.	In preliminary stage. Patient admitted in day time only	Normally in preliminary stage, those are come from nearby. But some are admitted in aggravated stage, those are come from far distance.	In initial stage.
DIETARY NORM AND PROVISION IN HEALTH INSTITUTION										
5	Dietary norm – Uniform Vs Differential	Differential norm	Differential norm	Only Dry food i.e. Milk and Bread, No Lunch and Dinner facility	Different norms for different patients	Different norms for different patients	Normally follow two types of dietary norm.	No provision of diet	Differential norm	No provision of diet

5.1	A)Diabetics (normal)	without sugar and without potato	without sugar and without potato		carbohydrates, without sweet	less oil, without root vegetable				
5.2	B) Cardiothoracic	salt free diet								
5.3	C)TB	High protein diet					Parboil rice, dal & curry		Parboil rice, dal & curry	
5.4	D)All other categories of disease	common diet (rice/chapatti, dal, bhaji/saga)	common diet (rice/chapatti, dal, bhaji)		low fat, low cholesterol,		Mostly milk, bread & egg as per patient's choice		Mostly milk, bread & egg as per patient's choice	
5.5	E) Diarrhoea		Barley, Rooty							
5.6	F)Kidney with High BP, Nephritis		Without salt rice, dal, fish							
5.7	G) Diabetics (Renal)				Low potassium diet					
	H) Renal, RTA				Liquid diet low potassium	less salt, potassium free				
	I) Hypertension cardiac					less salt				
	J) Surgery					semi solid, or liquid				
6	Present cost norm of diet for indoor patient (per patient)	Rs. 20, for TB- Rs. 25	Rs. 20, for TB- Rs. 25	Rs. 20	Charge cost as per the bed, not patient type. For general bed Rs. 75, 3-beded Rs. 100, Single bed Rs. 150, double deluxe Rs. 200-300 per day	Did not disclose	Rs. 20/- per patient per day, TB-Rs.25 per patient per day	NA	Rs. 20/- per patient per day, TB-Rs.25/- per patient per day	NA

7	Cost norm of diet for different patient category	Yes	Yes	Didn't have any idea	No, different bed category	No, different bed category	Yes; there is difference	NA	It is different by patient category	NA
8	Cost norm for different patient category	Rs. 20, for TB- Rs. 25	Rs. 20, for TB- Rs. 25				Rs. 20, for TB- Rs. 25			
9	Managing with less cost	Compel to reduce the quantity of ingredient	Compel to reduce the quantity of ingredient	As they are providing only dry food now no problem for them	As they are managing privately no need of increasing, they increase as and when required	As they are managing privately no need of increasing, they increased as and when required	Providing only dry food (milk, bread, egg), but for TB patient providing launch and dinner like Rice & dalma or Rice, dal & curry, what is possible within same price	NA	As per the market price it is not possible to provide three times in a day. So within Rs. 20/- providing dry food for one time only.	NA
10	Expected cost norm per patient per day	Rs. 50	Rs. 40-45	For all disease Rs. 35 if cooking food will provided			Rs. 40 is required to provide launch and dinner	Rs. 40/-	Rs. 50/-	Rs. 30/-
10.1	Expected cost norm for different diseases [Proposed]	Yes, Rs. 50, for TB- Rs. 60	Rs. 40-45	Rs. 35 , but for TB Rs. 40	No, different bed category	No, different bed category	To provide 2400 Kcal per normal patient, Rs. 40 is required	NA	Different for TB patient- Rs. 25/- otherwise it can be same for all patient Rs. 25/-	NA
11	Fixing quantum of diet per patient by age		They are fixed as per the diagnosis	No idea						

11.1	<5	1125 kcal			600-800 kcal	800 kcal	Need less Kcal, so it should be less quantum of diet	Need less kcal, so only milk and biscuit is sufficient.	600 to 800 kcal per day	Only milk and biscuits
11.2	6 yrs-14 yrs	1800 kcal			1800-2000 kcal	1200-1600 kcal	Needs <1400 Kcal, It should be separate	Two to three times of milk & biscuits	Separate diet within 1400 to 1600 Kcal	Bread and milk of 200mg per day three times
11.3	15 yrs-40yrs	2400 kcal			1800-2000 kcal	1800-2200 kcal	Except above category, all equal	Normal diet with 2400 to 2600 Kcal	Normal diet with 2400 to 2600 Kcal	Normal diet with 2400 to 2600 Kcal
11.4	41 and above	2400 kcal			1400-1500 kcal	1800-2200 kcal			Normal diet with 2400 to 2600 Kcal	
12	Specific diet menu by category of patient			For monazites disease providing only liquid food Milk and all other patient Milk and bread			For TB patient rice, dal & veg. curry and all other patients received Bread, milk & egg every day	NA	For TB patient rice, dal & veg. curry and all other patients received Bread, milk & egg every day	NA
13	Suggested norm for quantum of diet by gender	Male-2400 kcal, Female-1800 Kcal, as the activity of men is more than women, so men required more kcal. In the case of women in pregnant, lactate stage they require more 550 kcal	Presently no norm for gender wise, but it is required, as the lactating women required more energy		Gender specific diet is required, as in the case of gynaecology, lactate mother even as per the diagnosis of doctor	Gender specific diet is required, as in the case of gynaecology, lactate mother even as per the diagnosis of doctor	No need, because both male & female need same kcal, but variation in case of lactating mother	NA	No need, because both male & female need same kcal, variation in case of lactating mother	NA

14	Type of food normally supplied during different times			For monazites disease providing only liquid food Milk and all other patient Milk and bread						
14.1	a)Breakfast (Dry food)	Milk, boiled egg/ biscuits, bread	Milk, boiled egg/biscuits, bread		Upama, iddli, chakuli, sambar, chatani, guguni		No such type of break fast	NA	No	NA
14.2	b)Lunch	Rice, dal, vegetable curry	Rice, dal, vegetable curry/fish curry				Milk & bread at 10.30 am	NA	Milk & bread with egg	NA
14.3	c)Supper						No such type of diet is providing	NA	No	NA
14.4	d) Dinner	Chapatti, dal, vegetable curry	Rice/ Chapatti, dal, vegetable curry				One Egg	NA	No	NA
15	Health Institution having dietician/ Nutritionist	Yes	Yes	No	Yes	Yes	No	No	Recently a Nutritionist is posted, but not yet join	No
16	Prescribing diet in the absence dietician / nutritionist			Asst. Matron is looking after this			Doctor prescribes diet for patient.	NA	Doctor prescribe diet as per the patient's desire	NA

17	Basis of prescribing different diet menu	as per the diagnosis of doctor	as per the diagnosis of doctor	as per the diagnosis of doctor	Daily basis as per the patient desire and physician's advice	as per diagnosis of physician	As per the patient's willingness and doctor's advice, the diet fixed from day before	NA	Normally they are providing dry food. But those are willing to eat cooked food, accordingly patients have to inform them a day before	NA
18	Total budget allocation of diet for patient (Per month/ Year)	Rs. 9718125, per year			No information available	No information available	The budget prepared once in a year with the approval of the standing committee, according to the previous year indoor patient admission.	Every year a fixed budget allocated, but returned back, due the un-utilized of funds.	As per the bed strength, the budget fixed.	Not prepared a budget, because of no system of diet.
19	Problem faced in receiving budget in time	No problem	No problem	No problem	No problem		No problem	NA	No problem. It is released in 3 to 4 instalments	NA
20	Managing with surplus food / Diet	Generally no surplus	Generally no surplus	Generally no surplus	Generally food is not surplus	Generally food is not surplus	As per the indent, the diet is supplied every day.	NA	As per the indent, the diet is supplied every day.	NA
21	Managing with food deficiency	No deficiency	No deficiency	No deficiency	No deficiency	No deficiency	NA	NA	NA	NA

DIET MANAGEMENT PRACTICES										
22	Separate kitchen facility in the Health Institution	Yes	Yes	Yes, but presently they are not providing any cooking food	Yes	Yes, well developed, hygienic	Yes, there is a separate kitchen within the hospital campus	No specific kitchen	Yes, hospital have a separate kitchen with well furnished utensils and cooking accessories	
23	Management, preparation and supply of diet	Cooking outsources, overall management by the institution	Health Institution	Health Institution	Health Institution managed properly and efficiently		Two persons are appointed as cook. They prepared the diet and also serve to patients	NA	The cook prepares the food item for TB Patient and serves the diet. But the dry food supply by the contractor everyday and served by those persons both at morning and afternoon.	
24	Monitoring the diet preparation, its quality & distribution	Dietician and Doctor	Dietician	Asst. Matron is looking after this	Chief Dietician and Asst Dietician		Frequently, medical officer monitor the supply diet only. But the matron always monitors the food preparation and cleanliness.	NA	Time to time ADMO, Medical and Matron monitor the diet preparation and distribution.	

25	Preparation of food in health institution or outside	In health institution	In health institution	Presently no cooking food is prepared at there	All most all the foods are prepared at hospital, except milk, egg, bread and biscuits	All most all the foods are prepared at hospital, except milk, bread and biscuits. No non-vegetable items are provided	Yes, only milk and egg boiled in hospital kitchen. Besides that meal also prepared in hospital, those are preferred	NA	Only rice, dal and curry prepared in hospital. Besides that egg also boiled in hospital kitchen.	
26	If, supplied by any agency, items normally received from out side	Milk, egg, bread, biscuit	Milk, egg, bread, biscuit	Milk and bread	Milk, vegetable, fruit, bread	Milk, vegetable, fruit, bread. Apollo is going to start their own bakery very soon within Hospital campus	All the dry food supplied by agency. Side by side the cooking items also supplied by the agency. The agency has signed an agreement with standing committee.	NA	All the dry food supplied by agency. Side by side the cooking items also supplied by the agency. The agency has signed an agreement with standing committee.	
27	Regularity in supply	Regularly	Regularly	Regularly	Regularly	Regularly	All the items supply everyday besides grocery items.	NA	All the items supply everyday besides grocery items.	
28	Person responsible for checking the quality of supplied food items	Dietician	Dietician and Senior Health Admini-strator	Asst. Matron and Staff nurse of respective ward	Chief Dietician and Doctor		ADMO, Medical	NA	ADMO, Medical and Matron	

29	Diet based hygienic measures being taken			They are only providing packaged milk and bread with proper checking	The water for cooking is treated as per the Govt. norm, even as good as drinking water. Designated uniform is prescribed for the staffs in kitchen. Every day their checking the cleanliness of kitchen staffs, and in every six months their stool, blood is checking	The water for cooking is treated as per the Govt. norm, even as good as drinking water. Designated uniform is prescribed for the staffs in kitchen. Every day their checking the cleanliness of kitchen staffs, and in every six months their stool, blood is checking				

29.1	a) Raw material procurement	Advice to purchase fresh vegetable/non-vegetable, it is checked at the receiving stage by dietician	Advice to purchase fresh vegetable/ non-vegetable, it is checked at the receiving stage by dietician		avoid dust on potato, non-perishable vegetables are fresh purchased on daily basis	Avoid dust on potato, non-perishable vegetables are fresh purchased, checked at the receiving stage. Cleaned all the vegetable at the time of receiving and then keep in store room, purchased on daily basis the perishable item	ADMO, Medical has physically observe the bread and milk, whether it is in good condition or not. Otherwise all other items are not measure, due to quotation approved in committee	NA	All the supplied items physically observed by medical officer or Matron	
29.2	b) Raw material preservation	One fridge is provided, normally no vegetable/non-vegetable is surplus	as there is no surplus vegetable/ non -vegetable, no preservation is required		If the milk, curd, paneer remain surplus, keep in the refrigerator, separate store room	They have a Blue Star company cold storage for perishable item	No preservation system	NA	No preservation system is available	

29.3	c) Processing	except potato all the vegetables are first cleaning and then pilling	except potato all the vegetables are first cleaning and then pilling		First clean all the vegetables separately, then pilling separately and again wash the vegetables separately	First clean all the vegetables separately, then pilling separately and again wash the vegetables separately, separate chopping board and cutting item for separate vegetables	No	NA	Due to pressure of Collector, the matron monitors the preparation of diet and environment of hospital.	
29.4	d) Preparation	Only the staffs involved in cooking are cleaned, and the kitchen is cleaned	Only the staffs involved in cooking are cleaned, and the kitchen is cleaned		Spices prepared from their own, one by one item prepared and keep covered	The kitchen is cleaning at 24 hrs, everybody in the kitchen wear head gear and gloves, each item prepared separately in the proper utensils	No	NA	Matron	NA

29.5	e) Serving food	After preparation they keep the food in the food trolley and locked., then the supervisor served at the different ward	After preparation they keep the food in the food trolley, then the supervisor served at the different ward		During serving food the staffs used gloves in both hand, and the items are properly covered	They always served the food in hot condition, even if patents want to take in delay; they keep the hot case in the hot container which is 24 hr auto heating system. Properly cleaned all the plates and hot case and the staffs wear gloves and head gear	No	NA	Matron	NA
29.6	f) Cleaning of served plates	scrub with wheel detergent powder	only utensils are cleaned with detergent, and hospital is not providing any plate		All the utensils and plates are cleaned with plane water, then with detergent and lastly with hot water	They have separate washing area for utensils and plates. They cleaned all the items with Johnson detergent named SUMA-DET. They apply three type of cleaning.				

29.7	Problem faced in present management system	Kitchen space is not sufficient, support staff to dietician is required	Kitchen range, proper area for vegetable cutting, cleanliness of staffs and their health check up from time to time	No adequate manpower and dietician, even the Asst Matron in charge of Diet is not a member of food committee	Basically they have no problem	Basically they have no problem	No adequate cooking staffs In sufficient cost of diet any provision of dietician or Nutritionist. A patient can't get diet in first day of admit due to lack of prepared of indent. The diet is restricted to particular patient, except those are admitted without bed.	Due to less admission of indoor patient, not having cooking staffs, lack of interest of medical health provider, and the diet can't provide.	The present cost norm of diet is not sufficient. There is no system of separate diet menu for different patient, as they preferred No provision of diet; those are admitted in same day.	No provision of diet due to un-available of supply agency The bidders are un-willing to supply diet items, due to limited fund. Patients are not interested to say at night due to cost effective.

BACKGROUND INFORMATION OF INDOOR PATIENT										
30	Type of disease in-door patients are suffering from	CVA, ADENOMYOSIS, HYPATID CYST, RHD MITRAL STENOSIS, VASCULAR MALFORMATION, CELLULITIES, CRAUSH INJURY, PHYLLOIDS TUMER, VENTRAL HARNIA, GSD, BREAST CANCER, SPIRAL INJURY, MULTI INJURY, LEFT FOOT FACTURE, CYSTOCELE AND RECTOCELE, U V DECENT 3RD	Hydroceal operation, waist fractured, urine infection, Motia bindu, PTB, Typhoid, Diarrhoea, Vomiting with dehydration and severe anaemic, CVA (Cerebral Vascular Accident)	Hydroceal, Hernia, Delivery, peril unknown organic, Hypo skin, CODP Azma, Azma	CVA, Para Umbilical Hernia, Entry fever, road accident, diabetic fever cough, accidental injury, burn with diabetics, Hypo problem, uterine leo myoma		Hydroceal, Diarrhoea, Fever, Leg injury, Anaemic etc.	Fever	Delivery, Malaria, Diarrhoea, Paralysis, Hydroceal	Fever & vomiting, LBP, Delivery
DIETARY SERVICE DETAIL										
31	Status of consumption of diet by patient	Mostly patients, sometimes attendance/s	Mostly patients are consuming	Mostly patients are consuming	All patients are eating		Mostly patients consume except few cases	NA	Near about 90% patient consume diet, which are provide as a dry food Rest people are un-willing to take due to delay of serve or vomiting etc. But it is found that the TB patients are regularly taking cooking food.	NA

32	Reasons for reluctant to consume the food by patient	No such case found	Poor quality of diet		NA		Un-hygienic atmosphere, low quality food. All the patient are not preferred to eat the egg	NA	Un hygienic atmosphere, basically medicinal smell	NA
33	Diet provided by [who provide diet to patient]	Directly by hospital staff	Directly by hospital staff	Directly by hospital staff	Directly by hospital staff		Directly by hospital	NA	Directly by hospital	NA
34	Diet counselling to patients	Most of the cases doctors do not counsel, in few cases advice	Most cases doctor advice	Advice for bread, milk, rice any type of soft diet	Doctors advice as per the patients need of diet, and then their diet prepared		Normally doctor counsel to take dry or vegetarian food without spices and with less edible oil during his visit to patient	Only advice to take less quantum of diet like chapatti or bread with milk	It is not always, but some time doctor counsel to patient to take light food, as per the patient's willingness.	Counsel to take dry or vegetable food as per the patients' desire.
35	How many times diet received by patient in hospital in a day	Only one time in the case of DRY FOOD, two times in the case of launch and dinner	Only one time in the case of DRY FOOD, two times in the case of launch and dinner	Only one time milk diet with bread	More than four times		Only two times only	No provision	Only one time	No provision
36	Timing of diet supply to patient									
36.1	a)Breakfast (Dry Food one time)	8.30 am to 9.00am	8.30 am to 9.00am	8.30 am to 9.00am	9.00 am		No provision	No provision	No provision	No provision
36.2	b)Lunch	12.00 pm to 12.30pm	12.00 pm to 12.30pm		12 noon		10.30 to 11.00 a.m.	No provision	At 11.00 a.m.	No provision

36.3	c) Supper	No facility	No facility		4.00 pm		5.00 to 5.30 p.m.	No provision	No provision	No provision
36.4	d) Dinner	6.00pm to 6.30pm	6.00pm to 6.30pm		8.00 pm		No provision	No provision	At 5.00 p. m. for TB patient only	No provision
37	Type of diet normally supplied to patient									
37.1	a)Breakfast (Dry Food)	Milk, boiled egg/ biscuits, bread	Milk, boiled egg/biscuits, bread				NA	NA	NA	NA
37.2	b)Lunch	Rice, dal, saga, curry	Rice, dal, bhaja, curry				One glass of boil OMFED milk, one pocket of bread or those are willing, they take rice meal with one or two piece of meat, but it is not regular basis.	NA	One pocket of OMFED milk with one pocket of bread and two nos. of boiled egg.	NA
37.3	c) Supper				custard, milk tea		One boiled egg only, those are willing and admitted in bed.	NA	NA	NA
37.4	d) Dinner	Rice/Roti, curry	Rice/Roti, curry				No provision of dinner	NA	Rice meal to TB patient only	NA
38	Any other diet received by patient	No	No				No	No	No	No

39	Diet serving procedures	In their own plate for lunch and dinner, but dry food in packet	They carry a food trolley to different ward, from there patents/ attendant bring the diet in their own plate	Some patients are getting lose bread	In common feeding plate, direct package food		NA	NA	NA	NA
40	Satisfaction level in quantity of food provide to patient	Most of the patients are satisfied with dry food, but in cooking food average are not satisfied	Most of the patients are satisfied with dry food, but in cooking food average are not satisfied	Average	Sufficient		The quantity of milk and bread is adequate for a patient.	NA	The quantity of milk and bread are adequate for a patient.	NA
41	Satisfaction level in quality of food provided by hospital	Only they are satisfied with dry food but not with cooking food	Only they are satisfied with dry food but not with cooking food	good	Good		The quality of diet is not so poor, the patient like to eat.	NA	The quality of diet is good. But sometimes they do not prefer to eat due to illness.	NA
42	Maintenance of diet timing	Most cases they are providing in proper time	Most cases they are providing in proper time	Most cases they are providing in proper time	In proper time		The morning time is not so suitable, it is too let.	NA	The timing is not suitable for breakfast or lunch.	NA
43	Price charges to patient against of diet supply	No	No	No	Yes	Yes	No	NA	No	NA
44	Price list of different diet, if provided separately	N/A	N/A	N/A	Information not available	Information not available	NA	NA	NA	NA

45	Cleanliness of served plate by hospital	No plate is provide by hospital	No plate is provide by hospital	No plate is provide by hospital	Properly cleaned		Plates are not provide to patients, they arranged the by their own.	NA	NA	NA
46	Measure reasons for not providing diet [if applicable]	NA	NA	NA	NA	NA	NA	It is more interior health institution, which is not so access. Lack of health infrastru-cture and low quality treatment facilities, patients are not preferred to come. Due to less admission of patient no one interested to supply the diet or raw materials for preparation of diet.	NA	In 2002 the Ophthalmic assistance transferred, who was managing the diet service. After that no one initiated. Due to less no. of admitted patient, no bidder is interested to provide the diet. Due to non co-operation of district level officials the budget has not prepared or released. The indoor patients are also not interested to stay in night due to lack of facilities.

47	Suggestions to improve dietary services	Required variety of vegetable which will add kcal, quantity and quality of diet should more, diet should be provide as per nutrition norm	Required nutritional food three times in a day, good quality food, green coconut, and fruits for infants	Required sufficient food, launch, dinner and breakfast is required. Doctors should counsel properly.			Increased the diet cost norm, appoint more cooking staff, diet should be prepared as per the choice of patient	Increased the cost of norm, appoint a cook, construction of kitchen and supply the cooking accessories	Increased the diet cost norm, appoint more cooking staff, diet should be prepared as per the choice of patient	Increased the cost of norm, appoint a cook, construction of kitchen and supply the cooking accessories
48	Suggestions by dieticians to improve the dietary services	Cost should be increased, more space for kitchen is required, more purified drinking water facility should be provided, more support staff to dietician is required	Cooking range system, health check up of kitchen staffs, uniform, reusable plate should provided, cost should increase to Rs.40-45/-	Price of diet should be increased, additional manpower and a dietician is required						
49	Suggestion by Medical officer/ DPM / Administrator to improve dietary services	Cost should be increased, more space for kitchen is required, more purified drinking water facility should be provided, more support staff to dietician is required	Cooking system, health check up of kitchen staffs, uniform, reusable plate should provided, cost should increase to Rs.40-45/-	Price of diet should be increased, additional manpower and a dietician is required						

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