Experiences and lessons-learned from the integrated program for maternal anemia reduction in two states of Uttar Pradesh and Jharkhand, India

Prakash Kotecha
Arun Gupta, Syed Iqbal, Versha Mathur, Chandra Mishra, Praveen Sharma, Vishwajeet Pankaj, Mini Rozario & Nadra Franklin, Linda Tawfik, Lidan Du, Zo Rambeloson, Rolf Klemm, Omar Dary, Phillis Kim, Morgan Hillenbrand, A2Z Project, India
Why Anemia and Why Uttar Pradesh & Jharkhand, India?

<table>
<thead>
<tr>
<th></th>
<th>UP</th>
<th>Jharkhand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population (2011)</td>
<td>199 million</td>
<td>32 million</td>
</tr>
<tr>
<td>Districts</td>
<td>73</td>
<td>24</td>
</tr>
<tr>
<td>Anemia in pregnancy</td>
<td>52%</td>
<td>70%</td>
</tr>
<tr>
<td>Among highest SES group</td>
<td>46%</td>
<td>67%</td>
</tr>
<tr>
<td>Three Antenatal checkups</td>
<td>36%</td>
<td>36%</td>
</tr>
<tr>
<td>Mothers who consumed IFA for 90 days</td>
<td>9%</td>
<td>11%</td>
</tr>
</tbody>
</table>

- One in five maternal death is attributed to iron def anemia.
- In UP MMR 440/100,000
- Jharkhand MMR 312/100,000
- In the two states alone 77 maternal deaths every day
- 15 of them due to anemia...
- 30 times these figures are facing serious morbidities

Source: NFHS II 1998-99 NFHS III 2005-06

Source: NFHS III

Pregnancy anemia is strongly related to maternal and perinatal mortality

- The risk relationship is continuous
- Not just a problem of severe anemia

Source: Disease Control Priorities 2

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Jharkhand & UP State: A2Z Districts for Maternal Anemia

Selected 3 districts in UP for MA intervention: Kaushambi, SR Nagar and Varanasi

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High Prevalence of Anemia and STH Infection in UP & Jharkhand as compared to State

Anemia in UP & Jharkhand

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<tbody>
<tr>
<td>% of Pregnant women in the 3rd trimester</td>
<td>73</td>
<td>63</td>
<td>72</td>
</tr>
<tr>
<td></td>
<td>70</td>
<td></td>
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</tr>
<tr>
<td>N</td>
<td>285</td>
<td>398</td>
<td>942</td>
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<tr>
<td></td>
<td>220</td>
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STH Infection in UP and Jharkhand

<table>
<thead>
<tr>
<th></th>
<th>UP</th>
<th>Jharkhand</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ascariasis</td>
<td>49</td>
<td>31</td>
</tr>
<tr>
<td>Trichuris</td>
<td>11</td>
<td>6</td>
</tr>
<tr>
<td>Trichinura</td>
<td>9</td>
<td>3</td>
</tr>
<tr>
<td>Hook worm</td>
<td>65</td>
<td>50</td>
</tr>
<tr>
<td>Any Infection</td>
<td>65</td>
<td>50</td>
</tr>
</tbody>
</table>

Jharkhand n=146 UP n=150

Source: Awasthi S et al, 2007
A2Z APPROACH FOR MATERNAL ANEMIA CONTROL
Technical Assistance for Maternal Anemia Reduction

- Policies & Guidelines: RCH/ICDS roles and liaison, HMIS use, resources. (state level)
- Capacity Building of front line workers and MO with the tools to support them and providing technical assistance
- Systems Strengthening: Supplies, planning denominators, provider skills, records, use of data. (state and selected districts)
- Community & BCC: Village Health & Nutrition Days, home visits, print and broadcast media, community groups and leaders, local events, folk and street plays.
- M&E: Baselines, routine data, Mid Project Surveys and End-line surveys
- District and Block Level Consultant + Mentors

*Partners: Medical Colleges, NGOs, UNICEF, MI*
Complete and early registration for ANC

Provide 100 IFA to ALL pregnant women with complete package of counseling to ensure consumption (BCC as the focus)

Advice to provide and ensure the consumption of one extra meal

Deworming medicine after first trimester ALL pregnant mothers (ensure consumption)

Advice for Malaria control: IPT/Mosquito bednet/EDPT
Studies

- Baseline (2007 Jharkhand 2008 UP)
- Mid Project Monitoring Survey (2009)
- Endline (2011)

<table>
<thead>
<tr>
<th>District</th>
<th>Intervention Blocks</th>
<th>Non-intervention Blocks</th>
<th>District</th>
<th>Intervention Block</th>
<th>Non-intervention Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaushambi</td>
<td>1 Sarsawan</td>
<td>Manjhanpur</td>
<td>Dumka</td>
<td>1 Raneshwar</td>
<td>Gopikandar</td>
</tr>
<tr>
<td></td>
<td>2 Mooratganj</td>
<td>Kanailli</td>
<td></td>
<td>2 Saraiyahat</td>
<td>Jama</td>
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<tr>
<td></td>
<td>3 Sirathu</td>
<td>Chayal</td>
<td></td>
<td>3 Kathikund</td>
<td>Jarmundi</td>
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<td>Newada</td>
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<td>Kada</td>
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<tr>
<td>Varansi</td>
<td>1 Araji Lane</td>
<td>Kashi Vidyapeeth</td>
<td>Latehar</td>
<td>1 Balumath</td>
<td>Barwadih</td>
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<tr>
<td></td>
<td>2 Cholapur</td>
<td>Chirai Gaon</td>
<td></td>
<td>2 Chandwa</td>
<td>Garu</td>
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<td></td>
<td>3 Sewapuri</td>
<td>Harahua</td>
<td></td>
<td>3 Latehar</td>
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<td></td>
<td></td>
<td>Bada Gaon</td>
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<td>Pindara</td>
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<tr>
<td>S.R.Nagar</td>
<td>1 Gyanpur</td>
<td>Deegh</td>
<td>Ramgarh</td>
<td>1 Mandu</td>
<td>Patratu</td>
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<td></td>
<td>2 Bhadoi</td>
<td>Aural</td>
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<td>2 Gola</td>
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<td></td>
<td>3 Suryawan</td>
<td></td>
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<td>3 Ramgarh</td>
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</tbody>
</table>
Field Surveys Measuring Anemia

- For each state 31 cluster sampled PPS and then 10 mothers from each cluster (n=310 for CPW and RDW total n=620) was planned with expected design effect of 2 reduction of anemia 15%. (Baseline and Endline)
- Ethical Committee approved: US and India
- HemoCue Machine (301) was used for measuring hemoglobin level with lancet needle.
- Qualitative Study (FGD for ANM, AWW and beneficiaries mothers with high and low compliance)
Results for Process Indicators
Maternal Anemia ANC Coverage

Jharkhand

Improved ANC over 1.5 times to 85%

UP

Improved ANC over 2.2 times to 86%

---|---|---
54 | 92 | 85

Baseline (March 2008) | Mid Project Survey II (February 2009) | End or Project (April 2011)
---|---|---
36 | 92 | 86
Maternal Anemia
IFA Received and Consumed

Jharkhand

UP

Focus on this

Any IFA Received
100 IFA Received

Baseline (Dec 2007)
Mid Project Survey (April 2009)
Endline (April 2011)

Baseline (March 2008)
Mid Project Survey II (February 2009)
End or Project (April 2011)

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Deworming Medicine Received

- Baseline (2007/2008): 3 (Jharkhand) vs 4 (UP)
- Mid Project Survey (April 2009): 16 (Jharkhand) vs 10 (UP)
- Endline (April 2011): 10 (Jharkhand) vs 16 (UP)
Maternal Anemia
ICDS Food Received

Baseline (Dec 2007)
Jharkhand 2008 UP

Mid Project Survey (April 2009)

Endline (April 2011)

Jharkhand
UP

0 20 40 60 80 100

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Results for Impact on Anemia Prevalence
Maternal Anemia Prevalence UP

Anemia Prevalence  Severe Anemia

23% reduction achieved

Mean Hb Improved from 9.8 to 10.9 g/dL

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Maternal Anemia Jharkhand
Anemia Prevalence

Mean Hb Improved from 10.14 to 10.34 g/dL

only 2% reduction achieved

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What Worked

• **Helping ANM to assist (Job Aid)** how to find out unregistered pregnant woman for antenatal care, how to locate them, counseling steps for pregnant woman for anemia control and simple check list to avoid stock out at sub-center level.

• **Empowering Medical officers** through (Self guide, a tool) that provided simple steps to estimate expected number of pregnant mothers and compare them with actual registration and find out the registration gap

• **Hand Holding and mentoring** frontline workers

• **Creating Demand?** through print media, electronic media and folk media improved utilization… to get data that it made an impact is difficult proposition within the framework and mandate of our work..
Challenges in Anemia Control

• Not a priority disease for health care provider, nor for beneficiaries. It is a SILENT MORBIDITY

• 100 IFA tablets are recommended for prevention of anemia and is enough for additional requirement of iron for pregnancy for fetus, placenta and increased blood volume.

• Compliance for this 100 IFA also is a challenge.
  – Relative lack of importance for anemia as perception hardly exists..(provider and clients both)
  – Time availability by health workers for anemia (provider)
  – Priority for counseling vs other assignments (provider)
  – Capacity, conviction, understanding and desire to counsel

• Fortification of food, accepted world over needs to be strengthened, which is a proven technology.

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Challenges converted to Innovation
Jharkhand UP Health workers were anemic themselves…?

N=467

N=126

ANM 74%
AWW 97%
Others 91%
Total 91%

ANM 68.20%
ASHA 65.70%
AWW 56.10%
SUPERVISOR 50.00%
Total 61.10%

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Challenges beyond us..

• Political instability
  – Government Changes
  – Frequent Transfers of CMO/MO
  – Maoist and Terrorist activities

• Changes of Leaders and staff
  – Country Program Director and project director changed
  – State Coordinator changed three times in both the state
  – Country Director Changed
  – AOTR at India and Washington change
Will Anemia Control be achieved ever?
Jharkhand State

Reproductive Child Health | Initiative | RCH Schemes | RCH Camp

OUR GOAL OF PROVIDING HEALTH CARE TO
"THE LAST HOUSEHOLD & THE LAST PERSON
IN THE STATE"

A Little Care For Future

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What ever you do may look to be insignificant, but is very important that you do it.

The smallest drop of rain create the ocean
Knowing is not enough; We must apply....

Willingness is not enough; We must do.....

Johann Wolfgang von Goethe;
German Writer 1749-1832
Let us all strive to make every mother non-anemic

Thank You

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INDIA NFHS III: Anemia Vs IFAS

Percentage of Pregnant Women who took IFA for at least 90 days
Pregnant women age 15-49 who are anaemic

Source: NFHS III (2005-06)