NATIONAL HEALTH MISSION
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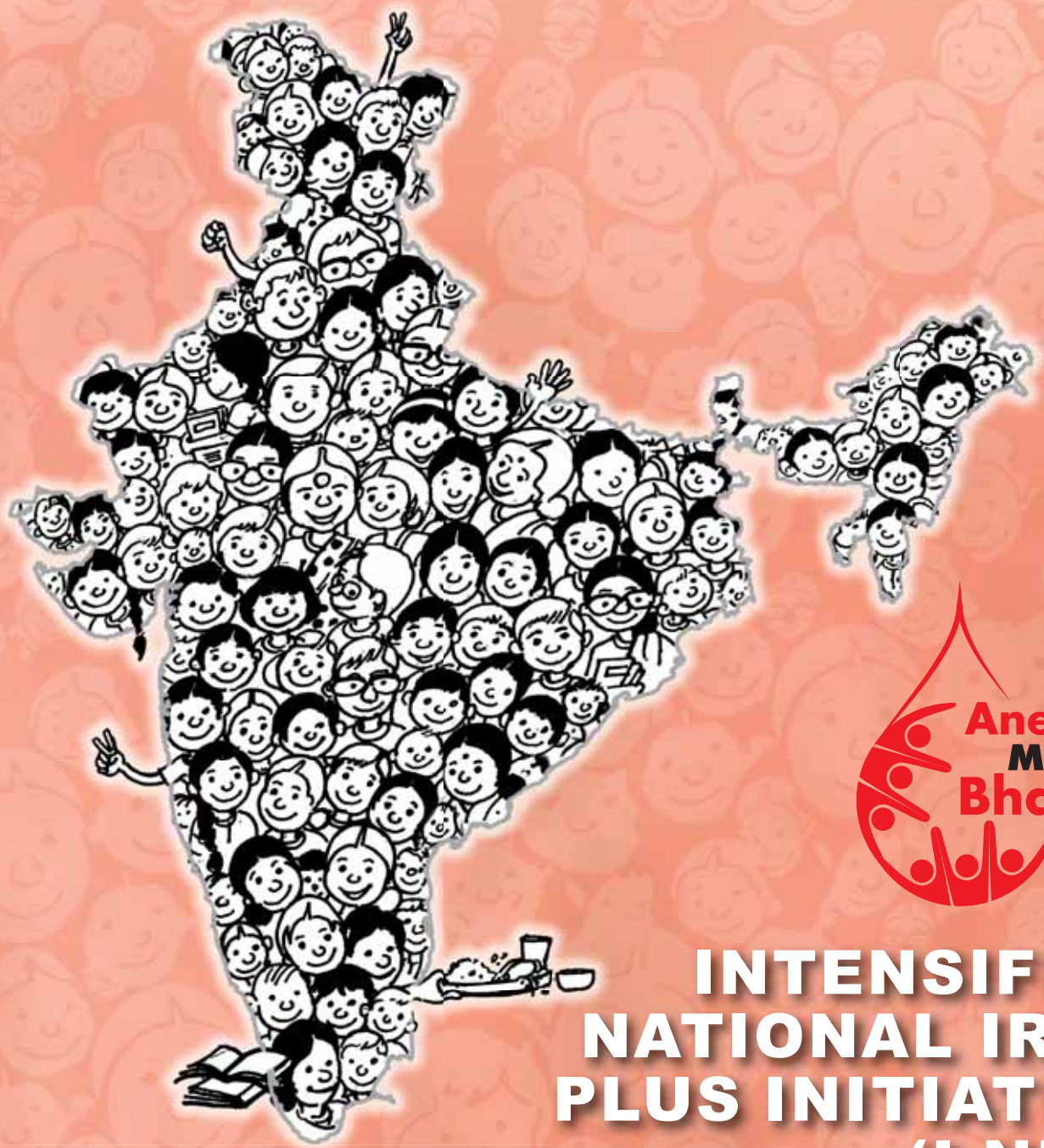
सत्यमेव जयते

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



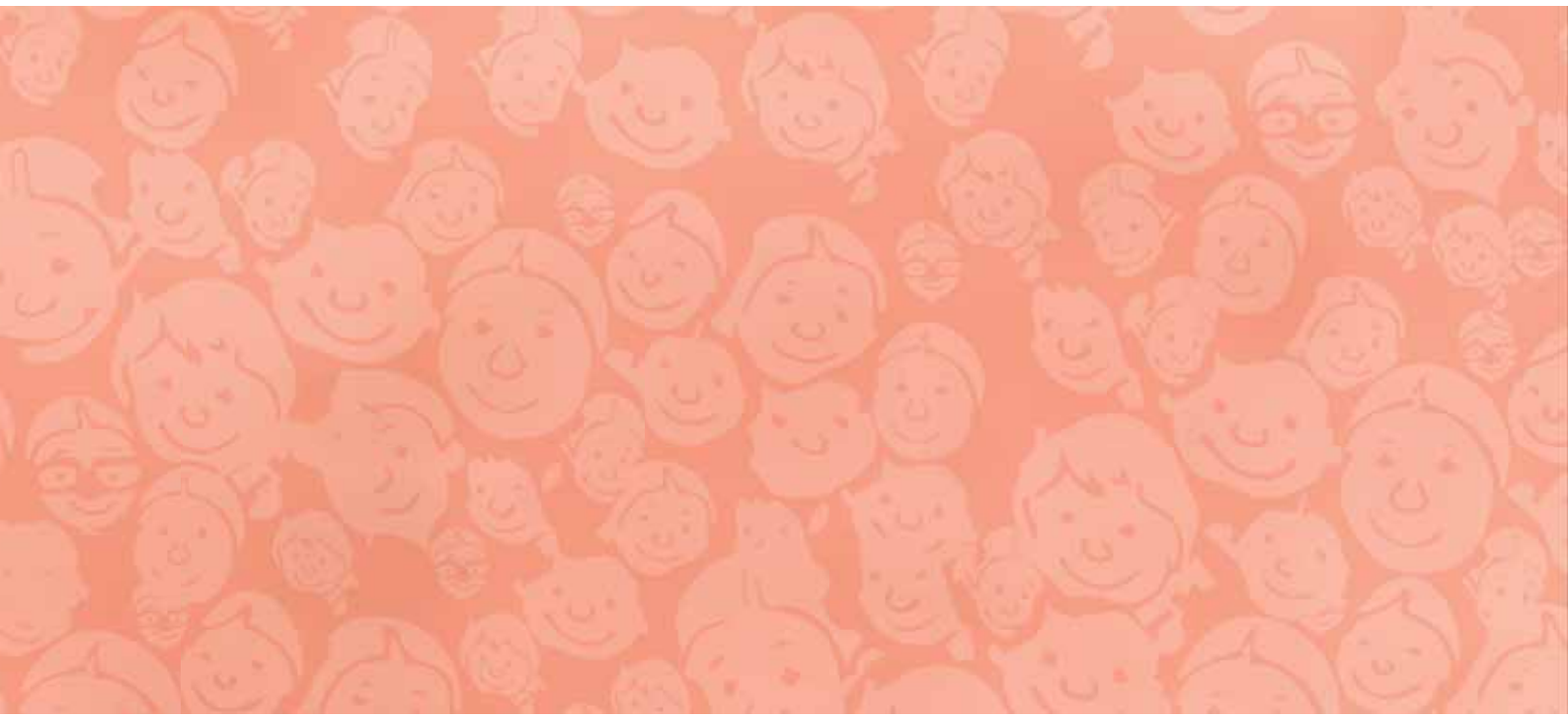
Anemia Mukt Bharat

INTENSIFIED NATIONAL IRON PLUS INITIATIVE (I-NIPI)

Operational Guidelines for Programme Managers

April, 2018

Ministry of Health and Family Welfare
Government of India



INTENSIFIED NATIONAL IRON PLUS INITIATIVE (I-NIPI)

Operational Guidelines for Programme Managers

जगत प्रकाश नड्डा
Jagat Prakash Nadda

स्वास्थ्य एवं परिवार कल्याण मंत्री
भारत सरकार
Minister of Health & Family Welfare
Government of India

Message

Our nation is on the cusp of writing history in terms of its economic development. The young population of our country carries the responsibility of leading the nation towards prosperous future with better social and economic standing.

Anemia, however, remains a major public health issue with high prevalence across the country irrespective of gender, age and geography. It is time to intensify our fight against anemia in terms of its prevention and control leading to better health outcomes for the country's population.

Concerted efforts to address this challenge, in congruence with the recently launched POSHAN Abhiyaan and convergent actions in the form of "Anemia Mukt Bharat" strategy are a welcome step. The strategy emphasizes on improving supply chain, targeted monitoring and continuous social mobilization using various channels of communication. I urge States and key stakeholders to build priority on this strategy aiming to achieve long term health and economic outcomes.

Let us all come together to work towards achieving the envisaged outcomes under the Anemia Mukt Bharat initiative integrated with other initiatives under National Health Mission (NHM) and POSHAN Abhiyaan for achieving better health outcomes of our nation.

(Jagat Prakash Nadda)

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FOREWORD

India is one of the countries with anemia as a serious public health concern today. Almost 50 percent of the pregnant women, 59 percent of children under five years of age, 54 percent of adolescent girls and 53 percent of non-pregnant non-lactating women of our country are anemic.

Anemia during pregnancy is associated with post-partum hemorrhage, neural tube defects, low birth weight, premature births, stillbirths and maternal deaths. In other populations, anemia is associated with lowered immunity, poor cognitive development and decreased work productivity.

The morbidity and mortality risks associated with anemia calls for an urgent need to design an effective strategy to address this public health problem. The decline in anemia prevalence will in turn contribute in improved maternal and child survival rates, and improved health outcomes for other population groups.

Concerted efforts to address this challenge, in congruence with the recently launched POSHAN Abhiyaan and convergent actions in form of the "Anemia Mukt Bharat" strategy are a welcome step. We urge States, Union Territories and key stakeholders to build priority on this strategy aiming to achieve long term health and economic outcomes.

These Operational Guidelines for Programme Managers have been designed to serve as a handbook and a resource for effective planning and implementation. We are hopeful that these guidelines will prove to be useful for service providers and programme managers at all the levels of implementation.

We are confident that the Anemia Mukt Bharat initiative integrated with initiatives under National Health Mission (NHM) and POSHAN Abhiyaan would contribute in achieving the envisaged outcomes for the country's population.

Ms. Preeti Sudan
Secretary
Ministry of Health & Family Welfare
Government of India

Sh. Rakesh Srivastava
Secretary
Women & Child Development
Government of India

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PREFACE

India has been facing the challenge of high prevalence of anemia, but a comprehensive strategy to tackle the issue had been missing. Technical guidelines for control of Iron Deficiency Anaemia in children and pregnant women and lactating mothers were in place but the operational mechanisms for implementing the same were needed.

The Anemia Mukt Bharat- Operational Guidelines are an attempt to provide the programme managers a simple operational strategy for implementation at all levels of care and service delivery.

The guidelines delineate the prophylactic management of anemia across all ages and provide the testing and treatment strategy for particular population groups of In-school adolescents and pregnant mothers receiving antenatal care.

These guidelines build on past and continuing work on anaemia prevention and control in India.

I am confident that the State Governments and other stakeholders will make adequate efforts to ensure that appropriate linkages and mechanisms for training, monitoring and operationalizing this strategy are established at the earliest for effective implementation, so that together we can build a healthy, Anemia Mukt Bharat.

Manoj Jhalani
Additional Secretary & Mission Director
National Health Mission
Ministry of Health & Family Welfare
Government of India, New Delhi

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PROLOGUE

Anemia impairs cognitive and motor development among children, increases their susceptibility to illness, and in adults reduces work capacity and productivity. In pregnancy, this contributes to high maternal and neonatal mortality and morbidity, obstetrical risks, impairment of fetal development and low birth weight.

Recent data as per National Family Health Survey-4 shows that anemia affects 53% of women in reproductive age group (15–49 years), 23% of men and 50% of pregnant women in the country. Further analysis shows considerably high disparity of anemia prevalence among rural and urban areas, where disadvantaged groups (particularly scheduled tribes) and children and women in households in the lower wealth quintiles have higher prevalence of anemia.

India's National Health Policy (2017) recognizes anemia as a deterrent to maternal and child survival and overall productivity of the nation. The policy also emphasizes on a need for intensifying efforts to address all causes of anemia for accelerating decline in anemia prevalence, in a mission mode using a unified multi-pronged strategy rather than multiple programmes. At the same time, Government of India has also made a commitment to Global World Health Assembly target of 50% reduction of anemia among women of reproductive age by 2025 and the POSHAN Abhiyaan (2018–2020), ambitious target to reduce prevalence of anemia among children 6–59 months, adolescents and women of reproductive age 15–49 years by 3 percentage points per year.

In view of the above mentioned national and global commitments, the Ministry of Health and Family Welfare has developed the Anemia Mukt Bharat strategy and Operational Guidelines, providing preventive and curative mechanisms through a 6X6X6 strategy including six target beneficiaries, six interventions and six institutional mechanisms, for all stakeholders to implement the strategy. The strategy also talks about newer initiatives such as use of advanced methods of haemoglobin estimations using digital haemoglobinometers, and point of care management of anemia among in-school adolescents and pregnant women.

I am hopeful that States will find the Anemia Mukt Bharat Operational Guidelines useful in pro-actively implementing the overall strategy and thus in turn have a positive impact on the health and economic status of the county.

Vandana Gurnani
Joint Secretary, RMNCH+A
Ministry of Health & Family Welfare
Government of India, New Delhi

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ACKNOWLEDGEMENT

The Anemia Mukt Bharat operational guidelines for programme managers have been prepared after numerous consultations among Ministry of Health and Family Welfare, domain experts and organizations namely WHO, UNICEF, Nutrition International, BMGF, Alive & Thrive, Ashoka University, PHFI and IFPRI.

I would like to acknowledge the overall guidance and vision provided by Ms. Preeti Sudan Secretary MoHFW, Mr. Rakesh Srivastava Secretary MWCD, Mr. Manoj Jhalani AS&MD MoHFW and Mr. Ajay Tirkey AS MWCD in drafting this strategy. The support of Ms. Vandana Gurnani JS (RCH) MoHFW and Dr. Rajesh Kumar JS MWCD has been instrumental in conceptualization and finalization of this strategy and operational guidelines.

I am also thankful for the technical contribution provided by Dr. Sila Deb DC (Child Health), Dr. Dinesh Baswal, DC (Maternal Health), Dr Sushma Dureja, DC (Adolescent Health), Dr Zoya Ali Rizwi, AC(Adolescent Health). The efforts of UNICEF, Centre for Community Medicine AIIMS New Delhi teams and Ms. Shikha Yadav, Senior Consultant-Maternal and Adolescent Anemia, in finalizing the guidelines are highly appreciated.

We are hopeful that policy makers, State and District officers and programme managers and other stakeholders at different levels of implementation will find these guidelines as a resourceful tool for effective implementation. of the strategy as envisaged.

Dr. Ajay Khera
M.D. (Public Health)
Public Health Specialist
& Deputy Commissioner In charge
Ministry of Health & Family Welfare

ACRONYMS

ANC	Antenatal Care
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
AWC	Anganwadi Centre
AWW	Anganwadi Worker
BEO	Block Education Officer
CHC	Community Health Centre
CDPO	Child Development Project Officer
DALY	Disability Adjusted Life Years
DH	District Hospital
DIET	District Institute for Education and Training
FCM	Ferric Carboxy Maltose
FRU	First Referral Unit
Hb	Haemoglobin
HMIS	Health Management Information System
ICDS	Integrated Child Development Services
IDA	Iron Deficiency Anemia
IFA	Iron Folic Acid
ITBN	Insecticide Treated Bed Nets
IV	Intra Venous
LBW	Low Birth Weight
MAA	Mothers' Absolute Affection
MO	Medical Officer
MHRD	Ministry of Human Resource and Development
MoHFW	Ministry of Health and Family Welfare
MPV	Mission Parivar Vikas

MWCD	Ministry of Women and Child Development
NCEAR-A	National Centre of Excellence and Advanced Research on Anemia
NCERT	National Council of Educational Research and Training
NDD	National Deworming Day
NIPCCD	National Institute of Public Cooperation and Child Development
NHFS	National Family Health Survey
NHM	National Health Mission
NHSRC	National Health Systems Resource Centre
NRLM	National Rural Livelihood Mission
NVBDCP	National Vector Borne Disease Control Programme
PHC	Primary Health Centre
POSHAN Abhiyaan	PM's Overarching Scheme for Holistic Nourishment Abhiyaan
PHN	Public Health Nurse
PMSMA	Pradhan Mantri Surakshit Matritva Abhiyaan
PNC	Post Natal Care
PW	Pregnant Woman
RBC	Red Blood Count
RBSK	Rashtriya Bal Swasthya Karyakram
RKSK	Rashtriya Kishor Swasthya Karyakram
SAM	Severe Acute Malnutrition
SRLM	State Rural Livelihood Mission
SIHFW	State Institute of Health and Family Welfare
VHND	Village Health and Nutrition Day
VHSNC	Village Health Sanitation and Nutrition Committee
WIFS	Weekly Iron Folic Acid Supplementation
WRA	Women in Reproductive Age

CONTENTS

1

INTRODUCTION

Anemia is a condition in which the number of red blood cells or their oxygen-carrying capacity is insufficient to meet the body's physiological requirements, which vary by age, sex, altitude, smoking habits, and during pregnancy.

The manifestations of anemia vary by its severity and range from fatigue, weakness, dizziness and drowsiness to impaired cognitive development of children and increased morbidity. Anemia in pregnancy is associated with post-partum haemorrhage, neural tube defects, low birth weight, premature births, stillbirths and maternal deaths. In malaria endemic regions, anemia is one of the most common preventable causes of maternal and child deaths. In its most severe form, anemia can also lead to death. There are many causes of anemia, out of which iron deficiency accounts for about 50 percent of anemia in school children and among women of reproductive age-group, and 80 percent in children 2–5 years of age (UNICEF and WHO Joint statement 2001).

Anemia, like fever, is a manifestation, not a disease. It can be prevented and treated.

Other nutritional deficiencies besides iron, such as vitamin B_{12}, folate and vitamin A, can cause anemia although the magnitude of their contribution is unclear. Infectious diseases – in particular malaria, helminth infections, tuberculosis and haemoglobinopathies – are other important contributory causes to the high prevalence of anemia (WHO and UNICEF, 2004).

Anemia is defined as haemoglobin concentration below established cut-off levels in the blood. The haemoglobin cut-offs which are used for diagnosing anemia across ages are described in Table 1.

Table 1: Haemoglobin levels to diagnose anemia (g/dl)

Population	Anemia		
	Mild	Moderate	Severe
Children 6–59 months of age	10–10.9	7–9.9	<7
Children 5–11 years of age	11–11.4	8–10.9	<8
Children 12–14 years of age	11–11.9	8–10.9	<8
Non-pregnant women (15 years of age and above)	11–11.9	8–10.9	<8
Pregnant women	10–10.9	7–9.9	<7
Men (15 years of age and above)	11–12.9	8–10.9	<8

Source: WHO- Nutritional Anemia: Tools for Effective Prevention and Control, 2017

According to the National Family Health Survey 4 (NFHS-4), 2015/16, anemia prevalence across all ages is extremely high in India; varying from 30 percent to 69 percent (Table 2). It is also to be noted that in the last 10 years (NFHS-3, 2005/06 to NFHS-4, 2015/16), the percentage point reduction of anemia prevalence has been extremely low in most age groups (Table 2).

Table 2: Prevalence of anemia in India

Age group	2006 (NFHS-3)	2016 (NFHS-4)	Decline in 10 years (2006–2016) in percent points
Children 6–59 months (Haemoglobin<11 g/dl), %	69	58	11
Adolescent girls 15–19 years (Haemoglobin<12 g/dl), %	56	54	2
Adolescent boys 15–19 years (Haemoglobin<13 g/dl), %	30	29	1
Women of reproductive age (Haemoglobin<12 g/dl), %	55	53	2
Pregnant women (Haemoglobin<11 g/dl), %	58	50	8
Lactating women (Haemoglobin<12 g/dl), %	63	58	5

Source: NFHS-3 (2005/06) and NFHS-4 (2015/16)

Anemia is widespread across most age groups across all states in the country (Annexure 1), which demands a universal approach across the country.

The Government of India has been addressing the problem of anemia, through National Nutritional Anemia Control Programme and later adopting a life cycle approach under the National Iron Plus Initiative (NIPI), Ministry of Health and Family Welfare (MoHFW), Government of India (2013).[1]The Interventions include age-appropriate iron and folic acid (IFA) supplementation for all age groups and a treatment protocol for facility-based management of anemia. Apart from NIPI, there are other programmes which address causes of anemia other than iron deficiency, such as National Deworming Day (NDD) for deworming, National Vector Borne Disease Control Programme (NVBDCP) for malaria and special efforts to reach out to populations affected with haemoglobinopathies and National Programme for Prevention and Control of Fluorosis. Simultaneously, behaviour change communication programmes to promote the consumption of iron-rich foods, vitamin C as iron absorption enhancer, adopting sanitation-hygiene practices and promoting the consumption of Iron Folic Acid fortified foods are also carried out.

India's National Health Policy (2017), as well as the National Nutrition Strategy (2017), recognizes that anemia is posing harmful consequences for maternal and child survival and productivity of the nation. There is a need for intensifying efforts to address all causes of anemia for accelerating decline in anemia prevalence among all age groups in a mission mode using a multi-pronged strategy rather than scattered programmes. The Government of India is also committed to the World Health Assembly target of 50 percent reduction of anemia among women of reproductive age by 2025 and the POSHAN Abhiyaan (2018–2020), target to reduce prevalence of anemia among children (6–59 months), adolescents and women of reproductive age (15–49 years) by 3 percentage points per year.

Global and national lessons indicate that if concerted efforts are made for reducing anemia through the highest political commitment, target-setting across age groups, strengthening programme coverage, addressing procurement and supply chain management issues, robust monitoring and review systems and intensive behaviour change communication, with special focus on vulnerable geographies, it is possible to achieve the desired goals.

In this context, the Anemia Mukt Bharat strategy has been designed, building up on the technical and operational evidence from National Iron Plus Initiative (NIPI) and Weekly Iron and Folic Acid (WIFS) programmes, with a multi-pronged approach and a more robust operational and accountability framework.

[1] http://nhm.gov.in/images/pdf/programmes/child-health/guidelines/Control-of-Iron-Deficiency-Anaemia.pdf. National Iron Plus Initiative National Iron Plus Initiative (NIPI), MoHFW, Government of India (2013)

2

OBJECTIVES

The reduction of anemia is one of the important objectives of the POSHAN Abhiyaan launched in March 2018. Complying with the targets of POSHAN Abhiyaan and National Nutrition Strategy set by NITI Aayog, the Anemia Mukt Bharat strategy has been designed to reduce prevalence of anemia by 3 percentage points per year among children, adolescents and women in the reproductive age group (15–49 years), between the year 2018 and 2022.

The strategy is estimated to reach out to 450 million beneficiaries with specific anemia prevalence targets for year 2022 to be achieved among various population groups (Table 3a and Table 3b).

Table 3: Anemia Mukt Bharat beneficiaries and anemia reduction targets for different age groups for 2022

Table 3a: Anemia Mukt Bharat Beneficiaries

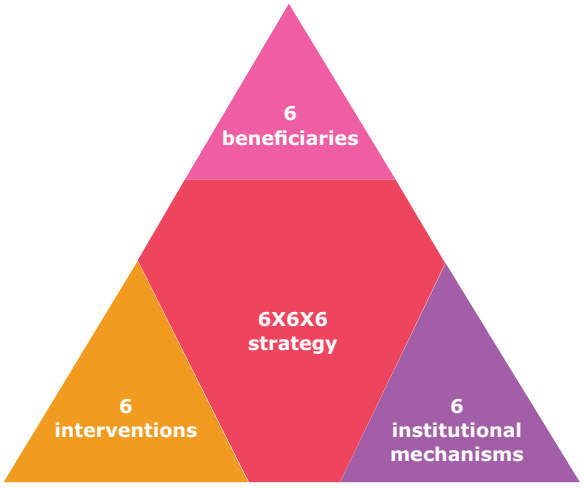
Age group	Estimated beneficiaries (in millions)
Children (6–59 months)	124
Children (5–9 years)	134
Adolescent boys (10–19 years)	47
Adolescent girls (10–19 years)	68
Women of reproductive age (20–24 years)	17
Pregnant women	30
Lactating women	27
Total beneficiaries	~450 million

Beneficiary estimations are as per Census 2011 estimations for 2017. Estimated number of beneficiaries will be annually revised and updated. While all women of reproductive age should ideally be covered, the estimated number of beneficiaries are those women aged 20–24 years from Mission Parivar Vikas Yojana who will be initially covered in Anemia Mukt Bharat.

Table 3b: Anemia Mukt Bharat Anemia reduction Targets for 2022

Age group	Anemia prevalence (%)	
	Baseline (NFHS 4)	National target 2022 (at 3 percentage points per annum from baseline)
Children (6–59 months)	58	**40**
Adolescent girls (15–19 years)	54	**36**
Adolescent boys (15–19 years)	29	**11**
Women of reproductive age	53	**35**
Pregnant women	50	**32**
Lactating Women	58	40

A snapshot of the Anemia Mukt Bharat 6X6X6 strategy is depicted below. Details of each component of the strategy will be described in later chapters.



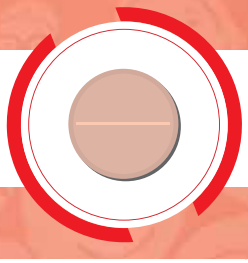
Approximately 450 million beneficiaries – nearly 50% of the country's population – will be reached

3

INTERVENTIONS

1. Prophylactic Iron Folic Acid supplementation

2. Deworming

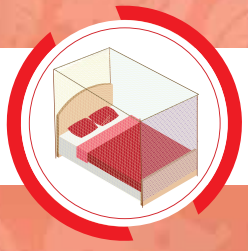


3. Intensified year-round Behaviour Change Communication Campaign (Solid Body, Smart Mind) including ensuring delayed cord clamping

4. Testing of anemia using digital methods and point of care treatment

5. Mandatory provision of Iron Folic Acid fortified foods in public health programmes

6. Addressing non-nutritional causes of anemia in endemic pockets, with special focus on malaria, haemoglobinopathies and fluorosis



The Anemia Mukt Bharat strategy is a universal strategy and will focus on the following **six** interventions:

1. Prophylactic Iron and Folic Acid supplementation
2. Deworming
3. Intensified year-round Behaviour Change Communication Campaign (Solid Body, Smart Mind) focusing on four key behaviours – (a) Improving compliance to Iron Folic Acid supplementation and deworming, (b) Appropriate infant and young child feeding practices, (c) Increase in intake of iron-rich food through diet diversity/quantity/frequency and/or fortified foods with focus on harnessing locally available resources and (d) Ensuring delayed cord clamping after delivery (by 3 minutes) in health facilities
4. Testing and treatment of anemia, using digital methods and point of care treatment, with special focus on pregnant women and school-going adolescents
5. Mandatory provision of Iron and Folic Acid fortified foods in government-funded public health programmes
6. Intensifying awareness, screening and treatment of non-nutritional causes of anemia in endemic pockets, with special focus on malaria, haemoglobinopathies and fluorosis

The Anemia Mukt Bharat strategy will be implemented in all villages, blocks, and districts of all the States/UTs of India through existing delivery platforms as envisaged in the National Iron Plus Initiative (NIPI) and Weekly Iron Folic Acid Supplementation (WIFS) programme.

3.1 Prophylactic Iron and Folic Acid (IFA) supplementation

Prophylactic Iron Folic Acid supplementation given to children, adolescents, women of reproductive age and pregnant women, irrespective of anemia is a key continued intervention under Anemia Mukt Bharat.

Service delivery platform for IFA supplementation:

- **Children 6–59 months**
  - » Children 6–59 months will be reached with biweekly IFA syrup by ASHA through home visits and mothers will be equipped with skills to provide biweekly IFA dose in households. State can choose to distribute the 50 ml IFA syrup bottle (with auto-dispenser) to mothers through respective ASHA on VHND or utilized platforms like dedicated rounds such as Vitamin A round, etc. ASHA will receive the required number of IFA syrup bottle from the PHC/sub-centre. ASHA will provide IFA syrup (1 ml) biweekly for the first week during the home visit under her supervision.
  - » Additionally, ASHA will demonstrate skills to mothers/ caregivers to provide IFA syrup through the auto-dispenser bottle and counsel mothers on the benefits of IFA syrup for their child, improving iron and folate content of the diets and the importance of sanitation and hygienic practices in order to prevent anemia and worm infestation in the child.
  - » From the second week onwards up to the month end (the remaining 6 doses for the month), ASHA will undertake a fortnightly home visits and encourage the mothers to administer IFA syrup to their child themselves in her presence. This would help in confidence building of the mothers in providing IFA syrup to her child. ASHA will record compliance in the IFA compliance card attached with the MCP card and teach mothers to mark the compliance after administering every dose.
  - » After a month, it is expected that mothers would acquire the required skills and confidence in providing IFA syrup to their child twice a week and marking the same on the compliance card.
  - » In addition, screening for anemia in children under-5 years will be done biannually and follow-up with the children diagnosed with anemia in scheduled visits by Rashtriya Bal Swasthya Karyakram (RBSK) team as per protocol.

- **School children 5–9 years** will be provided weekly IFA (Pink) tablet in schools using spot feeding approach of IFA after the mid-day meal through teachers in Government aided schools and after lunch break in private schools. Out-of-school children between 5–9 years will be provided IFA tablets through ASHA during home visits. States may consider rolling out this protocol in private schools, as per their discretion.

- **School-going adolescents 10–19 years** will be provided weekly IFA (Blue) tablets by school teachers. In addition, these adolescents will also be screened for anemia annually and provided point-of-care treatment after referral from RSBK teams.
- **Out-of-school adolescent girls 10–19 years** will be provided IFA (Blue) tablets through quarterly Adolescent Health Day component of Rashtriya Kishore Swasthya Karyakram (RKSK) programme at Anganwadi centres.
- **Women of reproductive age (WRA)** who are not pregnant or non-lactating will be provided weekly IFA (Red) tablets. Each state is encouraged to integrate provision of IFA tablets, Folic Acid tablets and deworming (albendazole) for WRA interventions through immunization day/VHND platform where feasible. To begin with, the strategy will focus on providing IFA tablet in Nayi Pehal Kit for target group for women of reproductive age 20–24 years using Mission Parivar Vikas platform in eight states. States should ensure preparation of line listing of newly weds and married women of 20–24 years age by ANM/HW-F using the Eligible Couple Register (ECR). ASHA will mobilize the target beneficiaries to attend the VHNDs, where they will be counseled by ANM on the importance of IFA supplementation and deworming to prevent anemia. Beneficiaries will be encouraged to undergo haemoglobin testing at the nearest health facility and, if diagnosed to be anemic, treatment will be provided as per protocol with advice on supplementation, once the Hb is normal. If Hb is found to be normal, weekly IFA supplementation will be provided and if the woman is planning for pregnancy, she is to be counselled to stop IFA supplementation and initiate Folic Acid supplementation. If she is already pregnant and in the first trimester of pregnancy, she will be counseled to continue Folic Acid supplementation till 12 weeks of pregnancy and begin IFA supplementation after 12 weeks as per standard ANC protocol. The Folic Acid tablets will be provided at the VHND/SCs by ANM.
- **Pregnant women** will be provided services under the strategy through antenatal care contacts (ANC clinics/VHND/PMSMA), receipt of IFA and Folic Acid tablets, screening and point-of-care treatment of anemia, and screening and prevention of malaria.
- **Lactating women** will be provided IFA tablets via the VHND platform when they bring their children for immunization.
- **All target groups** will be reached through age-appropriate Behaviour Change Communication (BCC) activities using monthly group counselling platforms, service delivery contacts and home visits for targeted groups by ASHA.

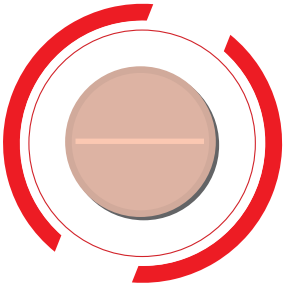
Table 4: Prophylactic dose and regime for Iron Folic Acid supplementation

Age group	Dose and regime
Children 6–59 months of age	Biweekly, 1 ml Iron and Folic Acid syrup Each ml of Iron and Folic Acid syrup containing 20 mg elemental Iron + 100 mcg of Folic Acid Bottle (50ml) to have an 'auto-dispenser' and information leaflet as per MoHFW guidelines in the mono-carton (*See Note 1*)
Children 5–9 years of age	Weekly, 1 Iron and Folic Acid tablet Each tablet containing 45 mg elemental Iron + 400 mcg Folic Acid, sugar-coated, pink colour
School-going adolescent girls and boys, 10–19 years of age Out-of-school adolescent girls, 10–19 years of age	Weekly, 1 Iron and Folic Acid tablet Each tablet containing 60 mg elemental iron + 500 mcg Folic Acid, sugar-coated, blue colour (*See Note 2*)
Women of reproductive age (non-pregnant, non-lactating) 20–49 years	Weekly, 1 Iron and Folic Acid tablet Each tablet containing 60 mg elemental Iron + 500 mcg Folic Acid, sugar-coated, red colour (*See Note 2*)
Pregnant women and lactating mothers (of 0–6 months child)	Daily, 1 Iron and Folic Acid tablet starting from the fourth month of pregnancy (that is from the second trimester), continued throughout pregnancy (minimum 180 days during pregnancy) and to be continued for 180 days, post-partum Each tablet containing 60 mg elemental Iron + 500 mcg Folic Acid, sugar-coated, red colour

Note 1: Prophylaxis with iron should be withheld in case of acute illness (fever, diarrhoea, pneumonia, etc.), and in a known case of thalassemia major/history of repeated blood transfusion. In case of SAM children, IFA supplementation should be continued as per SAM management protocol.

Note 2: All women in the reproductive age group in the pre-conception period and up to the first trimester of the pregnancy are advised to have 400 mcg of Folic Acid tablets, daily, to reduce the incidence of neural tube defects in the foetus.

[2] National Iron Plus Initiative, GoI (2013)
http://nhm.gov.in/images/pdf/programmes/child-health/guidelines/Control-of-Iron-Deficiency-Anaemia.pdf



3.2 Deworming

- **Children and adolescents:** To intensify efforts towards Soil transmitted Helminths (STH) control in India, the Ministry of Health and Family Welfare has been implementing the National Deworming Day programme under which biannual mass deworming (albendazole tablet) for children and adolescents in the age groups between 1 and 19 years is carried out on designated dates – 10 February and 10 August every year. Under this strategy, under-five children, out-of-school children and adolescents are provided deworming tablet at Anganwadi centres by AWWs, whereas school-going children and adolescents are provided the deworming treatment through school platform.
- **Newly wed/married women 20–24 years** who are not pregnant or non-lactating will be provided biannual deworming during NDD.
- **Pregnant women** will be provided services under the strategy through antenatal care contacts (ANC clinics/ VHND) for deworming (in the second trimester). The PMSMA platform is to be strengthened for deworming of pregnant women in the second trimester.

Table 5 reiterates the deworming dose and regime to be followed.

Table 5: Dose and regime for deworming

Age group	Dose and regime
Children 12–59 months of age	Biannual dose of 400 mg albendazole (½ tablet to children 12–24 months and 1 tablet to children 24–59 months)
Children 5–9 years of age	Biannual dose of 400 mg albendazole (1 tablet)
School-going adolescent girls and boys 10–19 years of age Out-of-school adolescent girls 10–19 years of age	Biannual dose of 400 mg albendazole (1 tablet)
Women of reproductive age (non-pregnant, non-lactating) 20–49 years	Biannual dose of 400 mg albendazole (1 tablet)
Pregnant women	One dose of 400 mg albendazole (1 tablet), after the first trimester, preferably during the second trimester

3.3 Intensified year-round Behaviour Change Communication Campaign (Solid Body, Smart Mind) including ensuring delayed cord clamping in newborns

There is sufficient evidence that repeated engagement using consistent key messaging is required for any behaviour to change, or to initiate new behaviour so that it becomes a practice. The various behaviour change communication activities of the strategy will address four key behaviours:

1. Compliance to Iron Folic Acid supplements and deworming
2. Appropriate Infant and Young Child Feeding (IYCF) with emphasis on adequate and age-appropriate complementary foods for children 6 months and above
3. Increase intake of iron-rich, protein-rich and vitamin C-rich foods through dietary diversification/quantity/frequency and food fortification
4. Promoting practice of delayed cord clamping (by at least 3 minutes or until cord pulsations cease) in all health facility deliveries followed by early initiation of breastfeeding within 1 hour of birth

Various activities prepared for behaviour change include sensitization meetings for the media, school teachers and administration, faith leaders, panchayat leaders, Village Health Sanitation and Nutrition Committee (VHSNC), etc.

Year-round broadcast of messages for 'Anemia Mukt Bharat' should be carried out through mass media and social media (Whatsapp and Twitter).

For community- and school-level communication, morning assemblies at schools will be utilized to discuss 'nutrition and anemia'. Youth festivals organized at school platform will also be utilized to generate discussions and dialogue on anemia and nutrition. Monthly meeting of ASHA and mothers' group will also be held at the existing platforms such as monthly Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) sites, monthly meetings as planned under Mother's Absolute Affection (MAA)[3] programme, weekly Self Help Groups (SHGs) meeting under the State Rural Livelihood Mission (Maitri Baithaks), etc.

Special press advertisements on occasions such as National Nutrition Week, National Deworming Day, Women's Day, World's Breastfeeding Week, and World Health Day including engagements with celebrities (local, national and international) will be used to amplify the communication strategy.

A comprehensive communication package for the strategy is available for use by the States which may be adapted as per requirement (Annexure 2). These can be downloaded from the Anemia Mukt Bharat portal: **www.anemiamuktbharat.info** (Annexure 3)

States can develop appropriate behaviour change communication plans through a range of communication channels such as using mass media through mobile phones, out-bound calls or text messages and interactive voice response system (IVRS), etc. as a need-based communication strategy.

Promotion and monitoring of delayed clamping of the umbilical cord for at least 3 minutes (or until cord pulsations cease) for newborns across all health facilities will be carried out for improving the infant's iron reserves up to 6 months after birth. Simultaneously, all birth attendants should make an effort to ensure early initiation of breastfeeding within 1 hour of birth.

3.4 Testing and treatment of anemia, with focus on pregnant women and school-going adolescents

Screening and testing of anemia is important in all age groups so that appropriate treatment may be initiated as per the haemoglobin level of the individual. The current method of haemoglobin estimation in the field uses SAHLI's method, which needs to be replaced with newer advanced technologies for the available haemoglobin estimation.

[3] Mother's Absolute Affection (MAA) - http://nhm.gov.in/MAA/Operational_Guidelines.pdf

Therapeutic Management of Anemia

Table 6: Anemia management protocol for children:

Target group A	**Children 6–59 months**
Who will screen and place of screening	ANM: VHND/sub-centre/session site RSBK team: AWC/school Medical Officer: health facility
Periodicity	• RBSK/ANM: as per scheduled microplan • MO: opportunistic
If Haemoglobin is 7–10.9 g/dl (mild and moderate anemia)	
First level of treatment (at all levels of care)	3 mg of iron/kg/day for 2 months • For children 6–12 months (6–10.9 kg): 1 ml IFA syrup, once a day • For children 1–3 years (11–14.9 kg): 1.5 ml IFA syrup, once a day • For children 3–5 years (15–19.9 kg): 2 ml IFA syrup, once a day Line listing for all anemic children to be maintained by the ANM/ ASHA/ AWW
Follow-up	• Every month by ANM at VHND • Hb estimation after 2 months for completing 2 months of treatment to document Hb>= 11g/dl • Monitoring by ASHA for compliance of IFA syrup every 14 days for a period of 2 months If haemoglobin levels have improved to normal level, discontinue the treatment, but continue with the prophylactic IFA dose
If no improvement after first level of treatment	In case the child has not responded to the treatment of anemia with daily dose of iron for 2 months, refer the child to the FRU/DH medical officer/paediatrician/physician for further investigation
If Haemoglobin is <7 g/dl (severe anemia)	
Treatment	• Refer urgently to District Hospital/First Referral Unit • Management of severe anemia in children of 6–59 months is to be done by the medical officer at the First Referral Unit/ District Hospital based on investigation

Target group B	**Children 5–9 years**
Who will screen and place of screening	RSBK teams will screen in-school and out-of-school children for anemia. All children with clinical signs and symptoms of anemia will be referred to SC/PHC for Hb estimation and further management
Periodicity	• Once a year • Opportunistic screening, e.g., routine Hb assessment of sick children presented to health facility
If Haemoglobin is 8–11.4 g/dl (mild and moderate anemia)	
First level of treatment (at all levels of care)	3 mg of iron/kg/day for 2 months Line listing of all anemic cases to be maintained in the school register for Iron Folic Acid supplementation and given to the ANM/ LHV/Multiple Purpose Health Worker for designated area
Follow-up	• Class teacher/ Nodal teacher at school to orient parents during Parent Teacher Meeting (PTM) for compliance of treatment • Parents to ensure follow-up of child after 30 days and 60 days at nearest SC/health facility • Follow-up by ANM/LHV/MPW of designated area, as feasible. • Hb estimation after completing 2 months of treatment to document Hb>=11.5 g/dl • If haemoglobin levels have improved to normal level, discontinue the treatment, but continue with the prophylactic IFA dose
If no improvement after first level of treatment	In case the child has not responded to the treatment of anemia with daily dose of iron for 2 months, refer the child to the FRU/DH medical officer/paediatrician/physician for further investigation
If Haemoglobin is <8 g/dl (severe anemia)	
Treatment	• Refer urgently to District Hospital/First Referral Unit • Management of severe anemia in children of 5–9 years is to be done by the medical officer at the First Referral Unit/District Hospital based on investigation

The strategy thus proposes the use of digital haemoglobinometers for haemoglobin level estimations (specifications at Annexure 4) in two beneficiaries groups namely;

a) adolescent girls and boys 10–19 years, in government and government-aided schools

b) pregnant women registered for antenatal check-ups. This may be extended to all age groups later.

In-school adolescents will be screened by the Rashtriya Bal Swasthya Karyakram (RBSK) mobile teams using **digital haemoglobinometers.**

Schools should plan to sensitize the students and parents during Parent Teacher Meetings, about the planned health check-up by the RBSK teams, test and treat strategy for anemia and importance of diagnosis and control of anemia in adolescents for improvement in health and overall performance at schools. If needed, private schools should opt for informed consent of parents for Hb testing of adolescents.

After the visit of RBSK team and screening of adolescents, a line list of identified anemic adolescents prepared by RBSK teams will be shared with Nodal teacher/class teacher, so that the school can inform the parents as well as the nearby Sub-Centre/Primary Health Centre/Health and Wellness Centre for treatment, follow-up and dietary counselling. Parents should be counselled on the importance of compliance to treatment and regular follow-up along and adhere to the dosage regime, as well as Dos and Don'ts as advised by the medical officer/nurse/ANM.

Testing of anemia in pregnant women will be done using **digital haemoglobinometers** at all ANC contact points. At all high case load facilities at the block level and above, haemoglobin level estimation will be done using Semi-Auto Analyzers.

[4]Rashtriya Bal Swasthya Karyakram (RBSK) http://nhm.gov.in/nrhm-components/rmnch-a/child-health-immunization/rashtriya-bal-swasthya-karyakram-rbsk/2013-12-19-08-30-24.html

Table 7: Anemia management protocol for adolescents

Target group	**All school-going adolescents 10–19 years in government/ government-aided schools**
Who will screen and place of screening	In school premises by RSBK team
Periodicity	Annually
Mild and Moderate Anemia (Hb cut-off as per Table 1)	
First level of treatment (at all levels of care)	Two IFA tablets (each with 60 mg elemental iron and 500 mcg folic acid), once daily, for 3 months, orally after meals
Follow-up	• Line listing of all anemic cases to be maintained in the school register for Iron Folic Acid supplementation and given to the ANM/LHV/MPHW of designated area • Follow-up by ANM/LHV/MPHW of designated area, as feasible for the state • Parents to ensure follow-up of adolescent after 45 days to 90 days at the nearest sub-centre/ health facility • If haemoglobin levels have improved to normal level, discontinue the treatment, but continue with the prophylactic IFA dose
If no improvement after first level of treatment	If no improvement after three months of treatment (i.e., still in mild/moderate category), ANM/MO of nearest facility to refer adolescent to First Referral Unit (FRU)/District Hospital (DH)
If Haemoglobin is <8 g/dl (severe anemia)	
First dose of treatment	Management of severe anemia in adolescents 10–19 years is to be done by the medical officer at FRU/DH based on investigation and subsequent diagnosis

[5]Pradhan Mantri Surakshit Matritva Abhiyan - https://pmsma.nhp.gov.in

Table 8: Anemia management protocol for pregnant women

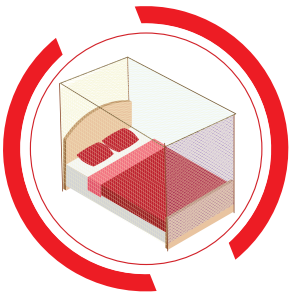
Target group	Pregnant women registered for antenatal care
Who will screen and place of screening	Health service provider at any ANC contact, including Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA)[5]
Periodicity	At every ANC contact
If Haemoglobin is 10–10.9 g/dl (mild anemia)	
First level of treatment (at all levels of care)	• Two tablets of Iron and Folic Acid tablet (60 mg elemental Iron and 500 mcg Folic Acid) daily, orally given by the health provider during the ANC contact • Parental iron (IV Iron Sucrose or Ferric Carboxy Maltose (FCM) may be considered as the first line of management in pregnant women who are detected to be anemic late in pregnancy or in whom compliance is likely to be low (high chance of lost to follow-up)
Follow-up	• Every 2 months for compliance of treatment by health provider during the contact • If haemoglobin levels have come up to normal level, discontinue the treatment and continue with the prophylactic IFA dose
If no improvement after first level of treatment	If no improvement in haemoglobin (<1 g/dl increase) after one month of treatment, refer to First Referral Unit (FRU)/District Hospital (DH) by health provider The case to be referred to FRU/DH for further investigations for cause of anemia and may be managed with IV Iron Sucrose/ FCM
If Haemoglobin is 7–9.9 g/dl (moderate anemia)	
First level of treatment (at all levels of care)	Two tablets of Iron and Folic Acid tablet (60 mg elemental Iron and 500 mcg Folic Acid) daily, orally given by the health provider during the ANC contact • Parental iron (IV Iron Sucrose or FCM) may be considered as the first line of management in pregnant women who are detected to be anemic late in pregnancy or in whom compliance is likely to be low (high chance of lost to follow-up)
Follow-up	• Every 2 months for compliance of treatment by health provider at regular ANC clinics/PMSMA/VHND platform. • The contact is to be utilized by the health provider to also conduct haemoglobin estimation of the anemic cases every month. If haemoglobin levels have come up to normal level, discontinue the treatment and continue with the prophylactic IFA dose.

If no improvement after first level of treatment	If no improvement in haemoglobin (<1 g/dl increase) after two month of treatment, refer to First Referral Unit (FRU)/District Hospital (DH) by health provider The case to be referred to FRU/DH for further investigations for cause of anemia and may be managed with IV Iron Sucrose/ FCM
If Haemoglobin is 5.0–6.9 g/dl (severe anemia)	
First level of treatment	Management of severe anemia in pregnant women will be done by the medical officer at PHC/CHC/FRU/DH The treatment will be done using IV Iron Sucrose/Ferric Carboxy Maltose (FCM) by the medical officer *Immediate hospitalization recommended in the third trimester of pregnancy at a health facility where round-the-clock specialist care is available
Follow-up after first level of treatment	After the first level of treatment, monthly or as prescribed by the medical officer
Treatment protocol if no improvement	As prescribed by the medical officer
Note	For severely anemic pregnant women with haemoglobin less than 5 g/dl, immediate hospitalization irrespective of period of gestation where round-the-clock specialist care is available. This is to be done till normal level of haemoglobin is achieved.

Management protocol for severe anemia mentioned in Tables 6–8 is contraindicated for patients with thalassemia major and sickle cell disease. Treatment of anemia through folic acid is recommended in thalassemia major cases.

3.5 Mandatory provision of Iron and Folic Acid fortified foods in government-funded health programmes:

The Government of India has mandated the use of fortified salt, wheat flour and oil in foods served under Integrated Child Development Services (ICDS) and Mid-day Meal (MDM) schemes to address micronutrient deficiencies. In addition, all health facility-based programmes where food is being provided are mandated to provide fortified wheat, rice (with iron, folic acid and vitamin B12), and double fortified salt (with iodine and iron), and oil (with vitamin A and D) as per standards for fortification of staple foods (salt, wheat, rice, milk and oil) prescribed and notified by the Food Safety and Standard Authority of India (FSSAI, 2016).



3.6 Intensifying awareness, screening and treatment of non-nutritional causes of anemia in endemic pockets, with special focus on malaria, haemoglobinopathies and fluorosis

The strategy attempts to intensify awareness and integrate screening and treatment for following non-nutritional causes of anemia with special focus on malaria, haemoglobinopathies and fluorosis.

Malaria:

As the country is committed towards malaria elimination by 2030, States have identified high malaria-endemic districts/ blocks/sub-centres and villages for intensification of malaria prevention and control activities.

The prevention and control strategy for nutritional anemia is to be integrated with active and passive case detection and management protocols as per the guidelines of National Vector Borne Disease Control Program (NVBDCP), MoHFW, GoI. The testing of malaria and anemia will be integrated in the identified malaria endemic regions, e.g., the beneficiaries who report recent fever and being screened for anemia will also be tested for malaria as per NVBDCP guidelines, to ascertain the co- occurrence of malaria. Similarly, patients who are being tested for malaria will also be tested for anemia in these endemic regions with increase in outreach under NVBDCP programme.

Fixed days for screening of anemia at Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA) sites and annually by Rashtriya Bal Swasthya Karyakram teams in schools will be utilized to provide screening for malaria as per NVBDCP, MoHFW guidelines. The treatment protocol for management of anemia in malaria-endemic regions will be the same as given in Tables 6 and 7 for children and adolescents. For treating malaria in pregnant women, the protocol issued by NVBDCP will be followed including Artemisinin Combination Therapy (ACT) for treatment of *P. falciparum* malaria as per drug policy of NVBDCP for treatment of malaria.

Indoor Residual Spray (IRS) before and after the monsoon season will be carried out with the appropriate insecticides in school premises and residential areas as per the malaria burden as decided by NVBDCP. To prevent malaria, NVBDCP has provided Long Lasting Insecticide Nets (LLINs) in all high endemic areas. Anaemia Mukt Bharat will play a key role for utilization of these LLINs by all target groups especially pregnant mothers and under-five children by promoting IEC/ BCC.

Haemoglobinopathies:

An integrated strategy for comprehensive prevention, screening and management of haemoglobinopathies should be provided at the existing service delivery platforms. Pre-marital and pre-conception screening and counselling services for informing the community about appropriate preventive options will be provided in the endemic districts of the country. Existing platforms such as AWCs, SCs and Health and Wellness Centres and events such as VHNDs, Nutrition week, Breastfeeding week, Women's Day, World Thalassemia Day, etc. will be utilized to generate discussions and dialogue on non-nutritional causes of anemia in the endemic districts.

Activities such as quizzes and assisted educative talks (with distribution of informative booklets) can be done during Adolescent Health Days to engage adolescents. Screening for haemoglobinopathies should be integrated with ANC services during the first trimester of pregnancy in the endemic districts. Women identified with severe anemia should be referred to higher centres for further investigations and if found positive, the husband is to be screened for carrier status. If the couple is found positive, they are to be referred to a higher centre for prenatal diagnosis before twenty weeks of pregnancy.

Appropriate treatment should be provided as per the National Guidelines on Prevention and Control of Haemoglobinopathies (2016).[6] The treatment of anemia using parental iron administration is contraindicated in sickle cell disease patients.

Fluorosis:

High fluoride concentration in food and water leads to destruction of gastrointestinal mucosa, thus reducing the nutrient absorption, including iron and folic acid. The National Programme for Prevention and Control of Fluorosis (NPPCF)[7] is coordinating action on the fluorosis issue across the country. The programme recognizes the linkages of fluoride, anemia and malnutrition, and recommends a combined approach of safe drinking water and nutritional therapy to treat the people affected with problems of anemia due to fluorosis.

Addressing anemia due to fluorosis will need sustained communication, behaviour change and a combined approach of safe drinking water along with nutritional improvements. This can be achieved through the existing implementation framework of the NPPCF under NHM and through convergence with other departments such as the PHE at the district level.

[6]National Guidelines on Prevention and Control of Haemoglobinopathies (2016) - http://nhm.gov.in/images/pdf/programmes/RBSK/Resource_Documents/Guidelines_on_Hemoglobinopathies_in%20India.pdf

[7]National Guidelines on Fluorosis Management (2014)- https://MoHFW.gov.in/sites/default/files/569857456332145987456.pdf

The 3 key interventions are:

1. Identification of fluoride-affected habitations: States should identify the habitations with high anemia and fluorosis prevalence. List of fluorosis-endemic districts/blocks of the country as available with the NPPCF Division, MoHFW is at Annexure 5. States should converge with the PHED departments to produce local mapping of high fluoride-affected habitations through this process for planning purpose.

2. Activities for anemia control due to fluorosis: The recommended activities for anemia prevention and control due to fluorosis is to be taken up in these habitations through counselling services in the community, such as use of safe drinking water, focus on diet corrections (Calcium, Magnesium, Vitamin C) by dietary diversity, etc. These counselling process to be made systemic within the district level by establishing local protocols for anemia and fluorosis control. Counselling services should also include periodic check-up of haemoglobin in affected habitations and seek appropriate treatment for the same. Subsequently, IFA supplementation is to be initiated after correction of anemia status through these fluorosis control activities.

3. Capacity building: Within fluoride-affected blocks, training of all public health staff, such as MO in PHC/CHC, field workers (ASHA, ANM and AWW) and others should be conducted on aspects of communication and behaviour change of anemia and fluoride control, with the broad message of "Accha Paani, Takatvar Paani" signifying health and nutritional improvements through water.

4

INSTITUTIONAL MECHANISMS

1 **Intra-ministerial coordination**

2 **National Anemia Mukt Bharat Unit**

3 **National Centre of Excellence and Advanced Research on Anemia Control**

4 **Convergence with other ministries**

5 **Strengthening supply chain and logistics**

6 **Anemia Mukt Bharat Dashboard and Digital Portal - one-stop shop for Anemia**

In order to ensure accountability and effective implementation of the Anemia Mukt Bharat strategy, institutional mechanisms are to be set-up at national, state and district levels, which are described below.

4.1 Intra-ministerial coordination

At the national level, the existing Rashtriya Kishor Swasthya Karyakram (RKSK) National Steering Committee will be expanded to include the National Anemia Mukt Bharat Steering Committee.

The Steering Committee will have biannual convergent meetings in coordination with the respective divisions within MoHFW associated with the strategy chaired by the Secretary, Ministry of Health and Family Welfare, with invitation to other related Ministries such as Tribal Welfare (residential schools), Ministry of Woman and Child Development (POSHAN Abhiyaan), Ministry of Rural Development and Panchayati Raj (NRLM) and MHRD (Department of School Education and Literacy)and other experts as approved by the chair.

The composition of the Steering Committee will be:

Secretary, MoHFW	Chairperson
Additional Secretary and Mission Director, MoHFW	Co-Chair
Joint Secretary (RMNCH+A) (RCH), MoHFW	Convener
DC (CH) (MoHFW)	Co-convener
Representative from All India Institute of Medical Sciences (AIIMS) (NCEAR-A)	Co-convener
Secretaries of Line Ministries (MoWCD, MoHRD, MoDWS, MoRD, MoPR and MoTA)	Member
Three to four technical experts as agreed by the committee, to be called as per the agenda and need of each meeting	Member

4.2 National Anemia Mukt Bharat Unit

A National Unit will be established to support and monitor states for strategy implementation. The unit will monitor and anchor the strategy under the leadership of Joint Secretary (RMNCH+A) with techno-managerial support through a DC (CH) from Reproductive and Child Health (RCH) division.

The State/UT should establish a state unit and designate a nodal officer. The State Unit will ensure accountability and effective implementation of the strategy.

At the district level, under the supervision of the CMO/CDHO, the District Programme Officer under the National Health Mission will be in-charge of the day-to-day implementation of this strategy and the BMO/BHO will be the nodal officer at the block level.

4.3 National Centre of Excellence and Advanced Research on Anemia Control (NCEAR-A)

All India Institute of Medical Sciences (Centre for Community Medicine), New Delhi, will house the NCEAR-A. The Centre will provide the following support to MoHFW:

- Provide technical inputs with focus on multi-sectoral approach for policy making, programme guidelines and programme implementation for anemia control programme in India.
- Address research needs including operational research for anemia control in India.
- Act as an apex reference laboratory for anemia screening and diagnosis at the national level.
- Facilitate periodic programme review and capacity building of anemia control programme personnel and state-level institutes to strengthen programme implementation including revising training components for service providers and programme managers, teachers, ASHA and ANMs, and AWWs respectively with NCERT/DIET, SIHFW, NHSRC, and NIPCCD.
- Support supply chain monitoring and develop protocols/ modules for improvement, including technical specifications.
- Support periodic rapid assessments, implementation science research and external evaluations related to Anemia Mukt Bharat.

At the state level, All India Institute of Medical Sciences (Centre for Community Medicine/Medical College/Nutrition College), can be designated as State Centre for Excellence and Advanced Research for Anemia Control (SCEAR-A)

SCEAR-A can help in trainings, monitoring and acting as the apex reference laboratory for anemia screening and diagnosis at the state level

4.4 Convergence with other ministries

Inter-ministerial convergence under the strategy will be ensured via existing convergence platform under the POSHAN Abhiyaan. One of the targets under POSHAN Abhiyaan is 'anemia reduction by 3 percent per annum'.

An Executive Committee under the Chairpersonship of Secretary, MoWCD, has been established via Government of India Letter No. NNM/50/2017-WBP[8] dated 3 January 2018, wherein the Secretary, MoHFW, is a member. Therefore, all issues related to Anemia Mukt Bharat for which inter-ministerial convergence is needed should be discussed during this committee meeting.

Similarly, State Executive Committee of POSHAN Abhiyaan should be Executive Committee of Anemia Mukt Bharat strategy.

4.5 Strengthening supply chain and logistics

The strategy plans to build upon the learning of implementing the National Iron Plus Initiative and Weekly Iron Folic Supplementation programmes and focuses on strengthening the procurement and supply chain mechanisms as these are key to effective implementation of these programmes. Therefore, special emphasis is suggested for streamlining the supply chain mechanisms.

To ensure uninterrupted supplies, states may consider: (a) introducing auto-indents at the district level, (b) provision for multi-year rate contracts (RC) and multi-vendor policy, (c) centralized procurement at the state level instead of district-level procurement, and (d) Iron Folic Acid supplements and albendazole tablets included as part of the Essential Drug List (EDL).

The State will strengthen convergence with the Central Drug

[8]Executive POSHAN Abhiyaan : http://icds-wcd.nic.in/nnm/NNM-Web-Contents/LEFT-MENU/Circulars/Constitution%20of%20Executive%20Committee%20of%20NNM.pdf.

Warehouses and periodic verification and audit of the supply chain at all levels. The stock positions of IFA supplements and albendazole tablets will also be monitored as part of programme monitoring and therefore states should ensure timely programme service delivery and stock position data entry into HMIS and Drugs and Vaccines Distribution System (DVDMS)/e-aushadi, for monitoring real-time stock availability.

The annual requirement for prophylactic Iron Folic Acid supplements and albendazole tablets will be estimated as per Annexures 6 and 7.

4.6 Anemia Mukt Bharat Dashboard and Digital Portal – one-stop shop for anemia

The Anemia Mukt Bharat portal (www.anemiamuktbharat.info) is a one-stop shop of materials developed under the Anemia Mukt Bharat strategy in one place, such as communication resource material, survey data, targets, state and district-wise denominators, and state and district-wise quarterly progress reports.

All of these resources can be efficiently utilized by policy makers, programme managers and medical corporation/procurement agencies for planning, implementing and monitoring the strategy. Its free download-able mobile application is also available.

5

REPORTING, MONITORING AND REVIEW MECHANISMS

The Anemia Mukt Bharat strategy focuses on establishing a strong reporting, monitoring and review mechanism to ensure accuracy, and completeness of data for use in effective strategy implementation.

The existing MoHFW's Health Management Information System (HMIS) structure and available indicators pertaining to anemia are identified to develop a quarterly Anemia Mukt Bharat report card. The quarterly report card will assess the progress as the percentage coverage against eligible denominators and performance will be monitored based on the coverage review. The state/UT-wise as well as district-wise targets for monitoring coverage of each beneficiary age-group under the strategy are also available on the portal, which will be updated annually as per the target beneficiary numbers provided by states/UT.

Out of the identified indicators of the quarterly report card, Key Performance Indicators (KPIs) are identified in order to monitor and rank the states and districts based on their performance on a quarterly basis.

The existing review mechanisms at district/state/national levels through common review missions, integrated joint monitoring visits, quarterly/biannual reviews at District Magistrate (DM)/ Mission Director (MD) level should integrate the KPIs for monitoring the progress of implementation of Anemia Mukt Bharat. The National Centre of Excellence and Advanced Research on Anemia Control (NCEAR-A) and other academic institutions will also support the Ministry of Health and Family Welfare in monitoring through annual rapid assessments of the strategy at the field level. Review mechanisms envisaged under the POSHAN Abhiyaan should also be effectively utilized for reviewing the implementation of Anemia Mukt Bharat strategy.

सत्यमेव जयते

Anemia Mukt Bharat

NATIONAL HEALTH MISSION
राष्ट्रीय स्वास्थ्य मिशन

ANEMIA MUKT BHARAT - QUARTERLY PROGRESS REPORT FY:_____

India		Upto Q1 Apr-Jun	Upto Q2 Jul-Sep	Upto Q3 Oct-Dec	Upto Q4 Jan-Mar
Children 6–59 months	HMIS 9.9: Percentage of children 6–59 months provided 8–10 doses (1ml) of iron and folic acid (IFA) syrup (Bi weekly)				
	HMIS 9.1: Percentage of children 12–59 months provided albendazole				
Children 5–9 Years	HMIS 23.1+23.3: Percentage of children covered under WIFS JUNIOR (5–9 years) provided 4–5 iron and folic acid (IFA) tablets (In schools + out of school)				
	HMIS 23.2+23.4: Percentage of children (5–9 years) provided albendazole (In schools + out of school)				
Adoles-cents 10–19 years	HMIS 22.1.1: Percentage of girls (6–12 class) provided 4 IFA tablets in schools				
	HMIS 22.1.1.a: Percentage of girls (6–12 class) provided 4 IFA tablets in schools				
	HMIS 22.1.1.b: Percentage of boys (6–12 class) provided 4 IFA tablets in schools				
	HMIS 22.1.2: Percentage of (6–12 class) provided albendazole in schools				
	HMIS 22.1.2.a: Percentage of girls (6–12 class) provided albendazole in schools				
	HMIS 22.1.2.b: Percentage of boys (6–12 class) provided albendazole in schools				
	HMIS 22.1.3: Percentage of out-of-school adolescent girls 10–19 years provided 4 iron and folic acid (IFA) tablets at Anganwadi Centres				
	HMIS 22.1.4: Percentage of out-of-school adolescent girls 10–19 years provided albendazole at Anganwadi Centres				
	(NEW) Percentage of school-going boys 10–19 years, who were screened for anemia (Under RBSK program)				
	(NEW) Percentage of school-going boys 10–19 years who are severely anemic (Under RBSK program)				
	(NEW) Percentage of school-going boys 10–19 years who are severely anemic and received treatment (Under RBSK program)				
	(NEW) Percentage of school-going girls 10–19 years, who were screened for anemia (Under RBSK program)				
	(NEW) Percentage of school-going girls 10–19 years who are severely anemic (Under RBSK program)				

India		Upto Q1 Apr-Jun	Upto Q2 Jul-Sep	Upto Q3 Oct-Dec	Upto Q4 Jan-Mar
	(NEW) Percentage of school-going girls 10–19 years who are severely anemic and received treatment (Under RBSK program)				
	(NEW) Percentage of schools, where monthly Nutrition Health Education sessions held against planned (Under WIFS program)				
Women of Reproductive Age	(NEW) Percentage of women of reproductive age (WRA) 20–24 years, provided albendazole (Under Mission Parivar Vikas)				
	(NEW) Percentage of women of reproductive age (WRA) 20–24 years, provided 4 iron and folic acid (IFA) tablets (Under Mission Parivar Vikas)				
Pregnant women	HMIS 1.2.4: Percentage of pregnant women (PW) given 180 iron and folic acid (IFA) tablets				
	HMIS 1.2.6: Percentage of pregnant women (PW) given one albendazole tablet after 1st trimester				
	HMIS 1.4.2: Percentage of pregnant women (PW) having Hb level<11 (tested cases)(7.1 to 10.9)				
	HMIS 1.4.3: Percentage of pregnant women (PW) having Hb level<7 (tested cases)				
	HMIS 1.4.4: Percentage of pregnant women (PW) having severe anemia (Hb<7) treated				
	(NEW) Percentage of eligible beneficiaries provided with long lasting /insecticide treated bednets (Only for malaria endemic geographies)				
Lactating mothers	HMIS 6.3: Percentage of mothers provided full course of 180 iron and folic acid (IFA) tablets after delivery				
	(NEW) Percentage of Nutrition Health Education sessions held against planned in AWCs in the reporting month (under MAA programme)				
Stocks	HMIS19.6 Percentage of stocks available for iron and folic acid (IFA) tablets - Red (Adult)				
	HMIS 19.7 Percentage of stocks available for iron and folic acid (IFA) tablets - Blue (Adolescent 10–19 years)				
	HMIS 19.8 Percentage of stocks available for iron and folic acid (IFA) tablets - Pink (Junior 6–10 years)				
	HMIS 19.9 Percentage of stocks available for iron HMIS and folic acid (IFA) - Syrup				
	HMIS 19.15: Percentage of stocks available for Albendazole tablets				
	(NEW) Percentage of stocks available for ITBNs/LLINs				
Institutions	HMIS A.1: Percentage of facilities reporting in the quarter				

KEY PERFORMANCE INDICATORS

- Percentage of children 6–59 months who received at least 8 doses of IFA syrup (HMIS 9.9)
- Percentage of school children 5–9 years who received at least 4 Pink-coloured IFA tablets (HMIS 23.1)
- Percentage of school-going adolescents 10–19 years (girls and boys), eligible under WIFS programme, who received at least 4 Blue-coloured IFA tablets (HMIS 22.1.1)
- Percentage of women of reproductive age 20–24 years, eligible under Mission Parivar Vikas, who received at least 4 Red-coloured IFA tablets (NEW)
- Percentage of eligible pregnant women who received at least 180 IFA tablets at the antenatal contact point (HMIS 1.2.4)
- Percentage of stock available for IFA tablet - Red (Adult) (HMIS 19.6)

6

ROLES AND RESPONSIBILITIES

For successful and effective implementation of the Anemia Mukt Bharat (AMB) strategy, it is important that all stakeholders are aware of their roles and responsibilities.

WHO	WHAT
National Anemia Mukt Bharat Unit	• Act as a nodal agency for policy and strategy formulation, resource allocation and monitoring expenditures, technical support for procurement and supply chain management, development of IEC/BCC materials and activity plan, establishing monitoring and digital reporting systems and reviewing progress. • Provide support to states for roll-out of Anemia Mukt Bharat strategy. • Coordinate external field assessments, validation of reported data, development of the digital dashboard cum knowledge repository and studies in consultation with National Centre for Excellence and Advanced Research on Anemia Control (NCEAR-A) and other academic institutions.
State Health Mission Unit	• Establish the State Anemia Mukt Bharat Unit. • Designate a nodal officer for overseeing the Anemia Mukt Bharat Unit. • Support roll-out of the Anemia Mukt Bharat implementation strategy. • Ensure quarterly review, reporting and supportive supervision as well as convergence with line departments and POSHAN Abhiyaan. • Ensure uninterrupted supplies of micronutrients/commodities related to the Anemia Mukt Bharat strategy.
AMB State Nodal Officer	• Ensure budgeting for Anemia Mukt Bharat in Annual NHM-PIP under the respective FMR code for training, procurement, M&E, IEC/BCC activities, etc. • Ensure convergence cum review meeting of state-level committee with participation from line departments. • Ensure training of health functionaries and programme managers from the state level and below. • Ensure timely procurement and supply of drugs, etc. till service delivery platforms. • Ensure adequate IEC/BCC activities including printing and dissemination of materials. • Ensure reporting, monitoring and supportive supervision of programme.
AMB District Nodal Officer	• Ensure training/orientation of health functionaries and programme managers. • Ensure district level review by the District Magistrate. • Ensure timely supply of drugs as per adequate requirement, IEC materials, etc. till service delivery platforms. • Ensure drug sampling as per protocol. • Ensure adequate IEC/BCC activities at the district level. • Ensure reporting, monitoring and supportive supervision of programme at the district level.
AMB Block Nodal Officer	• Ensure training/orientation of ANM/ASHA/AWW, school teachers/SN/MO. • Ensure availability of adequate supplies and maintain buffer stock at service delivery point. • Ensure adequate IEC/BCC activities at the block level. • Ensure reporting, monitoring and supportive supervision of programme.

7

TRAINING PLAN

Training will be done for two cadres: (a) Medical officers/staff nurse/ANMs and (b) Nodal officers/programme managers from health, WCD, HRD and related line departments, at all levels from the state to frontline workers.

While both the above mentioned cadres need to be sensitized on Anemia Mukt Bharat strategy, which can be a one-day training programme, the medical officers, staff nurse, ANM will additionally be trained on new test and treat protocols.

Programme managers will be specifically oriented on programme implementation, with focus on supply chain management, IEC/BCC activities, monitoring, review and reporting mechanism.

Training module will be developed by NCEAR-A. NCEAR-A would create a resource pool of master trainers, who would train the state and district teams through cascade model.

(A) Training of health, ICDS functionaries and school teachers

The training package includes providing hands-on experience in administering Iron Folic Acid syrup using auto-dispenser, doses, management of anemia through IV Iron Sucrose, management of adverse effects after Iron Folic Acid administration, etc.

The NCEAR would train a pool of State Trainers through national and regional trainings of state-level officers, who would train the district teams through cascade model. At the same time, it is expected that training modules for therapeutic management of anemia in adolescents and pregnant women for medical officers of the Rashtriya Bal Swasthya Karyakram teams will be included in the existing RBSK annual training mechanism. It will also include sensitization trainings for teachers.

The training of state/district officers will be done as per the RCH training norms. The package will also be included in its regular and refresher training courses for the health functionaries, which is done by SIHFW. State Health Departments, through their training institutes, should ensure that all concerned personnel are trained/oriented in protocols under Anemia Mukt Bharat.

(B) Training of programme managers

The NCEAR will train the state-level programme managers on key programme implementation aspects including supply chain management of Iron Folic Acid and Albendazole; comprising procurement calculation, indenting, reordering, preventing

stock-outs, mantaining buffer stocks, reporting, monitoring and review mechanisms, BCC/IEC activities under the strategy, etc. through a two-day training programme. The pool of trainees will include nodal officers/programme managers/consultants from Health Department, Women and Child Development (ICDS/POSHAN Abhiyaan), Education Department etc.

The state-level trained officers will then conduct the district level training for all CDHO/ CMO/RCHO/programme officers/district programme managers, district education officers, district social welfare officer at the state level in a two-day training/orientation programme.

The district-level trained officers of all concerned departments will train the block-level functionaries and stakeholders like BHO/BMO/ medical officers/ DPHN/ICDS – CDPO, etc. in a one-day training/ orientation programme at the district level.

The trained block-level functionaries will train the ANMs/Health Supervisors, ICDS supervisors/AWW facilitators, selected nodal teacher, AWWs and ASHAs to build up their knowledge on the programme and develop their skill to educate the beneficiaries and how to augment home foods with Iron Folic Acid, iron absorption enhancers and inhibitors, etc. at the block level.

8

FINANCIAL GUIDELINES FOR ANEMIA MUKT BHARAT

Anemia reduction is an important component of the overall RMNCH+A strategy. The budget under the Anemia Mukt Bharat strategy is allocated for procurement of supplies (Iron Folic Acid and Albendazole), costs of therapeutic management (test and treat) of in-school adolescents and pregnant women, capacity building activities (training of service providers, orientation of school teachers/AWWs), BCC/IEC activities, ASHA incentives and programme monitoring.

The average per district cost of implementing the strategy is approximately Rs. 109.0 lakhs, where the tentative cost of Rs.70.0 lakh funds for procurement, M&E, training and IEC will be utilized from the available RCH NHM budget; and Rs. 29.0 lakh is the average cost of test and treat strategy for the two beneficiary groups (in-school adolescents and pregnant women) and is a new activity under the strategy. Funds available under Janani Shishu Suraksha Karyakram (JSSK) will be utilized for managing costs of testing and treating anemia in pregnant women. Districts covered under NPCDCS and CPHC programme already have provision for digital haemoglobinometers and will utilize the same budget for procuring the equipment.

S.No	Activity	Average cost per district per year (Rupees in Lakhs)	Budget source
1.	Procurement of IFA supplements, Folic Acid tablets and Albendazole for children, adolescents, WRA and pregnant and lactating women (Recurring)	60.0	Existing NHM FMR 6.2.1.5 6.2.1.6 6.2.1.7.a 6.2.1.7.b 6.2.2.3 6.2.2.4 6.2.2.5 6.2.2.6 6.2.4.1 6.2.4.2
2.	Cost of testing and therapeutic management (Recurring)	29.0	New activity
3.	ASHA incentive for mobilizing children 6–59 months, WRA and post-partum lactating women (Estimated 1,000 ASHA/district x Rs. 150 per month)	18.0	Existing NHM FMR 3.1.1.1.8 3.1.1.1.9 3.1.1.1.10
4.	Capacity building	1.0	Existing NHM FMR 9.5.4.9 9.5.4.10
S.No	**Activity**	**Average cost per district per year (Rupees in Lakhs)**	**Budget source**
5.	IEC/BCC activities	0.5	Existing NHM FMR 11.4 11.5 11.6 11.7
6.	Monitoring, evaluation and miscellaneous activities	0.5	Existing NHM FMR
7.	**Grand total**	**109.0**	

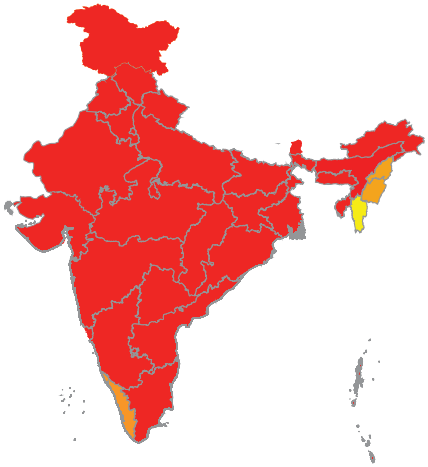
ASHA incentive for Anemia Mukt Bharat: ASHA will be provided a total of Rs. 150 per month per ASHA for covering at least 70 percent of the beneficiaries for IFA supplementation in two age groups: children 6-59 months and WRA. ASHA will enumerate all the eligible beneficiaries and prepare a line-listing. During her home visits, ASHA will also equip the mothers/care-givers and inform the beneficiaries about the intervention, doses of IFA supplements, regime of intervention, and also supervise administration IFA syrup to children aged 6–59 months by mothers. ASHA will also carry out IEC-BCC activities at the inter-personal level at available platforms. She will also provide regular updates recording and reporting of coverage under the programme.

The States will budget the costs under the respective budget heads of the NHM Annual Programme Implementation Plan (PIP).

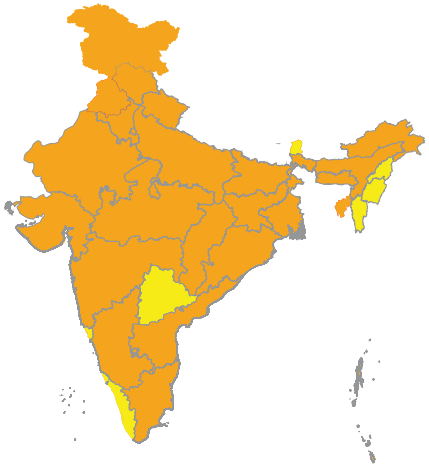
ANNEXURES

Annexure 1a: State-wise anemia prevalence among all age groups in India (%)

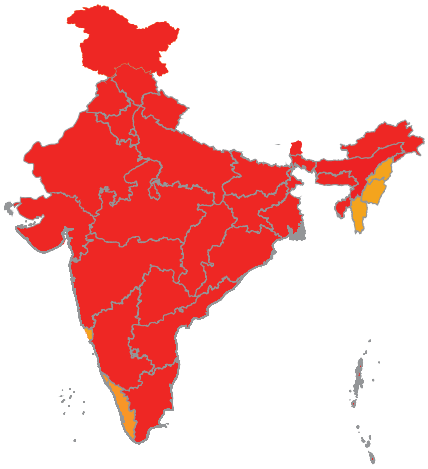
Children 6–59 months



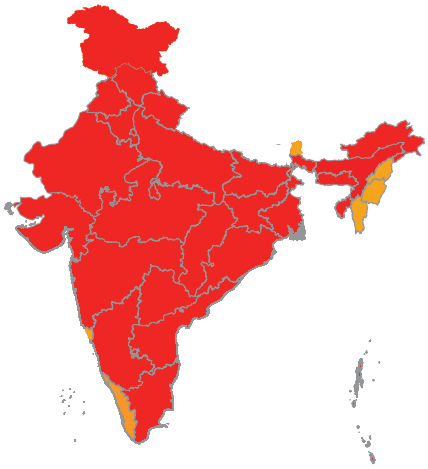
Adolescent boys 15–19 years



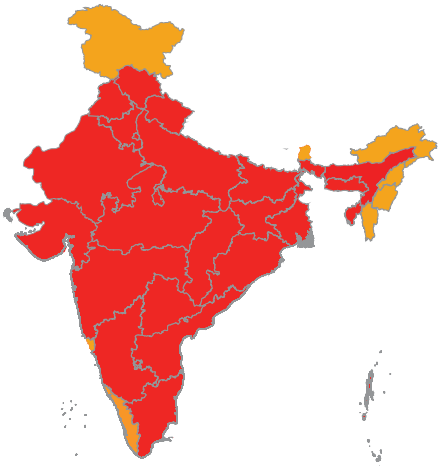
Adolescent girls 15–19 years



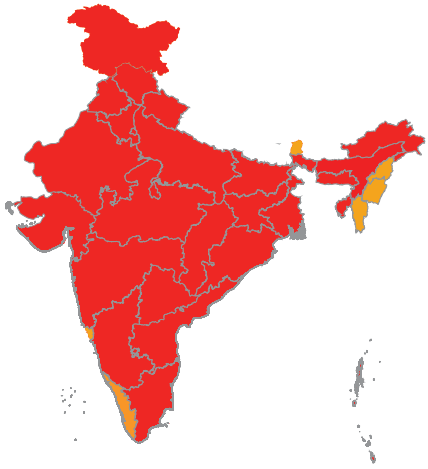
Women of reproductive age 15–49 years



Pregnant women



Lactating women



Source: NFHS4, 2015/2016

Note: The boundaries and the names shown and the designations used on these maps do not imply official endorsement or acceptance by the United Nations.

Annexure 1b: State-wise age-group-wise anemia prevalence (%) (NFHS 3, 2005/06 and NFHS 4, 2015/16)

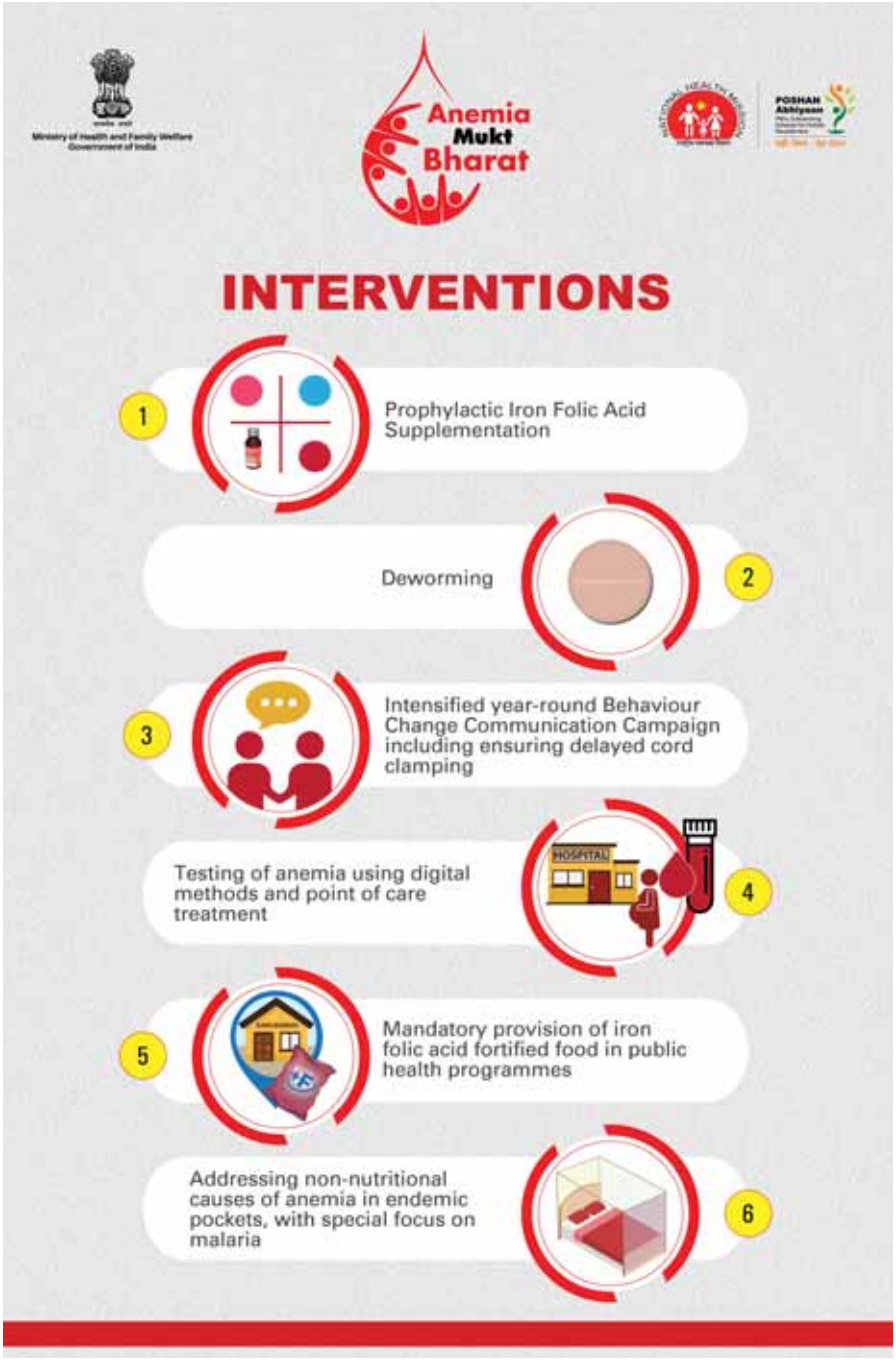
States	Children (6–59 months)		Adolescent girls (15–19 years)		Women in reproductive age-group (15–49 years)		Pregnant women (15–49 years)	
	NFHS-3	NFHS-4	NFHS-3	NFHS-4	NFHS-3	NFHS-4	NFHS-3	NFHS-4
All India	69.5	58.4	56.0	54.0	55.3	53.0	58.0	50.0
A & N Islands	NA	49.0	NA	68.1	NA	65.7	NA	61.4
Andhra Pradesh	70.8	58.6	68.3	61.1	62.9	60.0	58.2	52.9
Arunachal Pradesh	56.9	54.3	51.2	44.9	50.6	43.3	51.8	33.8
Assam	69.6	35.7	67.8	42.7	69.5	46.0	72.0	44.8
Bihar	78.0	63.5	66.4	61.0	67.4	60.3	60.2	58.3
Chandigarh	NA	73.1	NA		NA	75.9	NA	NA
Chhattisgarh	71.2	41.6	58.7	45.5	57.5	47.0	63.1	41.5
Dadra & Nagar Haveli	NA	84.6	NA	81.9	NA	79.5	NA	67.9
Daman & Diu	NA	73.8	NA	60.1	NA	58.9	NA	NA
Delhi	57.0	59.7	49.7	52.1	44.3	54.3	29.9	45.1
Goa	38.2	48.3	39.1	30.5	38.0	31.3	36.9	26.7
Gujarat	69.7	62.6	57.4	56.5	55.3	54.9	60.8	51.3
Haryana	72.3	71.7	57.7	62.7	56.1	62.7	69.7	55.0
Himachal Pradesh	54.7	53.7	42.7	52.7	43.3	53.5	39.2	50.2
Jammu & Kashmir	58.6	43.8	53.4	40.3	52.1	40.6	55.7	38.1
Jharkhand	70.3	69.9	67.2	65.0	69.5	65.2	68.4	62.6
Karnataka	70.4	60.9	51.3	45.3	51.5	44.8	60.4	44.8
Kerala	44.5	35.6	34.7	37.7	32.8	34.2	33.8	22.6
Lakshadweep	NA	53.6	NA	60.7	NA	46.0	NA	36.5
Madhya Pradesh	74.1	68.9	52.1	53.2	56.0	52.5	57.9	54.6
Maharashtra	63.4	53.8	51.7	49.7	48.4	48.0	57.8	49.3
Manipur	41.1	23.9	30.4	20.5	35.7	26.4	36.4	26.0
Meghalaya	64.4	48.0	46.5	46.2	47.2	56.2	60.2	53.1
Mizoram	44.2	19.3	39.4	21.3	38.6	24.8	51.7	24.5
Nagaland	NA	26.4	NA	21.9	NA	27.9	NA	28.9

States	Children (6–59 months)		Adolescent girls (15–19 years)		Women in reproductive age-group (15–49 years)		Pregnant women (15–49 years)	
	NFHS-3	NFHS-4	NFHS-3	NFHS-4	NFHS-3	NFHS-4	NFHS-3	NFHS-4
Odisha	65.0	44.6	61.4	51.0	61.2	51.0	68.1	47.6
Puducherry	NA	44.9	NA	55.0	NA	52.4	NA	31.2
Punjab	66.4	56.6	41.4	58.0	38.0	53.5	41.6	42.0
Rajasthan	69.7	60.3	53.9	49.1	53.1	46.8	61.7	46.6
Sikkim	59.2	55.1	64.1	48.7	60.0	34.9	62.1	23.6
Tamil Nadu	64.2	50.7	49.7	53.9	53.2	55.0	54.7	44.4
Telangana	NA	60.7	NA	59.8	NA	56.6	NA	49.8
Tripura	62.9	48.3	59.8	52.2	65.1	54.5	57.6	54.4
Uttar Pradesh	73.9	63.2	48.6	53.7	49.9	52.4	51.6	51.0
Uttarakhand	61.4	59.8	59.3	42.4	55.2	45.2	50.8	46.5
West Bengal	61.0	54.2	62.0	62.2	63.2	62.5	62.6	53.6

Annexure 2: Communication Materials

Resource materials for Awareness Generation accessible for download from Anemia Dashboard and Digital Portal: www.anemiamuktbharat.info

1 Poster for programme managers



Interpersonal communication material for workers

1 Posters
(English and Hindi)

Target group - 6 to 59 months

Target group - 5 to 9 years

Target group - 10 to 19 years

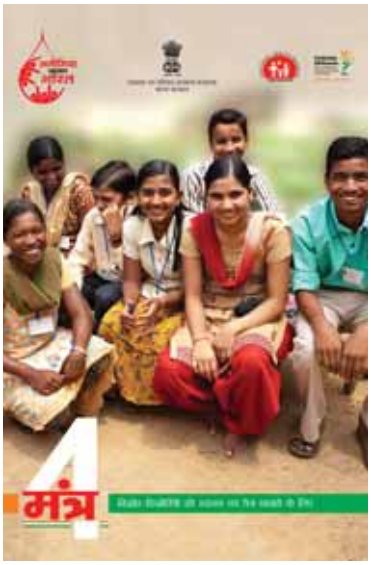
Target group - WRA

Target group - Pregnant women

Target group - Lactating women

Iron-rich foods - Dos and Dont's

2 4 Mantras booklet (Hindi)



3 Dialogue cards

4 Job Aid

Interpersonal communication material in schools

1 4 Mantras booklet (English)

2 Anemia playing cards

3 Badge

4 Name slip

5 Radio programmes for children

- Episode Patang Muqabla
- Episode Rajkumar Ki Kahani
- Episode Tasveer Banaoon
- Episode Murli Aur Amrood Chor
- Episode Khojo Jawab

Mass media

1 Radio spots

- Rakhte Hain Hum Mazboot Irade (30 seconds, for 5 to 9 years)
- Lohe Sa Dum Hum Rakhte Hain (30 seconds, for 10 to 19 years)
- Maa Ki Shakti Se Sab Ka Jeevan Chalta Hain (30 seconds, for pregnant and lactating women)

2 TVC (30 seconds)

Kites (5 to 9 years)

Tuition (10 to 19 years)

Pooja (Pregnant women)

Social media

1 WhatsApp messages in English and Hindi for all target groups

2 Twitter messages in English and Hindi for all target groups

Annexure 3: Anemia Mukt Bharat dashboard and digital portal

Annexure 4: Specifications for digital haemoglobinometers

States should procure haemoglobinometers meeting the following specifications:

- Good diagnostic accuracy (at least 90% sensitivity), established through large-scale diagnostic accuracy studies in field settings in India
- Large data storage capacity
- FDA/other relevant approvals like DGHS, DGCI/NHSRC HCT approval
- Certification should be available

Technical specifications of a digital haemoglobinometers are given below:

- Principle: Works in reflectance photometry
- Low weight, preferably less than 100gm
- Internally rechargeable battery
- Auto calibration
- Working temperature: Less than 50°C
- Working humidity: 0–100% Rh
- Testing time: Less than one minute

2. Specifications of Strips:

- Principle: Reflectance photometry
- Range of measurement: 2g/dL to 23g/dL
- Accuracy: Coefficient of variance under 3%
- Specificity: 100%
- Blood type needed: Freshly collected whole blood

Digital haemoglobinometers

Use of haemoglobinometers in the community

Annexure 5: States / Districts under National Programme for Prevention and Control of Fluorosis (NPPCF)

Sl. No.	State	Total districts in the State	No. of districts under NPPCF	Districts under NPPCF
1.	Andhra Pradesh	13	9	Nellore, Guntur, Prakasam, Ananthapur, Kurnool, Krishna, Chittoor, Visakhapatnam Srikakulam
2.	Assam	27	6	Nagaon, Kamrup, Karbi Anglong, Dhubri, Nalbari, Karimganj
3.	Bihar	38	11	Nawada, Banka, Aurangabad, Bhagalpur, Gaya, Jammui, Nalanda, Shekhpura, Kaimur, Munger, Rohtas
4.	Chattisgarh	27	5	Durg, now shifted to Balod, Kanker, Kondagaon, Korba, Mahasamund
5.	Gujarat	33	4	Jamnagar, Sabarkantha, Vadodara, Banaskantha,
6.	Haryana	21	2	Mehendragarh, Mewat
7.	Jammu & Kashmir	22	1	Doda
8	Jharkhand	24	13	Palamu, Garhwa, Chatra, Hazaribagh, Ranchi, Pakur, Sahebgann, Ramgarh, Jamtara, Simdega, Dhanbad, Giriih, Godda
9.	Karnataka	30	19	Ballary, Mysore, Chikballalpur, Koppal, Davangere, Tumkur, Bagalkote, Bangaluru (Urban), Bangaluru (Rural), Bijapur, Raichur, Chitradurga,Gadag, Gulbarga, Hassan, Kolar, Mandya, Ramanagara, Shimoga
10.	Kerala	14	2	Palakkad, Alapuzha
11	Madhya Pradesh	51	15	Ujjain,Chindwada, Mandla, Dhar, Seoni, Betul, Jhabua, Raigarh, Sehore, Alirajpur, Dindori, Khargoan, Raisen, Shajapur, Ratlam
12	Maharashtra	34	7	Nanded, Chandrapur, Latur, Washim, Yavatmal, Beed, Nagpur
13.	Odisha	30	3	Nayagarh, Angul, Nuapada
14	Punjab	22	3	Sangrur, Firozepur, Patiala
15.	Rajasthan	33	30	Nagaur, Ajmer, Bhilwara, Churu (Ratangarh) Dausa, Dungarpur, Rajsamand, Tonk, Bikaner, Jalore, Jaisalmer, Jodhpur, Jaipur, Pali, Sikar Udaipur, Swaimadhopur, Banswara, Karauli, Chittaurgarh, Ganganagar, Jhalawar, Jhunjhunu, Barmer, Alwar, Bharatpur, Kota, Sirohi, Bundi, Pratapgarh
16.	Tamil Nadu	31	1	Dharmapuri
17	Telangana	30	9	Mehboobnagar, Nalgonda, Karimnagar, Jagityal, Sircilla,Suryapet, Yadagiri, Wernaparthy, Nagarkurnool
18.	Uttar Pradesh	75	10	Unnao, Rae Bareli, Pratapgarh, Firozabad, Mathura, Sonbhadhra, Ghazipur, Jhansi, Varanasi, Agra
19.	West Bengal	19	6	Bankura, Purlia, Birbhum, D. Dinajpur, Maldha, Uttar Dinajpur
	TOTAL		156	

Annexure 6: Iron Folic Acid tablet/syrup supply estimation calculations

Children 6–59 months	Estimated Iron Folic Acid syrup bottle (of 50 ml each) supply= 2 X Number of children 6–59 months + additional 10% as buffer stock*
Children 5–9 years	**In-school** Estimated Iron Folic Acid tablet supply = (Number of children aged 5–10 years registered in schools x 52 tablets) + (52 tablets/teacher/year) + additional 10% as buffer stock **Out-of-school** Estimated Iron Folic Acid tablet supply = (Number of children aged 5–10 years registered with ICDS x 52 tablets) + (52 tablets/year for each AWW + 52 tablets/ year for ASHA) + additional 10% as buffer stock
Adolescents 10–19 years	**In-school** Estimated Iron Folic Acid tablet supply = (52 x total number of children (both girls and boys) in 10–19 years) + (52 tablets/per teacher/year) + additional 10 % as buffer stock **Out-of-school adolescent girls** Estimated Iron Folic Acid tablet supply = (number of adolescent girls registered with ICDS x 52 tablets) + (52 tablets/year for each AWW + 52 tablets/year for ASHA) + additional 10% as buffer stock*
Pregnant and lactating women	Considering, all pregnant women requiring 180 IFA tablet (1 tablet daily) and 50% pregnant women as anemic in India requiring 360 IFA tablets (2 IFA tablets daily) during pregnancy; Estimated Iron Folic Acid tablet supply = (half number of PW as per HMIS x 180 tablets) + (half number of PW as per HMIS X 360 tablets) + (number of live birth as per HMIS x 180 tablets) + additional 10% as buffer stock
Newly wed women in WRA	Estimated Iron Folic Acid-Red tablet supply = (number of eligible couples registered under Mission Parivar Vikas x 52 tablets) + additional 10% as buffer stock

** An additional 10% of total requirement is to be added as buffer (for wastage and spoilage)*

Annexure 7: Albendazole supply estimation calculations

Children 1–19 years	Estimation number of albendazole tablets (400mg) for one deworming round: (1 x number of children in the age group 1–19 enrolled/registered in government and government-aided schools + (1 x number of children in the age group 1–19 years and out-of-school children in Anganwadi centres) + (1 x number of children in the age group 1–19 years enrolled in private schools) ** + additional 10% as buffer stock * **In states where NDD is also being implemented in private schools
Pregnant women	Estimated number of albendazole tablets (400 mg) = (1X number of estimated pregnancies as per HMIS) + additional 10% as buffer stock*
WRA covered under Mission Parivar Vikas Yojana	Estimation number of albendazole tablets (400mg) for one deworming round = (1X number of eligible couples registered under Mission Parivar Vikas Yojana) + additional 10% as buffer stock

**An additional 10% of total requirement is to be added as buffer (for wastage and spoilage)*

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