Nutrition and the Continuum of Care from the Pre-Conception to the Postnatal Period

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28 July 2014
Washington D.C.
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- Recommendations
Investing in girls, breaking the intergenerational cycle of malnutrition
Conceptual Framework: Lancet 2013

- Preconception care: family planning, delayed age at first pregnancy, prolonging of inter-pregnancy interval, abortion care, psychosocial care
- Folic acid supplementation
- Multiple micronutrient supplementation
- Calcium supplementation
- Balanced energy protein supplementation
- Iron or iron plus folate
- Iodine supplementation
- Tobacco cessation
- Delayed cord clamping
- Early initiation of breast feeding
- Vitamin K administration
- Neonatal vitamin A supplementation
- Kangaroo mother care
- Exclusive breast feeding
- Complementary feeding
- Vitamin A supplementation (6–59 months)
- Preventive zinc supplementation
- Multiple micronutrient suppletions
- Iron supplementation

- Adolescent
- WRA and pregnancy
- Neonates
- Infants and children

Disease prevention and treatment
- Malaria prevention in women
- Maternal deworming
- Obesity prevention

Management of SAM
Management of MAM
- Therapeutic zinc for diarrhea
- WASH
- Feeding in diarrhea
- Malaria prevention in children
- Deworming in children
- Obesity prevention

Delivery platforms: Community delivery platforms, integrated management of childhood illnesses, child health days, school-based delivery platforms, financial platforms, fortification strategies, nutrition in emergencies

Bold = Interventions modelled
Italics = Other interventions reviewed


Decreased maternal and childhood morbidity and mortality
Improved cognitive growth and neurodevelopmental outcomes
Increased work capacity and productivity
Economic development
India - Key Indicators

- 47% women married & 30% gave first birth before 18 years age
- Half the adolescents (boys and girls) have below normal BMI
- 56% adolescent girls (15-19 years) have anaemia
- Highest prevalence of anaemia is between 12 to 13 years
- Adolescents (15-19 years) contribute to 16% of total fertility
- 36% women have a BMI below 18.5
- 22% babies born each year have LBW (1/3 global burden)
- 79% children (6 to 35 months) are anaemic
- Highest rate of stunting (38% global burden)
- 42.5% children (0-5 years) are underweight
- Biggest contributor to the world’s prematurity burden (23.6%)
Continuum of Care – Critical issues

- Pre-conception care important for pregnancy & child health outcomes & reduction in preterm birth rates
- Birth weight - an important risk factor for child survival and a strong predictor for size in later life
- Undernourished mothers usually deliver LBW children
- First 2 years of life: ‘critical window of opportunity’ for prevention of growth faltering
- Under-nutrition epitomize societal inequities,
- Stunting serves as marker for poverty & underdevelopment
- Interventions should focus on critical 1,000-day window including pregnancy & before child turns two.
- Intergenerational Cycle of Survival, Growth and Development - Undernourished girls become undernourished women who give birth to a new generation of undernourished children.
Pre-Conception Care - India

The period before conception and the inter-conception period

- 11-18 years: Adolescent Girls (AGs) - 16.75% of female population
- Approximately 33% of Adolescent Girls are undernourished.
- Anaemia in Adolescent girls: 56%. {39% adolescent girls (15-19 years) are mildly anaemic, 15% and 2% suffer from moderate and severe anaemia respectively}
- Highest prevalence of anaemia is reported between the ages 12-13 years, which also coincides with the average age of menarche.
- 58% women are married and 30% gave first birth before age of 18 years contributing to High MMR and anaemia.
- 63.5% drop-out rate from class I to class X amongst girls.
Child Nutrition - India

- 22% babies born low birth weight {One third global burden}.
- 42.5% of children 0-5 years are underweight
- 79% children (6-35 months) are anaemic
- Highest rate for stunting {38% of the global burden (2011)}
- 40% children are underweight, 45% stunted and 23% wasted.
- India accounts for nearly 20% of the world’s child deaths.
- More than one third of child deaths are attributable to undernutrition
- Significant gender variation and urban rural differential
Intergenerational Cycle of Survival, Growth and Development - India

- 22% babies born each year have LBW linked to maternal under-nutrition and anaemia among other causes.
- The mother’s condition before pregnancy is a key determinant of its outcome - half of adolescents (boys and girls) have below normal body mass index (BMI) and almost 56% of adolescent girls aged 15–19 years have anaemia.
- Adolescents (15–19 years) contribute about 16% of total fertility in the country and 15–25 years age group contributes 45% of total maternal mortality.
- Substantial unmet need of contraception – about 27% among married adolescents (15 – 19 years) and low condom use by adolescents in general,
- Adolescent girls are at a high risk of contracting sexually transmitted infections, HIV and unintended and unplanned pregnancies contributing to maternal morbidity and mortality due to unsafe abortions and infections.
Gender and Nutrition

- Under-nutrition in India is a gender issue since 36% women are chronically undernourished and 55% anaemic.
- 63.5% drop-out rate from Class One to Class Ten amongst girls.
- Enough evidence - women’s low status in household and in society an important cause of poor nutrition.
- Women’s lack of decision-making power and control over income, have an adverse effect on health-seeking behaviour & child health & nutrition.
DISCRIMINATION THROUGH THE LIFE CYCLE OF GIRLS AND WOMEN

Infant (0-1 Years)

- Conception
- Foeticide

- Infanticide, infant mortality, discrimination in breast feeding, health care

- Malnutrition, anaemia, child marriage, child labour, school dropout
- HIV/AIDS, trafficking, commercial sex work

Teenage girl (11-18 years)

- Adult woman
- Worker
- Wife
- Older woman

- Domestic violence, rape, trafficking, commercial sex work, abortion, HIV/AIDS, desertion, anaemia, unpaid care work, unpaid farm work, lack of asset base

Worker

- Sexual abuse at workplace, wage discrimination, discrimination in employment, safety & security, lack of support facilities, absence of women friendly tools & equipments

Wife

- Domestic violence, dowry harassment, sati, polygamy, desertion, divorce, unpaid care work

Pregnancy

- Maternal mortality, anaemia, unsafe delivery, early & frequent deliveries, undernutrition

India’s Response
## Interventions addressing Malnutrition: India

<table>
<thead>
<tr>
<th>Target Group</th>
<th>Schemes</th>
<th>Expansion</th>
</tr>
</thead>
<tbody>
<tr>
<td>Children 0-3 years</td>
<td>ICDS, RCH-II, NRHM, Rajiv Gandhi National Creche Scheme</td>
<td>RGNCS (2005-06) ICDS (2008-09)</td>
</tr>
<tr>
<td>Children 3-6 years</td>
<td>ICDS, RCH-II, NRHM, Rajiv Gandhi National Creche Scheme, Total Sanitation Campaign (TSC), National Rural Drinking Water Programme (NRDWP)</td>
<td>TSC (2008-09)</td>
</tr>
<tr>
<td>School-going children 6-14 years</td>
<td>Mid-Day Meals (MDM), Sarva Shiksha Abhiyan (SSA)</td>
<td>SSA (2002/2005-06) MDM (2008-09)</td>
</tr>
<tr>
<td>Adolescent Girls 11-18 years</td>
<td>Rajiv Gandhi Scheme for the Empowerment of Adolescent Girls (RGSEAG), NIPS, WIFS, Kishori Shakti Yojana, Total Sanitation Campaign (TSC), National Rural Drinking Water Programme (NRDWP)</td>
<td>NRDWP (2010) RGSEAG (2010-11)</td>
</tr>
</tbody>
</table>
Reproductive, Maternal, Newborn, Child
Plus Adolescent Health (RMNCH+A) strategy

Launched in 2013
RMNCH+A - Continuum of Care approach with
evidence-based packages for different stages
of lifecycle, at various levels in the health system.

The ‘Plus’ here denotes:

- Inclusion of adolescence as a distinct ‘life stage’ in the
  overall strategy;
- Linking of maternal and child health to RH & other
  components (like FP, AH, HIV, gender and PCPNDT;
- Linking of community & facility-based care & referrals
## RMNCH+A Strategy - India

<table>
<thead>
<tr>
<th>Clinical</th>
<th>Reproductive care</th>
<th>Pregnancy and child birth care</th>
<th>Newborn and childcare</th>
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<tbody>
<tr>
<td></td>
<td>Comprehensive abortion care</td>
<td>Skilled obstetric care and immediate newborn care and resuscitation</td>
<td>Essential newborn care</td>
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<td></td>
<td>RTI/STI case management, Postpartum IUCD and sterilisation; interval IUCD procedures</td>
<td>Emergency obstetric care</td>
<td>Care of sick newborn (SNCU, NBSU)</td>
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<td></td>
<td>Adolescent friendly health services</td>
<td>Preventing Parent to Child Transmission (PPTCT) of HIV</td>
<td>Facility-based care of childhood illnesses (IMNCI)</td>
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<td></td>
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<td>Postpartum sterilisation</td>
<td>Care of children with severe acute malnutrition (NRC)</td>
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<td></td>
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<td>Immunisation</td>
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</tbody>
</table>

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<tr>
<th>Outreach/Sub centre</th>
<th>Reproductive health care</th>
<th>Antenatal care</th>
<th>Postnatal care</th>
<th>Child health care</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Family planning (including IUCD insertion, OCP and condoms)</td>
<td>Full antenatal care package</td>
<td>Early detection and management of illnesses in mother and newborn</td>
<td>First level assessment and care for newborn and childhood illnesses</td>
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<td></td>
<td>Prevention and management of STIs</td>
<td>PPTCT</td>
<td>Immunisation</td>
<td>Immunisation</td>
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<tr>
<td></td>
<td>Peri-conception Folic acid supplementation</td>
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<tr>
<th>Family &amp; Community</th>
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<tbody>
<tr>
<td>Weekly IFA supplementation</td>
<td>Counselling and preparation for newborn care, breast feeding, birth preparedness</td>
<td></td>
<td>Home-based newborn care and prompt referral (HBNC scheme)</td>
<td></td>
</tr>
<tr>
<td>Information and counselling on sexual reproductive health and family planning</td>
<td>Demand generation for pregnancy care and institutional delivery (JSY, JSSK)</td>
<td></td>
<td>Antibiotic for suspected case of newborn sepsis</td>
<td></td>
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<tr>
<td>Community based promotion and delivery of contraceptives</td>
<td></td>
<td></td>
<td>Infant and Young Child Feeding (IYCF), including exclusive breast feeding and complementary feeding,</td>
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</tr>
<tr>
<td>Menstrual hygiene</td>
<td></td>
<td></td>
<td>Child health screening and early intervention services (0-18 years)</td>
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<td></td>
<td></td>
<td></td>
<td>Early childhood development</td>
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<td></td>
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<td>Danger sign recognition and care-seeking for illness</td>
<td></td>
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<td>Use of ORS and Zinc in case of diarrhoea</td>
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**Intersectoral:** Water, sanitation, hygiene, nutrition, education, empowerment

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**Adolescence/ Pre-pregnancy** | **Pregnancy** | **Birth** | **Newborn / postnatal** | **Childhood**
Special Programmes for Adolescents

Adolescents (10-19 years) constitute 21% of India’s population (253 million)
Rashtriya Kishor Swasthya Karyakram

- MoHFW has launched a health programme for adolescents (10-19 years)
- 6 priority areas: Nutrition, Mental Health, Violence, Substance Misuse, SRH, Non-Communicable Diseases
- Moves away from a one-size-fits-all approach to more customized programmes and service delivery specific to adolescents
- Paradigm shift from a clinical approach to one that of health promotion
**SABLA – Comprehensive programme for Adolescent girls**

*Focuses on adolescent girls between 11 and 18 years of age in 200 districts of India*

<table>
<thead>
<tr>
<th>Nutrition Component</th>
<th>Non Nutrition Component</th>
</tr>
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</table>
| Take Home Ration or Hot Cooked Meal  
- 11-14 years:  
  Out of school girls  
- 14-18 years:  
  Both out of school and in school girls | For Out of school Adolescent Girls: (2–3 times a week)  
(a) 11-18 years  
- IFA supplementation,  
- Health check-up and Referral services,  
- Nutrition & Health Education (NHE),  
- Counselling / Guidance on family welfare, ARSH, child care practices  
- Life Skill Education and accessing public services  
(b) 16-18 years  
- Vocational training under National Skill Development Program  
For In school Adolescent Girls: (twice a month – average)  
(c) 11-18 years  
- Nutrition & Health Education (NHE),  
- Counselling / Guidance on family welfare, ARSH, child care practices  
- Life Skill Education and accessing public services |
Rajasthan
## Progress on SABLA and Mid-Day Meal

### Data on SABLA programme Rajasthan (2013-2014)

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Adolescent girls in 10 districts (11-18 years)</td>
<td>1215,275</td>
</tr>
<tr>
<td>Number of Anganwadi Centres</td>
<td>24,259</td>
</tr>
<tr>
<td>Nutrition for Out of school children (11 to 14 years) and School going children (14 to 18 years)</td>
<td>816,079</td>
</tr>
<tr>
<td>IFA tablets Adolescent beneficiaries - Out of school (11 to 14 years)</td>
<td>439587</td>
</tr>
</tbody>
</table>

### Data on Mid-Day Meal Rajasthan (2012-2013)

<table>
<thead>
<tr>
<th>Coverage</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schools where Mid-Day Meal given</td>
<td>81,054</td>
</tr>
<tr>
<td>Number of children given Mid-Day Meal</td>
<td>6,671,000</td>
</tr>
</tbody>
</table>
Launch of WIFS

- Creating the IFA brand BLUE with ‘Solid Bano India’
- For branding a logo developed with media campaign material
- Mass Media Campaign launch
  - TV: 2 spots + edits (Kites and Tuition)
  - Radio: 2 spots (Cattle and Tiffin)
  - Press: 4 ads (Blackboard – Horizontal/Vertical)
  - Outdoors: *Sust-Chust* (Hoardings, Wall Paintings)
- State Campaign launch
  - Posters, wall planners
  - Launch event
  - Press briefing/coverage
  - Institution of Awards
Chahiye solid shareer aur solid dimag?
Toh harfe mein srf ek baar to iron ki ek goli,
Ye kyun mein iron ki maante badiyaaye aur
apko anlar se baahar tak, ekum solid danaaye!

Solid Bano India

Bachchon mein khoon ki kami door karne ke liye
Bharat Sarkar ki pahal
SOLID BANO INDIA

Paratha
Progress

- Nutrition component progress is satisfactory
- IFA tablets supply and distribution regular
- Supervision and Monitoring weak because HR gaps in supervisory cadre
- Irregular meetings of the Adolescent groups. Adolescent girls do not come or the Anganwadi workers do not organize meetings
- Take Home Ration for Out of school children is given as 4 packets of food per month. This is shared by the whole family and hence the benefit of the food is diluted.
- Data collection is not regular and no feedback is given to the functionaries
- Skills component is also weak
- Recently SABLA evaluation done – Report awaited
Weekly Iron & Folic Acid Supplementation (WIFS)

- Community-based intervention addressing nutritional anaemia amongst adolescents (boys & girls) in both rural and urban
- Cover adolescents in class VI–XII of government, government aided and municipal schools as well as ‘out of school’ girls

The key features of the scheme are:

- Supervised administration of weekly IFA supplements of 100 mg elemental iron and 500 mcg folic acid;
- Screening of target groups for moderate and severe anaemia & referral to an appropriate health facility
- Bi-annual de-worming (Albendazole 400 mg)
- Information and counselling
WIFS: Rajasthan Story

- **Out of school children**: Every Thursday the adolescent girls come to the AWC for adolescent girls meetings when tablets given.
- Reporting consists of number of tablets available, number of children who have consumed 1 tablet, 2 tablets, 3 tablets and 4 tablets.

**Coverage:**
- Scheme is under RMNCH+A programme operational in 10 High Priority districts
- State consultants have been hired through UNFPA & UNICEF

<table>
<thead>
<tr>
<th>Numbers of Centres</th>
<th>Number of Adolescents</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. of Schools</td>
<td>34,164</td>
</tr>
<tr>
<td>Out of School</td>
<td>61,119 Anganwadi Centres</td>
</tr>
</tbody>
</table>
WIFS: …Rajasthan Story - Progress

- Scheme well accepted
- Negligible side effects reported (Only 3 cases)
- Popular with teachers
- Gradual acceptance by parents
- Convergence is a problem since this is a scheme involving 3 departments. There is lack of ownership
- Initially the take up was slow as the teachers were reluctant. They said that the tablets should be given by the health department
- Teachers were not keen to take supplies of tablets quarterly hence 6 months to one year stocks are allowed
- Reporting was poor but it has picked up in the last 3 months and 21 districts out of 33 districts are reporting regularly
- No baseline study was conducted. A research study needs to be carried out to see the outcomes in terms of the haemoglobin and the level of performance of children including energy levels
WIFS: Rajasthan Story

- Launched on 25\textsuperscript{th} July 2013 at a large scale state launch
- Orientation of teachers and AWWs with robust Monitoring system
- Media campaign: All TV channels, radio stations & newspapers
- Rajasthan Medical Services Corporation responsible for procurement, inventory & supply
- Inventory guidelines made for education department & for ICDS
- Stock up for at least 3 to 4 months with expiry date of 2 years
- Procurement done quarterly,
- Deworming tablets given yearly
- In-School: IFA tablets first ingested by the school teachers/ AWWs once a week & then given to each adolescent to be ingested by them in front of the teacher/AWW
Key Recommendations: India

- Single policy for nutrition addressing all the root causes and to be implemented in the mission mode
- Integrated approach for new RMNCH+A strategy specially addressing pre-conception care, new born care, stunting, pre-maturity, perinatal care, mild and moderate malnutrition & community-based care for Severely Acute Malnourished (SAM)
- Research eg. Impact of various schemes and programmes, long term intergenerational benefits of under nutritional prevention, pre-conception care package
- Timely & accurate data on nutrition (gender & equity based) to be part of mother-child tracking software & HMIS
...Recommendations

- Monitoring of important indicators
- Independent third party surveys required
- Capacity Building of health personnel and doctors on nutrition, create a cadre of public health nutritionists
- Prevention of under age marriages and early pregnancies
- Strengthening linkages between programmes and schemes. eg. Among WIFS, RKSK & SABLA
They dream big!

Restless to make their mark in the world

Want to discover new highs

Want to outwit others in their own way

Want to take on every challenge... confidently...

...fearlessly!
Thank You

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