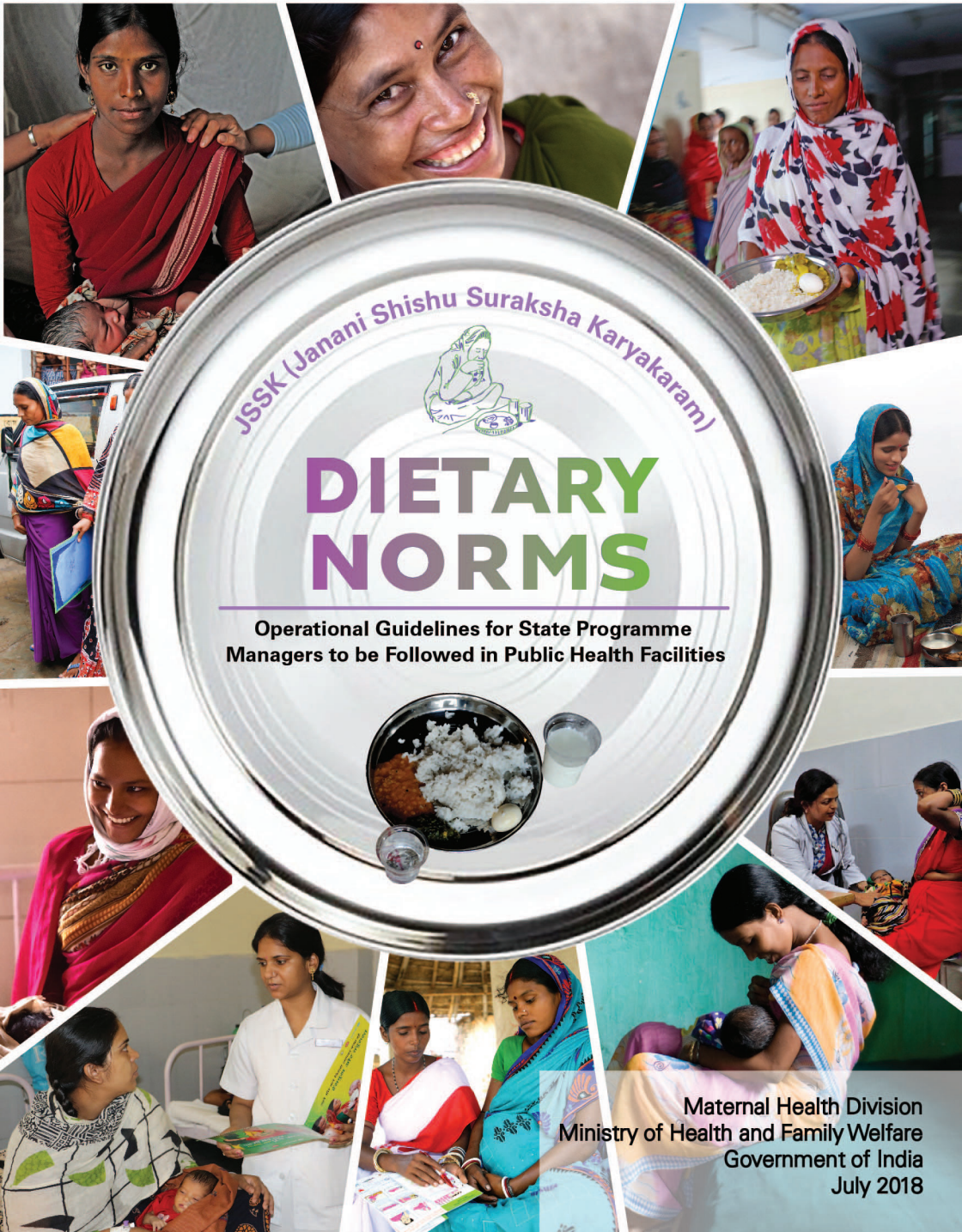
NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

सत्यमेव जयते

POSHAN Abhiyaan
PM's Overarching Scheme for Holistic Nourishment
सही पोषण – देश रोशन



JSSK (Janani Shishu Suraksha Karyakaram)

DIETARY NORMS

Operational Guidelines for State Programme Managers to be Followed in Public Health Facilities

Maternal Health Division
Ministry of Health and Family Welfare
Government of India
July 2018

Janani Shishu Suraksha Karyakaram (JSSK)

Dietary Norms

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PREFACE

Reduction of maternal and infant mortality is one of the key goals of the National Health Mission (NHM). During the last four years utilization of maternal and child health services provided at the public facilities have increased manifold. Launch of Janani Shishu Suraksha Karyakarm (JSSK) in 2011 is a significant move in this direction. JSSK aims to achieve 100% institutional delivery and elimination of out of pocket expenditure for both pregnant women and sick neonates. Entitlements for pregnant women include free and cashless delivery, free caesarian section, free drugs and consumables, free diagnostics, free diet during stay, free provision of blood, exemption from user charges, free transport.

As we are aware, the postnatal period is very critical for the survival of the neonate and the mother since majority of complications occur in this period co-existing with increased nutritional demands. The diet of the mother is of prime importance, especially after delivery. Free diet is to be given for three days in case of normal delivery and seven days in case of caesarean section under JSSK. However, it has been observed that the emphasis on meeting nutrition needs as per the Recommended Dietary Allowances is lacking. Further, meals provided are neither balanced nor are they uniform. In fact, diet varies significantly across facilities. Considering these, guidelines for establishing norms for provision of diet was the need of the hour.

These guidelines have been prepared after detailed deliberation through a series of meetings with different experts, convened by the Maternal Health Division, Ministry of Health and Family Welfare. The guidelines cover dietary norms for normal delivery, caesarean section and special conditions like pregnant women with hypertension and anemia. In addition, these also include counselling messages with emphasis on culturally acceptable diets. Further, the guidelines include norms for facilities with and without a kitchen, norms for birth waiting homes, food safety aspects, quality assurance and constitution of nutrition committee with specific roles and responsibilities.

These guidelines will help Program Officers and Facility Staff to provide quality diet to mothers as per prescribed norms in order to strengthen JSSK implementation. Further, it will provide an opportunity for convergence of health department with other ministries and nutrition related academic institutes.

Contents

Acronyms

AIIMS	All India Institute of Medical Sciences
ANM	Auxiliary Nurse Midwife
CDHO	Chief District Health Officer
CMHO	Chief Medical Health Officer
C-section	Caesarean Section
FMR	Financial Management Report
FSSAI	Food Safety and Standards Authority of India
GDM	Gestational Diabetes Mellitus
HI	Health Inspector
ICDS	Integrated Child Development Scheme
ICMR	Indian Council of Medical Research
IMS	Infant Milk Substitutes
IYCF	Infant and Young Child Feeding
JSSK	Janani Shishu Suraksha Karyakaram
MAA	Mothers' Absolute Affection
MCP	Mother and Child Protection
MoHFW	Ministry of Health and Family Welfare
MOIC	Medical Officer In-charge

MUAC	Mid Upper Arm Circumference
NGO	Non Government Organization
NHM	National Health Mission
NIPCCD	National Institute of Public Cooperation and Child Development
RCH	Reproductive and Child Health
RDA	Recommended Dietary Allowance
RMNCH+A	Reproductive, Maternal, Neonatal, Child and Adolescent Health
RO	Reverse Osmosis
SHG	Self Help Group
SMO	Senior Medical Officer
SRLM	State Rural Livelihood Mission
UNICEF	United Nations Children's Fund

1 Background, situation analysis and objectives

Background:

1.1 Reduction of maternal and infant mortality is one of the key goals of the National (Rural) Health Mission, a flagship programme of the Government of India, launched in 2005. At the outset of the Mission, Janani Suraksha Yojana, a demand promotion and conditional cash transfer scheme, was launched with the objective of reducing maternal and infant mortality. It has been lauded as a scheme that has been successful in bringing about a surge in institutional deliveries since its launch, especially in the Empowered Action Group states. However, various evaluations brought forth the fact that pregnant women faced out-of-pocket expenditure for drugs, diagnostics, transport, etc. while accessing public health facilities.

1.2 In view of the difficulties being faced by women during pregnancy and delivery due to high out-of-pocket expenses on delivery and treatment, Ministry of Health and Family Welfare (MoHFW), Government of India, launched the Janani Shishu Suraksha Karyakaram (JSSK) on 1 June 2011. The scheme was to benefit pregnant women who access government health facilities for their delivery. The

scheme also aimed to motivate those who still choose to deliver at their homes to opt for institutional deliveries. Under JSSK, every pregnant woman is entitled to free delivery, including caesarean section, in public health institutions. This includes absolutely free to and from transport between the home and institution, diet, diagnostics, medicines, other consumables and blood, if required. The scheme has been expanded to cover sick infants up to one year of age and cases of antenatal and postnatal complications as well.

Situation analysis:

1.3 The postnatal period is critical for the newborn and the mother since most complications occur in this period. Thus, hospital stay is advised. To encourage and overcome barriers to hospital stay, free diet (3 days in case of vaginal delivery[1] and, 7 days in case of caesarean section[2]) is being provided under JSSK. However, it has been observed that the emphasis on meeting nutrition needs as per the Recommended Dietary Allowances (RDAs) is lacking. Further, meals provided are neither balanced nor uniform. In fact, the diet varies as per the discretion of the state, district and facility.

The period immediately following delivery has increased nutrition demands. An adequate healthy diet is needed to meet the energy demands of the delivery process, for recuperation of the woman's body and for better breast milk production. The energy and nutrition demands vary for mothers who have undergone caesarean section. So, to ensure quality postnatal care under JSSK, it is imperative that the dietary and nutritional norms with operational considerations are clearly defined to

[1] Vaginal delivery: includes all normal and assisted deliveries namely spontaneous, induced, preterm, term, instrumental deliveries.

[2] Caesarean section/delivery: is a surgical procedure in which incisions are made through a woman's abdomen and uterus to deliver her baby.

help the state and district programme managers deliver standardized, quality care.

1.4 Thus, these operational guidelines have been developed to equip the facility staff and programme managers with appropriate knowledge on dietary and nutritional norms under JSSK in order to maintain uniformity in the diet and provision of a balanced meal.

Objectives:

1.5 The objectives of these guidelines are to:

1.6 These guidelines are based on the RDA for pregnant and lactating mothers provided by the Indian Council of Medical Research (ICMR, 2010). Operational feasibility at district and sub-district levels has also been considered.

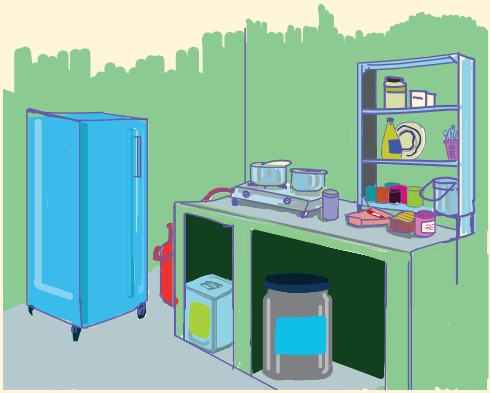
An average pregnant woman (sedentary worker) requires 2,250 kilo calories and 78 g of protein every day. A lactating mother requires 2,500 kilo calories and 74 g protein during 0–6 months of lactation per day. Experts have taken the nutritional recommendations into account while developing these guidelines.

1.7 The institutions conducting deliveries have varying infrastructure for cooking. Some high caseload facilities are equipped with kitchens, while others are not. Under JSSK, it is mandatory to provide food in birth waiting homes and postnatal wards, irrespective of the kitchen facility. Thus, these guidelines have been developed with operational classification between facilities having kitchens, those without kitchens and birth waiting homes.

1.8 The document provides guidance on nutrition norms for health facilities with and without kitchens and for birth waiting homes. Subsequently, it covers operational considerations and food safety norms.

2 Dietary norms for health facilities with a functional hospital kitchen and refrigerator

2.1 The ICMR, 2010, RDA for pregnant women and lactating women 0–6 months (sedentary worker) must be used as the basis for developing daily diet plans to provide food for mothers during their stay in public health facilities before and after delivery. The RDA for specific nutrients for lactating women is given below:



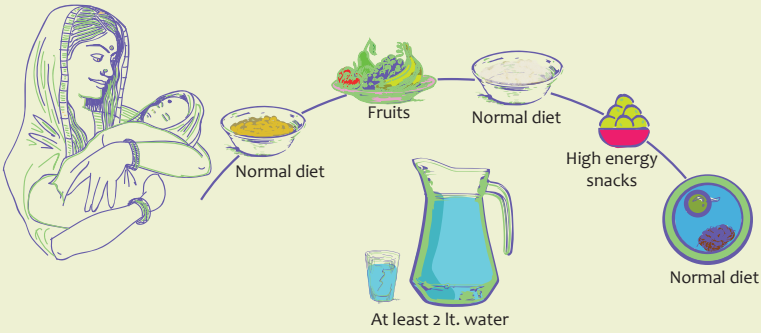
- Energy – **2,500** Kcal/day
- Protein – **74** g/d
- Fat – **30** g/d
- Calcium – **1,200** mg/d
- Iron – **21** mg/d

2.2 The daily diet plan for lactating women should provide the nutrients from the food groups given below in the form of three main meals and two snacks:

- Cereals and millets – **300** g/d 
- Pulses (legumes) – **120** g/d 
- Green leafy vegetables – **50** g/d 
- Other vegetables – **300** g/d 
- Fruits – **200** g/d 
- Milk, milk-based products (Toned milk/ cow's milk) – **500** g/d 
- Fats and oils – **30** g/d 
- Sugar and jaggery – **20** g/d 

2.3 **For vaginal deliveries:**

- Women should be provided a **normal diet** three times in a day.
- The diet should be consumed within two hours of cooking.
- In between meals, women should be given **high-energy snacks** as mid-morning/evening snacks.
- Salt used should be iodized (at least 15 ppm at household level).
- At least two litres of water should be consumed daily and fluids should be consumed before feeding the baby.



A sample weekly menu for vaginal deliveries (normal diet) is given as Table 1. For a non-vegetarian diet, pulse can be substituted with egg/ meat/ fish/poultry as indicated in the menu. Cultural and traditional food choices should be considered.

Table 1: Sample weekly menu for vaginal delivery (normal diet)

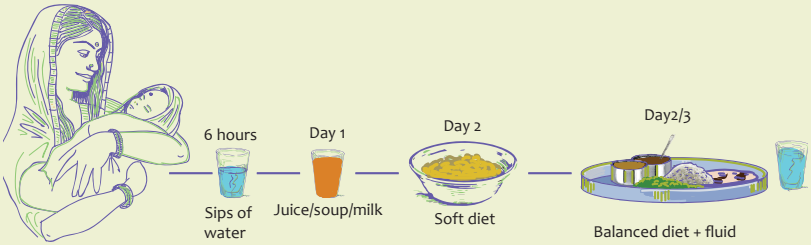
Meal	Day-1	Day-2	Day-3	Day-4	Day-5	Day-6	Day-7
Early morning	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits	Tea (1/2 cup) and 4 biscuits
Breakfast	1. Milk (200 ml) with sugar 2. *Namkeen dalia* (1/2 cup) 3. Boiled egg (1) 4. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. Vegetable *upma* (1/2 cup) 3. Dal sprouts (1/2 cup) 4. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. *Parantha* (2) 3. *Besan cheela* (2 medium) 4. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. Bread (2 slices) 3. Vegetable omelette 4. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. *Idli* (4 small) 3. *Sambhar* (1 bowl) 4. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. *Dal parantha* (2) 3. Any seasonal fruit (1) (100 g)	1. Milk (200 ml) with sugar 2. *Parantha* (2) 3. *Dal palak* or *Channa* with *ghia* 4. Any seasonal fruit (1) (100 g)
Lunch	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Curd *(100 g)* 4. Seasonal vegetable with green leafy vegetable (1/4 cup) 5. Salad (small tomato/ onion / half radish/ half carrot)	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Tomato onion *raita* (100 g) 4. Seasonal vegetable with green leafy vegetable (1/4 cup)	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Curd *(100 g)* 4. Seasonal vegetable with green leafy vegetable (1/4 cup) 5. Salad (small tomato/ onion / half radish/ half carrot)	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Cucumber *raita* (100 g) 4. Seasonal vegetable with green leafy vegetable (1/4 cup)	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Curd (100 g) 4. Seasonal vegetable with green leafy vegetable (1/4 cup) 5. Salad (small tomato/ onion / half radish/ half carrot)	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Mint peanut *raita* (100 g) 4. Seasonal vegetable with green leafy vegetable (1/4 cup)	1. *Roti* (1) and Rice (1/2 cup) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Curd (100 g) 4. Seasonal vegetable with green leafy vegetable (1/4 cup) 5. Salad (small tomato/ onion / half radish/ half carrot)

(Continued)

Evening snack	1. Milk (200 ml) with sugar 2. Vegetable *poha* (1/4 cup) 3. Boiled *kabuli channa chaat* (50 g)	1. Milk (200 ml) with sugar 2. Vegetable cutlet (1) 3. *Dhokla* (4 piece) (50 g)	1. Milk (200 ml) with sugar 2. *Ladoo (besan,* peanuts, jaggery, *rajgira gaund)* (2) 3. Boiled *kala channa chaat* (50 g)	1. Milk (200 ml) with sugar 2. *Ladoo (besan,* peanuts, jaggery, *rajgira gaund)* (2) 3. *Khandvi* (4 piece) (40 g)	1. Milk (200 ml) with sugar 2. Vegetable *poha* (1/4 cup)/ Vegetable cutlet (1) 3. Boiled *kala channa chaat* (50 g)	1. Milk (200 ml) with sugar 2. Vegetable *poha* (1/4 cup)/ Vegetable cutlet (1) 3. *Dhokla* (4 piece) (50 g)	1. Milk (200 ml) with sugar 2. Vegetable *poha* (1/4 cup)/ Vegetable cutlet (1) 3. Boiled *kabuli channa chaat* (50 g)
Dinner	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/ fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. *Roti* (3) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. Rice (3/4 cup) 2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit	1. *Roti* (1) and Rice (1/2 cup) 2. Mixed *dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup) 3. Seasonal vegetable (1/4 cup) 4. Banana (1 medium size; 100 g) Or any other seasonal fruit

2.4 **For C-section deliveries:**

- Once bowel function return is assured by the doctor (usually 6 hours after surgery), the woman can be given sips of water for a few hours.
- This should be followed by a liquid diet such as fruit juice, sweet lime water, coconut water, clear soup, weak tea/ coffee, *dal* soup, etc. on day 1. It should be followed by a soft diet like *khichri*, vegetable *upma*, *poha* and *namkeen dalia* on day 2. The appropriate time to start the soft diet is based on indications of C-section, intra-operative complications and involvement of bowels. The operating surgeon should take the final decision in this regard.
- On the second and third days (after the passage of stools), a normal balanced diet with emphasis on consumption of fluids (about 2–3 litres of fluids including milk in a day) is to be ensured unless contraindicated. This decision should be based on the surgeon's discretion.



2.5 Post-surgery liquid meal options are given as Table 2 and post-surgery soft meal options are given as Table 3.

Sample diet plan for C-section delivery

- Once bowel function return is assured by the doctor (usually 6 hours after the surgery), sips of fluid can be taken for a few hours.
- The most important thing is that the mother requires energy at this time and calories should not be restricted for a long time.

Table 2: Post-surgery liquid meal options

Post-surgery liquid meal - Option 1	Coconut water	1 glass
Post-surgery liquid meal - Option 2	Sweet lime water	1 glass
Post-surgery liquid meal - Option 3	Fruit juice / clear soup*	1 glass
Post-surgery liquid meal - Option 4	Rice and washed pulse gruel	1 cup
	Chaach	1 glass
Post-surgery liquid meal - Option 5	Weak tea/coffee	1 glass
Post-surgery liquid meal - Option 6	Fruit juice / clear soup*	1 glass

**Clear soup means that vegetables, after being boiled, are strained and only the liquid portion is served*

- Post-surgery liquid meal options, as mentioned above, should be given at 2–3 hours intervals on day 1. It should be followed by a soft diet on day 2. The time for starting a soft diet is based on the indication of C-section and intra-operative complications and will be decided by the operating surgeon.

Table 3: Post-surgery soft meal options

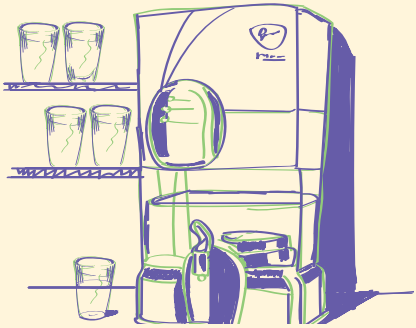
Early morning	Milk	1 glass
Breakfast	Vegetable *upma* *Chaach*	1 cup 1 glass
Mid-morning	Fruit juice	1 glass
Lunch	Vegetable *khichri* Curd	1 cup 1/2 cup
Evening tea	*Suji kheer*	1 cup
Dinner	Soup *Namkeen dalia*	1/2 cup 1 cup

- On the second and third days (after the passage of stools), a normal balanced diet (Table 1) with emphasis on fluid intake (about 2–3 litres of water) is to be ensured unless medically contraindicated.

2.6 **Liquids:** Irrespective of whether the delivery is vaginal or C-section, at least 2 litres (8–10 glasses) of safe drinking water in addition to other fluids is recommended. This includes soup, milk, butter milk, etc.

2.7 **Galactagogues:** Traditional food items that stimulate milk production and secretion are known as galactagogues. Certain food items including cumin (*jeera*), aniseeds (*saunf*), carom seeds (*ajwain*) and garlic can be used for seasoning (*baghar*) in *dals* and in vegetables, fennel seeds in vegetable *pulao*, nuts and *gondh katira* (edible gum) in *atta* and *besan laddu*, ginger in tea and vegetables, etc. to stimulate milk production and secretion. These can be integrated into Indian recipes to prepare a balanced meal/snack for the nursing mother.

2.8 **Drinking water safety norms:** Water should be chlorinated to ensure it is potable. In fluoride hotspots (where fluoride is > 1.5 F mg/L), appropriate de-fluorination water filters should be installed in the wards. Provision for hot water may be made available. If reverse osmosis (RO) units have been installed, chlorination may not be required.



2.9 Counselling points for the mother during stay and at-discharge are discussed in Chapter 6.

3 Dietary norms for health facilities with no hospital kitchen / kitchenette facility

3.1 The facilities should always try to provide freshly cooked food. Facilities may adopt any of these mechanisms based on their convenience and local context:

a. Outsourcing on a per meal basis

b. Outsourcing on a monthly contract basis

c. Cooking through Self Help Groups

d. Any other method based on local context

3.2 If freshly cooked food cannot be provided, then facilities should provide dry diet.

a. Provision of locally produced dry diet: There are a number of dry diets being provided by states as take-home rations. The dry diets can be consumed as they are, or can be roasted or cooked with water/milk/oil and consumed.

b. Dry diet options given as supplementary food or hospital diet, with cost per serving is given as Table 4.

Table 4: Dry diet options from different states given as supplementary food and hospitals

A. Supplementary food

	Composition	Energy (Kcal) Amounts/ 100 g	Protein (g)	Fats (g)	Cost per 100 g in Rs)	Amount required for 1 day (in gm) to provide 2500 Kcal
1. *Amrutham* nutrimix (Kerala)	Wheat	391	16.14	69.47	5.6	639
	Soya chunks					
	Bengal gram					
	Groundnut					
	Sugar					
2. PWLMAG (Kerala)	Wheat	501	23.3	5.9	9.6	499
	White rice					
	Ragi					
	Bengal gram					
	Green gram					
	Soya chunks					
3. *Shakti* nutrimix (West Bengal)	Rice	402	10.4	5.3	7.2	622
	Wheat					
	Whole gram (*chana*)					
	Groundnut					
	Sugar					
4. *Chhatua* (Odisha)	Wheat	303	11.7	5.68	7 This is inclusive of 2 eggs	825
	Roasted *chana*					
	Groundnut					
	Sugar					

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	Composition	Energy (Kcal) Amounts/ 100 g	Protein (g)	Fats (g)	Cost per 100 g in Rs)	Amount required for 1 day (in gm) to provide 2500 Kcal
5. Complementary (weaning) food (Tamil Nadu)	Wheat/ maize/ *bajra* (*kambu*) flour	330	8.99	1.58	6.4	758
	Malted *ragi* flour					
	Bengal *gram dhal* flour					
	Powdered jaggery					
	Minerals (iron, calcium) and Vitamins pre-mix (Vitamin A and C, Thiamine, Riboflavin, Niacin, Folic Acid)					
6. Fortified *sukhadi* (Maharashtra/ Gujarat)	Wholewheat flour	463	15.06	23.14	5.92	540
	Defatted soya flour					
	Edible oil					
	Jaggery					
	Groundnut					
7. Fortified *sheer* (Maharashtra/ Gujarat)	*Atta*	455	16.52	27.8	5.92	549
	Full fatted soya flour					
	Green gram					
	Sugar					
	Edible oil					
	Groundnut					

(Continued)

	Composition	Energy (Kcal) Amounts/ 100 g	Protein (g)	Fats (g)	Cost per 100 g in Rs)	Amount required for 1 day (in gm) to provide 2500 Kcal
8. Fortified *upma* dry (Maharashtra/ Gujarat)	Wholewheat flour	462	11.8	30.42	5.92	541
	Full fatted soya					
	Green gram					
	Edible oil					
	Groundnut					
	Coconut oil					
	Sugar					
9. Energy dense extruded fortified dried *halwa* (Rajasthan)	Wholewheat	400	11.69	8.17	2.73	727
	Defatted soya bean					
	Green gram					
	Edible oil					
	Sugar					
	Micronutrients (as per norm)					
10. Egg		87	6.55	-	4.5 per egg	

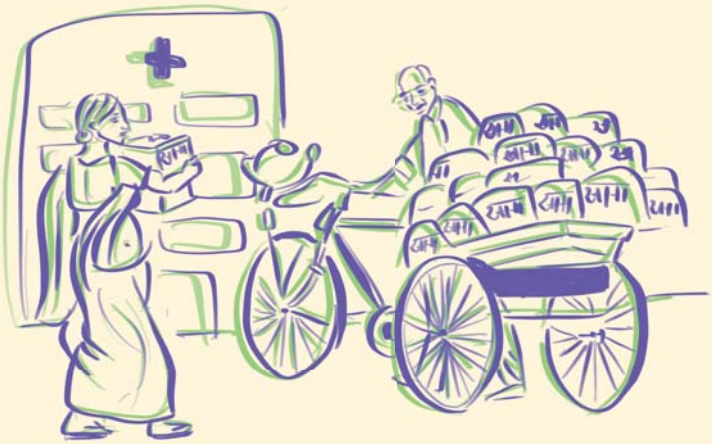
B. Dry diet given in few hospitals of Karnataka:

Ingredients	Parts (g)	Energy (Kcal)	Protein (g)
Roasted wheat	55	190	6.4
Bengal gram	5	18	1.0
Skimmed milk powder	10	36	3.6
Sugar	20	80	0
Oil	10	90	0
Total	100	414	11.0

Similar arrangements for locally produced dry diet could be considered by the states/ UTs. The amount to be given should comply with the RDA for lactating and pregnant women as given in Chapter 2 (Section 2.1) and 4 (Section 4.1), respectively.

All food items/raw material should be procured from a vendor having FSSAI license.

3.3 Procurement norms for dry diets are given in Chapter 5. Other considerations mentioned in Chapter 2 should be followed for heath facilities with no hospital kitchen/kitchenette facility (Sections 2.1–2.9).



4 Dietary norms for birth waiting homes

4.1 The ICMR, 2010, RDA for pregnant women (sedentary workers) must be the basis of developing the diet plan for those pregnant women who are in waiting homes.

RDA for pregnant women:

- Energy – **2,250** Kcal/day 
- Protein – **78** g/d 
- Fat – **30** g/d 
- Calcium – **1,200** mg/d 
- Iron – **35** mg/d 

4.2 Sample diet plan for birth waiting homes is given as Table 5 and amount of food to be consumed in household measures is given as Table 6.

Table 5: Sample diet plan for birth waiting homes

Meal	Menu
Early morning	Tea (1 cup) and 2 biscuits
Breakfast	1. Milk (200 ml) with sugar
	2. Vegetable *upma* with sprouts (1/4 cup)/ *dal parantha* (1)
	3. Any seasonal fruit (1) (100 g)
Lunch	1. *Roti* (3) or Rice (3/4 cup)
	2. Seasonal vegetable with green leafy vegetable (1/4 cup)
	3. Salad (small tomato/ onion / half radish/ half carrot)
	4. Curd (1/3 cup; 100 g)
Evening snack	1. Milk (200 ml) with sugar
	2. Vegetable *poha* (1/4 cup) / Vegetable cutlet (1)
	3. Banana (1 medium size; 100 g) or any other seasonal
Dinner	1. *Roti* (3)
	2. *Dal* (1/4 cup) or Chicken/fish/ egg curry (1/4 cup)
	3. Seasonal vegetable (1/4 cup)
• Cereals and millets: *Chapattis*/ boiled rice/*poha*/*upma*/ vegetable *khichri*/vegetable *dalia*/*idli*/ vegetable *uttapam* • Pulses and legumes: Cooked *dal*/ steamed sprouts/*besan cheela*/ *besan laddu* • Milk and milk products: Plain milk/ buttermilk/ curd/ vegetable *raita*/ *paneer* • In tribal areas where milk is not preferred, eggs may be given	

Depending on the availability, and culture and tradition of the respective state, food from various food groups can be consumed in appropriate amounts.

Table 6: Amount of food to be consumed in household measures

Food group	Any one of the following items (in household measures)
Cereals	• 1 slice of bread (30 g) • 1 medium *chapatti* (30 g) • 1 small *parantha* (30 g) • 1/4 cup cooked rice (60 g) • 2 small *idlis* (30 g) • 4 biscuits (30 g) • 1/4 cup cooked *upma* (60 g) • 1/4 cup cooked *poha* (60 g)
Pulses	• 1/4 cup of cooked *dal* (90 g) • 1 *besan cheela* (30 g) • 2 small *besan ladoos* (30 g)
Milk and milk products	• 1 glass of plain milk (250 ml) • 2 glasses of buttermilk (500 ml) • 1 cup of curd (240 g) • 4 big slices of *paneer* (40 g of *paneer*)
Fruits	• Mango/guava/pear/orange (100 g) • Banana (50 g)
Vegetables	
• Green leafy vegetables	• Green leafy vegetables (spinach, *bathua*, amaranth, mustard) (50 g)
• Other vegetables	• Others (cauliflower, *bhindi*, peas, brinjal, etc.) (100 g)
• Roots and tubers	• Roots and tubers (potato, colocassia, carrot, radish, etc.) (100 g)
Fats and oil	• Oil - 1 tsp (5 ml) • Butter - 1 tsp butter (5 g) • Ghee - 1 tsp (5 ml)
Sugar and jaggery	• Sugar - 1 tsp (5 g) • Jaggery - 1 tsp (5 g) • Honey - 1 tsp (5 ml)

- *1 teaspoon (tsp) – 5 g*
- *1 glass – 250 ml*
- *1/2 cup – 120 ml*
- *1/4 cup – 60 ml*
- *1 tablespoon – 15 g*
- *1 cup – 240 ml*
- *1/3 cup – 80 ml*

4.3 **High risk pregnancies:** A high risk pregnancy is the one where the mother, the developing fetus, or both are at higher-than-normal risk for complications during or after the pregnancy and birth. Severe anemia, hypertension and/or gestational diabetes mellitus (GDM) during pregnancy are some examples of high risk pregnancy. Hence, appropriate medical management and counselling should be done, as per the situation. Special considerations for high risk pregnancies have been provided in Section 6.3 of the guidelines.

5 Food safety norms

5.1 Food safety refers to all those hazards, that may make food injurious to health. India has a Food Safety and Standards Act (2006), which details the provisions and measures for ensuring food safety.

5.2 FSSAI is the apex body in India that has developed norms/counselling materials for maintaining food safety and hygiene. FSSAI guidelines for safe and hygienic practices should be referred (FSSAI Guidance document. Food Industry Guide to implement GMP/GHP requirements – Catering, 2017).[3]

Some basic principles to be followed while provisioning of diets are given below.

i. All food items/raw material should be procured from a vendor having FSSAI license

ii. The food provided should be freshly cooked (to be consumed within two hours of cooking preparation) and should be stored out of danger zone (5°–63°C)

iii. Minimal handling of cooked food should be done to prevent contamination

iv. Handling and storage of raw and cooked foods should be separate to prevent cross contamination

v. All food handlers should wear suitable clean protective clothing, head covering, face mask, gloves and footwear

vi. All food handlers should wash their hands with soap before and after handling food and after using toilets, coughing, sneezing, etc.

3. https://www.fssai.gov.in/dam/jcr:84485705-ae48-4b97-bdd2-1a7426e42986/Guidance_Document_Catering_Sector_19_01_2018.pdf

vii. Potable/ clean drinking water should be used for food preparation

viii. Kitchen equipments/containers should be kept clean, dry and free from moulds and fungi

ix. Separate and covered dustbins for wet food waste and dry food waste should be kept

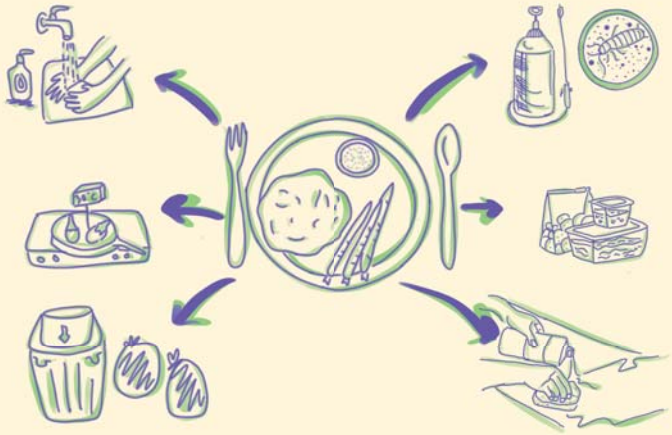
x. Kitchen and food premises should be kept clean and pest free (every 6 months) at all times

5.3 **For dry diet**

i. Procured diets should conform to the prescribed standards laid down under Prevention of Food Adulteration Act and the Integrated Food law to ensure their consistent quality and nutritive value.

ii. Dry diet should be procured at the local level through State Rural Livelihood Mission/self help groups/milk cooperatives/non-governmental organizations (NGOs), etc. Commercial mixes should be avoided, wherever possible.

iii. The raw material should be provided by an authorized FSSAI-certified service provider.



6 Counselling at the time of post delivery and discharge

6.1 Counselling the mother during the stay at the facility:

i. Once a day, a designated person (breastfeeding counsellor/ RMNCH-A counsellor/staff nurse/any designated counsellor) should support the mother to establish breastfeeding and allay her myths regarding food restrictions and breastfeeding using the infant and young child feeding (IYCF) booklet. Breastfeeding counselling and its initiation should be the responsibility of the skilled birth attendant as well. Counselling should begin in the delivery room.

ii. Breastfeeding should be on demand and this may sometimes imply 10–12 feeds a day. The baby should not be given anything other than breast milk.

iii. In compliance with Infant Milk Substitutes (IMS) Act (2003), formula milk or bottle feeding should be strictly prohibited.

6.2 Counselling and nutritional assessment of the mother at the time of discharge:

i. At the time of discharge, detailed counselling is to be provided by the designated counsellor to the mother on dietary practices, breastfeeding practices, breast positioning, maternity and food security entitlements/ government schemes, and significance of family planning and available options.

ii. Iron folic acid and calcium supplements should be provided at the time of discharge along with counselling on how to consume them.

iii. In case a woman has a history of night blindness in the third trimester, special care must be taken to advise consumption of foods rich in vitamin A. In addition mother should be counselled on foods that are rich in protein, iron, calcium and vitamin A, etc. Table 7 enlists food sources rich in protein, iron, calcium and vitamin A.

Table 7: Food sources rich in protein, iron, calcium, vitamin A

Nutrient	Food source
Protein	Legumes and pulses, sprouts, egg, *paneer*, milk and milk products, fish and poultry, groundnuts, other nuts/edible seeds
Iron	Animal food sources (Heme iron) such as egg, meat and poultry (especially liver, kidney) Plant-based sources (Non-heme iron) such as green leafy vegetables, legumes whole grains /millets, amaranth, Bengal gram, cauliflower greens and radish leaves (18–40 mg) and dry fruits Iron-rich locally available foods should be consumed with vitamin C-rich sources like citrus fruits, guava and papaya to enhance iron absorption; whole grains/millets
Calcium	Milk and milk products, sesame seeds, *ragi*, dark green leafy vegetables, *rajkeera* (amaranthus), egg
Vitamin A (B-carotene)	Yellow and orange fruit and vegetables like pumpkin, carrots, mangoes and green leafy vegetables

iv. After counselling, assessment and recording of anthropometric indices including weight, height, mid-upper arm circumference (MUAC), and assessment of clinical signs (goitre, Bitot's spot and fluorosis) should be done. Classification of MUAC should be done as per the Guidance Document: Nutritional Care and Support for Patients with Tuberculosis in India, 2017.[4]

[4] https://tbcindia.gov.in/WriteReadData/Guidance%20Document%20-%20Nutritional%20Care%20%26%20Support%20for%20TB%20patients%20in%20India.pdf

v. A growth monitoring/mother and child protection (MCP) card should be explained to the mother.

vi. The delivery record should be filled in the post natal care section of the MCP card.

vii. Ministry of Health and Family Welfare, MAA Guidelines for counselling at discharge may be referred for detailed information about counselling points.

viii. A counselling leaflet is attached with the guideline which can be used by the counsellor (at least two contacts – soon after delivery and on discharge).

6.3 Special considerations for high-risk pregnancies:

For anemia and any other high-risk condition in birth waiting homes, appropriate medical management, dietary advice and counselling needs to be instituted as per the situation.

The following diet and counselling points should be kept in mind:

1. **Anemia:**

i. Measurement of blood haemoglobin levels and appropriate medical treatment to be provided according to mild/moderate/severe category

ii. Hospital admission and parenteral iron using IV sucrose or ferric carboxy maltose to be administered if women have moderate/severe anemia

iii. Increasing intake of iron and dietary folate rich foods including green leafy vegetables (*bathua*, *chaulai*) plantain, lotus stem, whole grain cereals (*bajra*), pulses (black *channa*), legumes, nuts should be done

iv. Iron fortified foods should be included in the diet

v. Intake of heme iron sources including meat, fish, poultry products should be increased in the diet

vi. Intake of fruits rich in vitamin C like papaya, guava and citrus fruits (lemon) to improve iron absorption from plant foods should be increased

vii. Intake of beverages like tea and coffee which bind dietary iron and make it unavailable should be reduced. Hence, it is advisable to drink coffee or tea 2 hours before and after meals

viii. Fermented foods (e.g., *idli*, *dosa*) and sprouted pulses should be included in the diet as they help in iron absorption

ix. Foods rich in folic acid like pulses, green leafy vegetables, legumes, liver and eggs should be included

x. Foods rich in vitamin B complex and particularly B_6 like wholegrain cereals, parboiled rice, liver, milk, etc. should be consumed

xi. Prolong warming of meals decreases the vitamin C content leading to reduced iron absorption

xii. Coconut milk, if used extensively in cooking, inhibits iron absorption

2. **Hypertension:**

i. Regular monitoring of blood pressure is mandatory

ii. Development of new symptoms/signs of severe hypertension requires immediate hospitalization

iii. At least 4 servings of calcium-rich foods like dairy products (milk, *paneer*, curd), soya milk, whole pulses, whole cereals, green leafy vegetables and *ragi*/nuts should be consumed

iv. Potassium-rich foods like *ragi*, wheat, Bengal gram, cowpea, *moong*, peas, red gram, colocassia, coriander seeds, fenugreek seeds, *musambi*, apricots, banana, cherries, etc. should be consumed

v. Small and frequent meals should be taken

vi. Avoid fasting or missing any meal

vii. Plenty of water (2–3 litres/day) should be taken to keep the bowels regular

viii. Intake of processed foods, rich in fat, salt and sugar should be restricted

ix. Keep salt intake to less than 6 gms/day (approximately 1 tsp full/ day)

x. Consumption of caffeine products like tea, coffee, etc. should be reduced

xi. Regular physical activity should be done (e.g., yoga, walking, etc.) like 30 minutes of walk, two times a day

3. **Gestational Diabetes Mellitus:**

i. Regular monitoring of fasting blood glucose should be done and appropriate medical treatment should be provided as per the National Gestational Diabetes Mellitus: Diagnosis and Management of Gestational Diabetes Mellitus (2018)[5]

ii. The recommended diet composition for a mother with GDM is 50–60 per cent calories from carbohydrate, 10–20 per cent from protein and 25–30 per cent from fat. The total intake of carbohydrate should be controlled and monitored

iii. Carbohydrate foods with a lower glycemic index should be emphasized

iv. Refined carbohydrate foods like sweets, fruit juices, table sugar, starchy vegetables, etc. should be avoided

v. Carbohydrate foods should be spread through the day over 3 small meals and 2–3 snacks each day to maintain blood glucose levels

vi. Fried foods should be avoided. Instead serve steamed, boiled or sautéed food in a non-stick pan

5. http://nhm.gov.in/New_Updates_2018/NHM_Components/RMNCH_MH_Guidelines/Gestational-Diabetes-Mellitus.pdf

vii. Whole fruits should be preferred over juices

viii. Prefer fish or chicken over red or organ meat

ix. Fibre should be increased in the diet by including salad, beans, non-starchy vegetables, whole fruit, whole grain cereals, whole pulses, flax seeds and oat bran as they help control blood sugar levels[6]

x. A mother should drink water, buttermilk, soups, and other unsweetened healthy beverages instead of soda or fruit juices

xi. Intake of processed foods, rich in fat, salt and sugar should be restricted specially pickles, chutneys, *murabbas*

xii. The meal plan differs as per the calorie requirements. Specialist opinion should be sought before planning a meal for a mother with GDM. National Gestational Diabetes Mellitus: Diagnosis and Management of Gestational Diabetes Mellitus (2018) has charted out the sample meal for different calorie requirements

xiii. Regular physical activity must be encouraged (e.g., yoga, walking, etc.) like 30 minutes of walk, two times a day

6. http://ninindia.org/DietaryGuidelinesforNINwebsite.pdf

7 Operational considerations

7.1 A State-level Committee on Nutrition is to be formed as per Table 8.

Table 8: State-level Committee on Nutrition

Sr. No.	Designation	
1	Principal Secretary (Health)	Chairperson
2	Mission Director (NHM)	Vice Chairperson
3	Director General Health Services	Member
4	State Programme Officer (Maternal Health)	Member and Nodal Person
5	Representative, Women and Child Development	Member
6	Representative, National Institute of Public Cooperation and Child Development (regional centre) (NIPCCD)	Member
7	Representative, Nutrition and Home Science College	Member
8	Representative, State Rural Livelihood Mission (SRLM)	Member
9	Representative, Public Distribution System and Civil Supplies	Member
10	Representative, Agriculture University	Member
11	Representative, Food Safety and Standards Authority of India (FSSAI)	Member
12	Development partners	Member

Terms of reference:

The terms of reference for the committee are as given below. The committee will:

a. **Set-up** nutrition norms for in-patients diets in various facilities

b. **Formulate** the framework of a diet plan and logistics, depending on culture, staple diet, customs and possible linkages with other sectors (especially convergence with other ministries for provision of food and water)

c. **Review** whether a District-level Committee on Nutrition has been formed in each district and is meeting regularly

d. **Assess** implementation and address grievances

e. **Undertake** financial review (fund distribution, utilization and issues)

f. **Decide** specific, appropriate and time-bound actions based on field reports from state monitors and minutes of meetings received from district committees

g. **Review** the action taken, report on the actions decided in previous meetings

h. **Ensure** strict adherence to food safety, hygiene and sanitation norms

If a similar committee with the primary focus on food and nutrition exists in the state, then instead of setting up a parallel committee, the existing committee should be given additional responsibility of these activities. If required, a sub-committee may be set up under the existing committee for this purpose.

A similar district-level committee may be constituted for operational and technical guidance at the district level.

It is essential that states/ UTs issue clear guidelines to districts on the financial arrangements under JSSK, including for JSSK diet.

These guidelines should specify the following:

- **Clear norms for facilities that have high caseloads but do not have kitchens:** These should include guidelines for outsourcing and tender processes.
- **Clear norms for facilities that have low caseloads:** These should include guidelines for outsourcing and tender processes (e.g.: if service is to be outsourced, whether it should be on a per meal basis or a monthly contract basis; whether the service requires tendering or can be exempt from the tendering process, etc.)
- Clear norms for the Financial Management Report (FMR) code under which the expenditure is to be booked

7.2 **Financial norms:** Facilities should always provide food from kitchens running through the state budget. JSSK budget can be used to provide additional food, if required.

If a facility does not have a kitchen running through the state budget, JSSK budget can be utilized to provide food as presented in the guideline.

JSSK recommends INR 100 per day for the diet of postnatal mothers during their stay in a public health facility post-delivery (3 days in case of normal delivery and 7 days in case of caesarean section) and for pregnant women in birth waiting homes. An indicative amount of INR 100 is recommended per woman per day as food cost. However, as per JSSK norms, this cost may vary across levels of facilities and states/UTs. Thus, states/UTs may budget for higher/lower costs based on local considerations, with adequate justification.

Budget heads:

All expenditure for this scheme should be included under the budget head for JSSK diet (unless provided from a state budget). No cash should be given in lieu of diet to the target group. Funds need to reach district health societies and facilities in advance.

7.3 **Recording and reporting:** A register should be maintained at facility level to keep a record of the number of beneficiaries, type of diet provided, counselling provided during the stay, and discharge. A sample register is given as Table 9.

Table 9: Sample register

Type of facility: Availability of kitchen/kitchenette (1)
Non-availability of kitchen/kitchenette (2)

S. No	Name of mother	Date and time of admission	Date and time of delivery	Vaginal (1)/ Caesarean (2)	Date and time of discharge	Duration of stay (in days)	Type of diet provided*	Nutrition counselling provided at the time of delivery and at discharge (Yes/No)	Signature of nursing In-charge/ matron
1	2	3	4	5	6	7	8	9	10

Note: *Separate record has to be maintained for diet given in birth waiting homes*

** Diet for vaginal delivery (1), C-section delivery (2), or dry diet (3)*

7.4 **Monitoring:** JSSK monitoring is a part of the existing supportive supervision and monitoring plan. The tools for JSSK monitoring are already provided to the states. The checklist covers all components of JSSK, including diet. Members from state-level committees should also be included in the JSSK monitoring.

7.5 **Review:** State, district and facility should regularly review implementation of programmes, issues and grievances, if any.

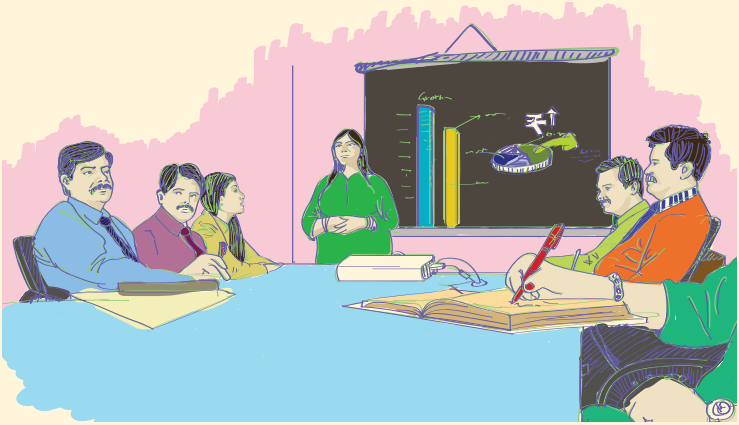
7.6 **Grievance redressal:** The grievance redressal should be as per JSSK guidelines. A help desk/suggestion box should be set up and issues raised should be addressed as per other complaints and grievances.

8 Roles and responsibilities

The roles and responsibilities of various organizations and functionaries related to JSSK are given below.

Department of Health and Family Welfare:

- Responsible for overall implementation. Individual responsibilities within the departments are as follows:
    - The Superintendent/SMO/MO in-charge of the facility will be responsible for provision of food, assuring quality of food, recording, reporting, reviewing and addressing grievances at the facility level.
    - The Health Inspector (HI)/supervisor will be responsible for the hygiene of the cooking premises, utensils, place, ingredients and trained food handlers can be given the responsibility.
    - The Chief Medical Health Officer (CMHO)/ Chief District Health Officer (CDHO) will be responsible for smooth implementation in the district by providing guidance and funds to facility as well as regular supervision, monitoring and review, and corrective steps based on feedback.
    - The state nodal officers for maternal health will be responsible for the overall implementation in the state. They will ensure appropriate guidance and timely release of funds to districts and facilities; regular monitoring by state-level officer; regular review;



and organization of meetings of the State-level Committee on Nutrition; and discussion of issues and grievances during meetings.

State Rural Livelihood Mission:

- Use the services of Self Help Groups in providing diet to pregnant women at facilities with no kitchen through village organizations.
- Engage organizations to create awareness among the community about JSSK entitlements and provision of diet during their scheduled meeting.

Nutrition/Home science colleges:

- Ensure diet plans are in accordance with RDA.
- Formulate diet plans depending on cultural and staple diets of the states.

- Assist the district-level committee in making diet plans for pregnant women with medical conditions like anemia, hypertension, diabetes mellitus, etc. and provide training on nutritional assessment.

Agriculture universities:

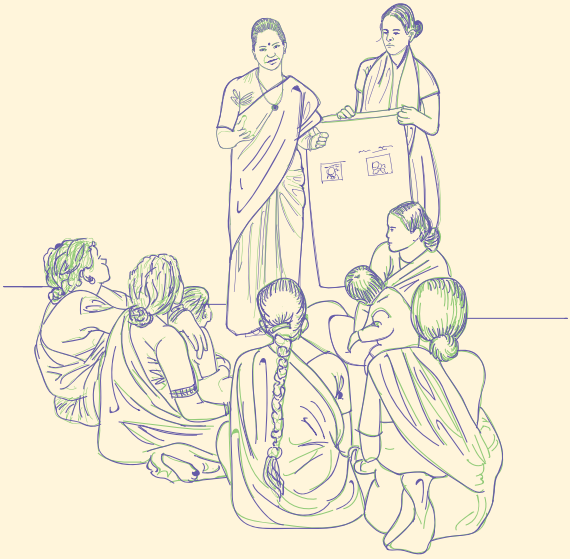
- Develop models through which Self Help Groups can work at the facility level for kitchen gardens, composing new products and composting wastes.

Public distribution system and civil supplies:

- Improve access to cereals, pulses and other food articles that are subsidized/free under various government programmes.

Food Safety and Standards Authority of India:

- Ensure quality assurance under National Food Safety and Standards Act, 2006.



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