



The USAID  
Micronutrient and  
Child Blindness Project

# Pharmaceutical Management for Micronutrients and Anemia-Reduction Medicines

## Supply –Side Considerations

### Academy for Educational Development

A2Z/India: Suneel Muttoo, Prakash Kotecha, **Sumitro Roy**;

A2Z/Uganda: Alfred Boyo, Milly Namaalwa

A2Z/USA: Linda Tawfik, Tina Sanghvi, Zo Rambeloson, Verónica Lee

&

### Management Sciences for Health

Vim Dias, Grace Adeya, Helena Walkowiak, Abaasi Kabogo

## Sumitro Roy, Alive & Thrive

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## Presentation Outline

- **Intervention Site- Uganda & India**
- **Problem**
- **Aims**
- **Methods**
- **Results**
- **Global and Country-level Implications**



## THE PROBLEM – INDIA, JHARKHAND STATE



<b>Estimated rural population<sup>1</sup></b>	<b>24 million</b>
<b>Any anemia in pregnant women<sup>2</sup></b>	<b>70%</b>
<b>Any ante-natal care (ANC) checkup<sup>2</sup></b>	<b>55 %</b>
<b>3 or more ANC checkups<sup>2</sup></b>	<b>28%</b>
<b>Received or purchased IFA<sup>2</sup></b>	<b>46%</b>
<b>Prenatal IFA supplementation consumed for 90+ days<sup>2</sup></b>	<b>11%</b>
<b>Sources:</b>	
<sup>1</sup> Registrar General of India, Dec., 2006	
<sup>2</sup> NFHS 2005-06, Jharkhand State Report, May 2008	



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## THE PROBLEM: UGANDA

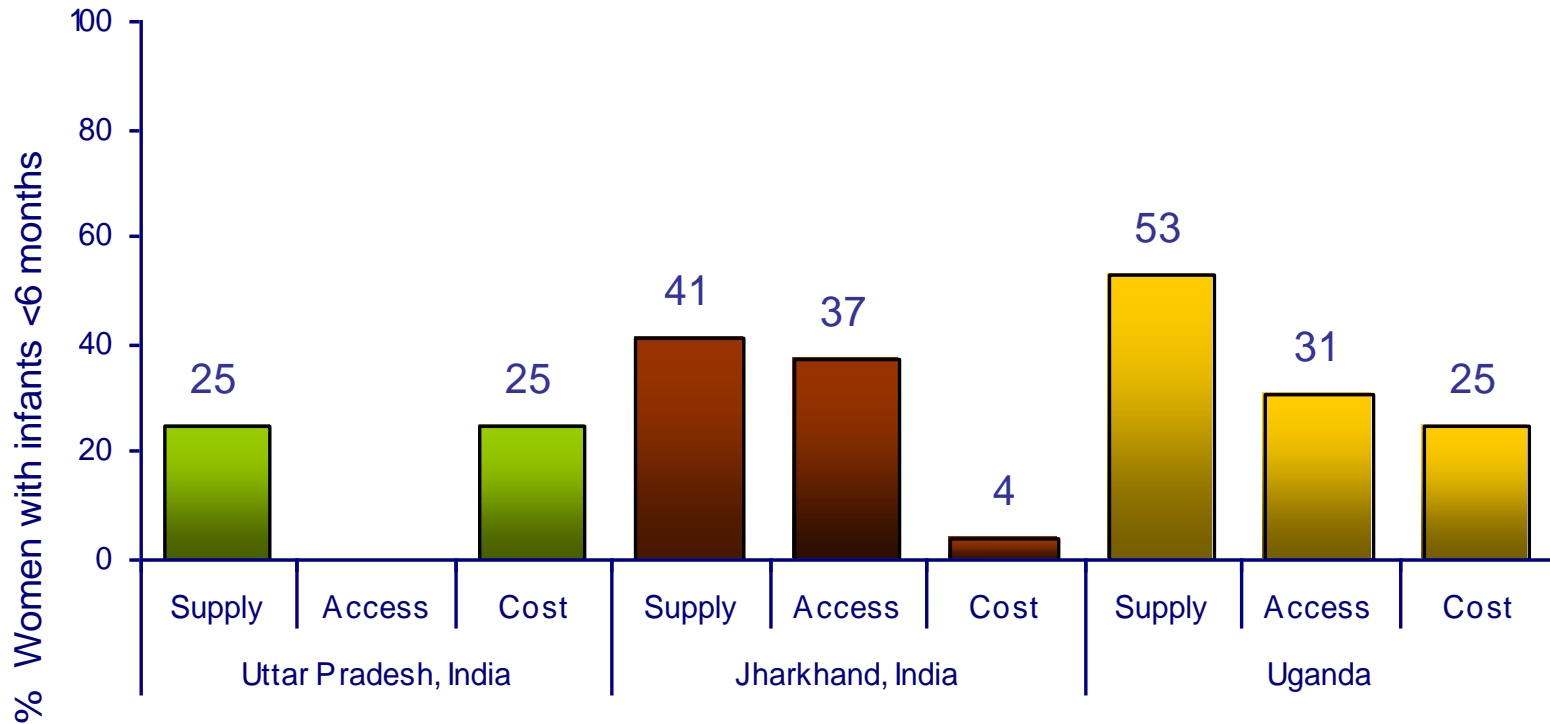


<b>Population<sup>1</sup></b>	<b>28.5 million</b>
<b>Anemia in pregnant women<sup>2</sup></b>	<b>64%</b>
<b>Any ANC checkup<sup>2</sup></b>	<b>94.5%</b>
<b>2-3 ANC checkups<sup>2</sup></b>	<b>41.7%</b>
<b>4+ ANC checkups<sup>2</sup></b>	<b>47.2%</b>
<b>Prenatal iron supplementation consumed for 90+ days<sup>2</sup></b>	<b>0.70%</b>
<i>Source: <sup>1</sup>Uganda Bureau of Statistics; <sup>2</sup>UDHS 2006</i>	



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## The Problem: % of Women Reporting Difficulty in IFA Supply Availability versus Access or Cost of IFA



**Supply: Tablets not available/stockout**

**Access: Site too far away/no transport**

**Cost: Too expensive**



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## Aims

- Improve program impact
- Transfer knowledge and develop toolkit

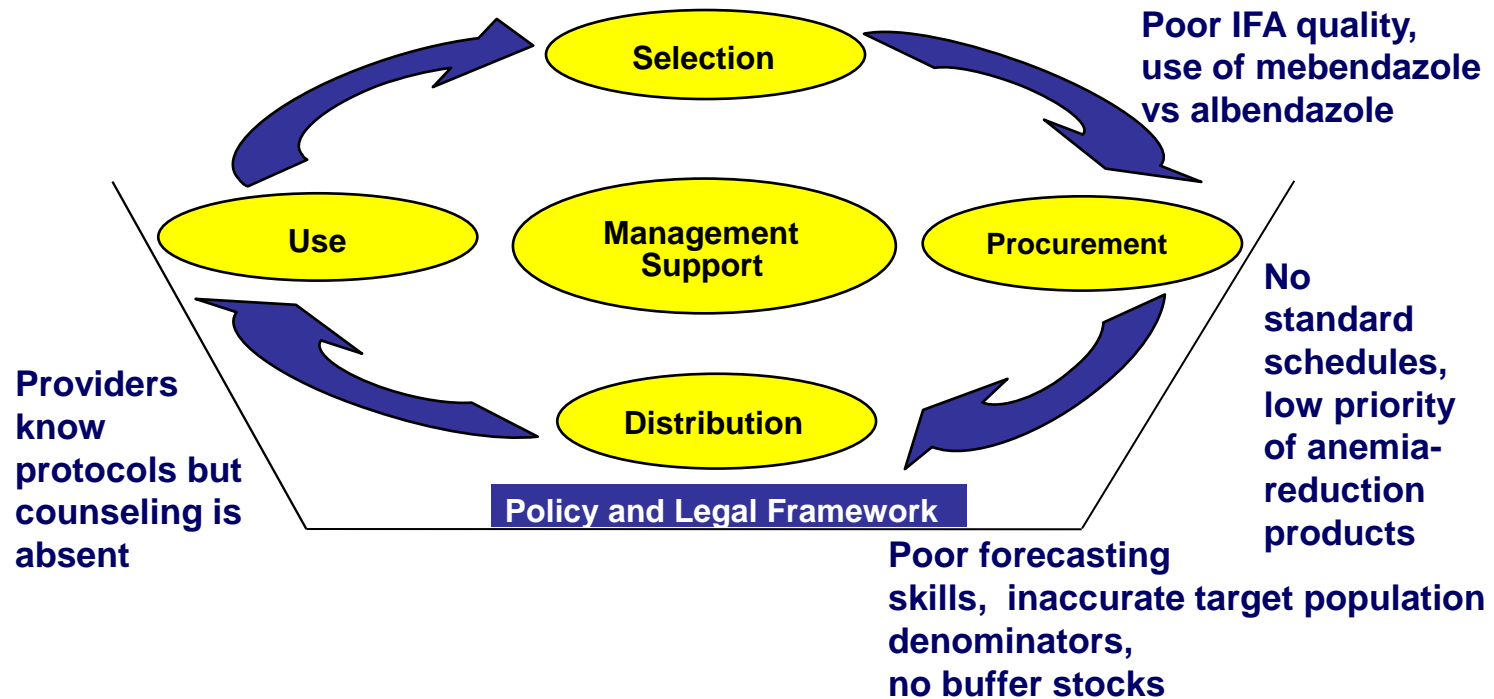
## Methods

- Selected large-scale A2Z program sites in India, Uganda, and Cambodia
- Determined conceptual framework
- Collaborated with stakeholders and engaged international pharmaceutical experts to conduct assessment
- Selected interventions by analyzing options
- Implemented interventions
- Monitored and evaluated results



## Determine Framework & Conduct Assessments

### Pharmaceutical Management Cycle





## Select Interventions

### India/Jharkhand State

- **Advocate**  
National, State, District levels
- **Change to a demand-based system**  
Estimate needs based on population based
- **Develop systems & procedures**  
Procurement, forecasting, inventory control, distribution, HMIS, appropriate use
- **Build capacity**  
Train service providers  
(quantification, counseling, and HMIS use)  
Develop job aids
- **Monitor** stocks at all levels

### Uganda/12 Districts

- **Advocate**  
National & District levels
- **Build Capacity**  
Train service providers in 12 districts  
(quantification, counseling, and HMIS use)  
Develop job aids
- **Develop National Guidelines and Tools for Anemia Reduction**  
Village Health Teams Manual, Supplies Monitoring Checklist
- **Monitor** stocks at all levels





## Results: *India and Uganda*

### **India/Jharkhand State**

- State procurement of IFA increased 8 fold from 2005/6 - 2008/9
- Deworming medicine selected and procurement increased
- State level MOH logistics staff increased
- Number of service providers trained in supplies management and counseling increased
- Stock outs of IFA and deworming medicines at district and health sub-center levels decreased

### **Uganda/12 Districts**

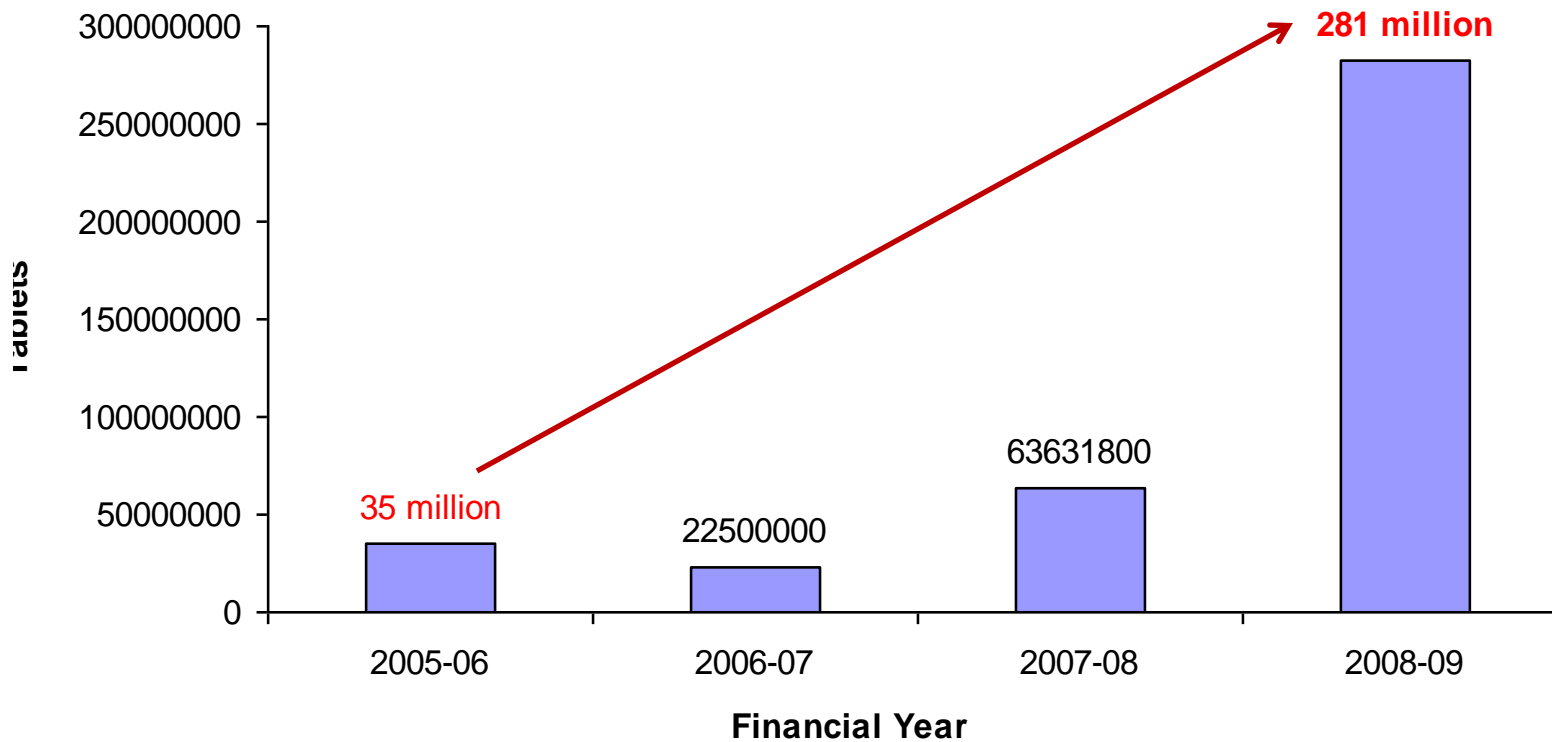
- National Medical Stores committed to stock combined IFA (at national level)
- Number of service providers trained in supplies management and counseling increased
- Days of stock out for ferrous sulphate (200mg) and folic acid (500 micro g) reduced
- Days of stock out for deworming medicines (albendazole or mebendazole) reduced



**Results:**

***Trend in IFA Procurement (L)  
Jharkhand State, India 2005/06-2008/09***

**Micronutrient Drug Procurement IFA (L): Jharkhand**

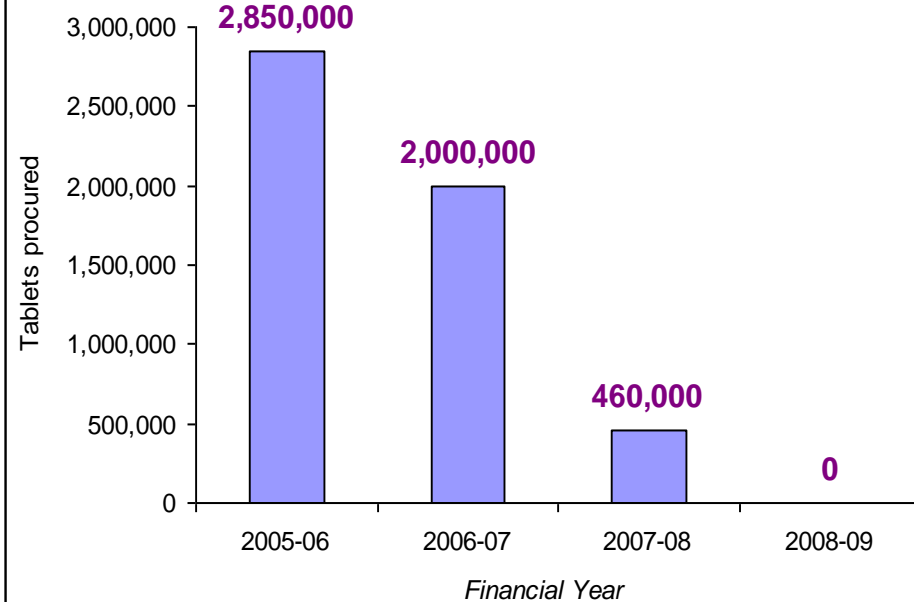




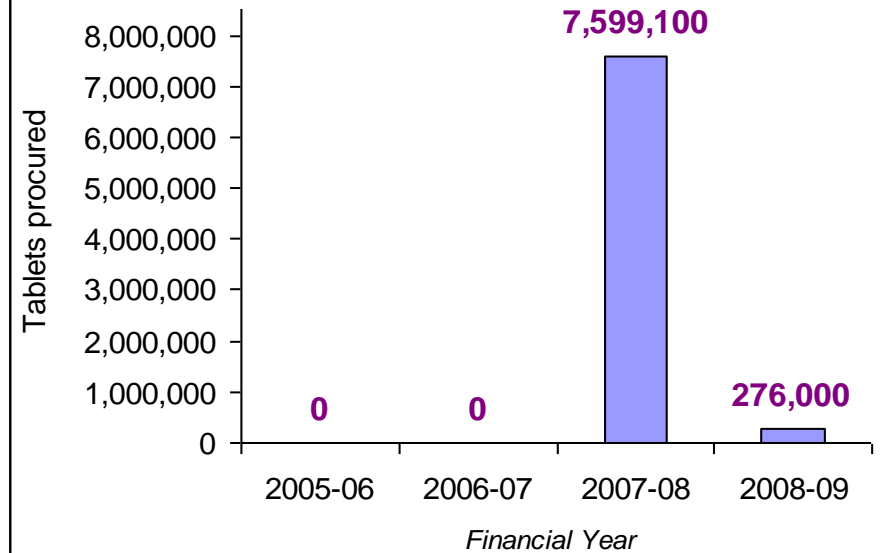
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## Results: Trends in procurement of Mebendazole & Albendazole Jharkhand State, India 2005/06 - 2008/09

**Trend in Procurement of MEBENDAZOLE,  
Jharkhand 2005/06-2008/09**



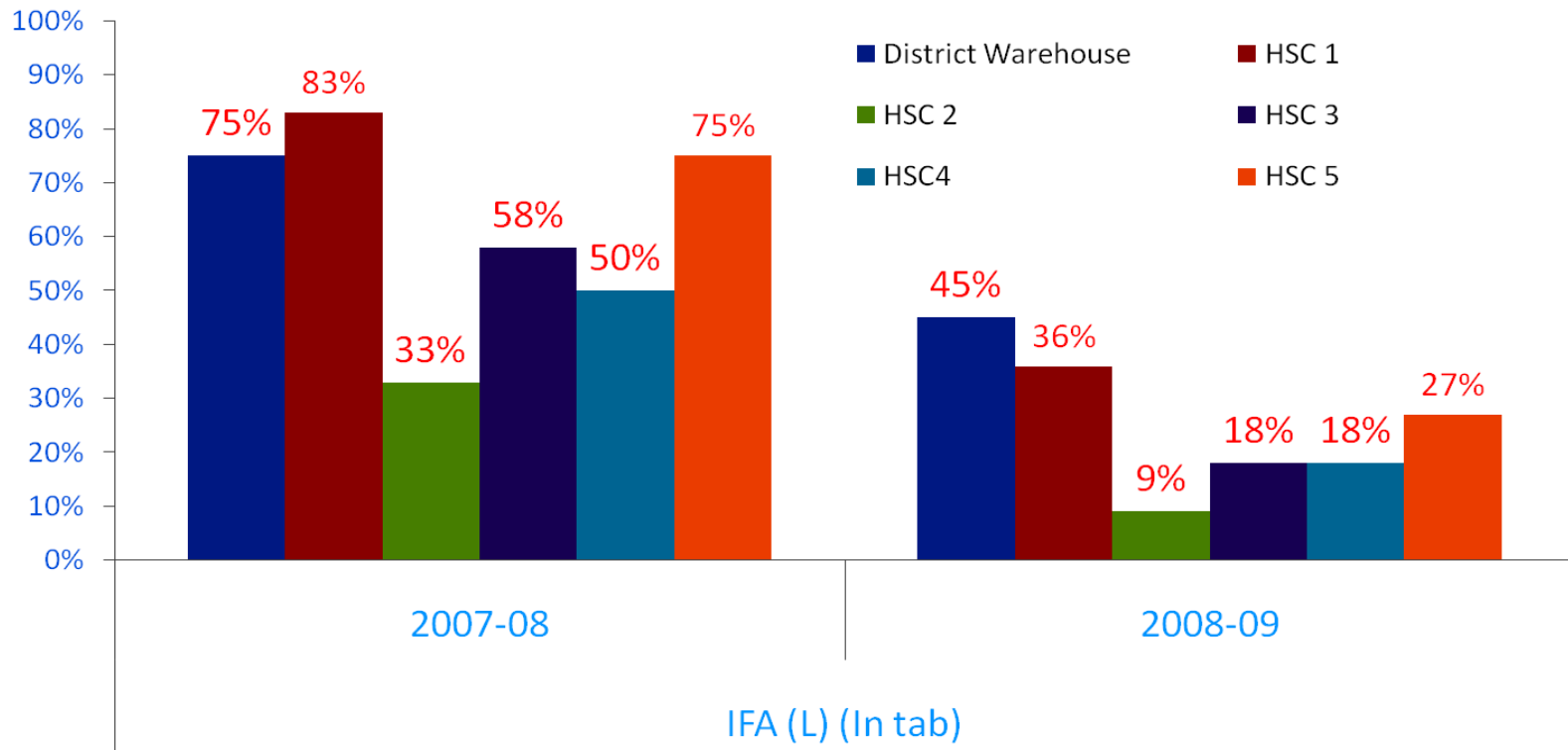
**Trend in Procurement of ALBENDAZOLE,  
Jharkhand 2005/06-2008/09**





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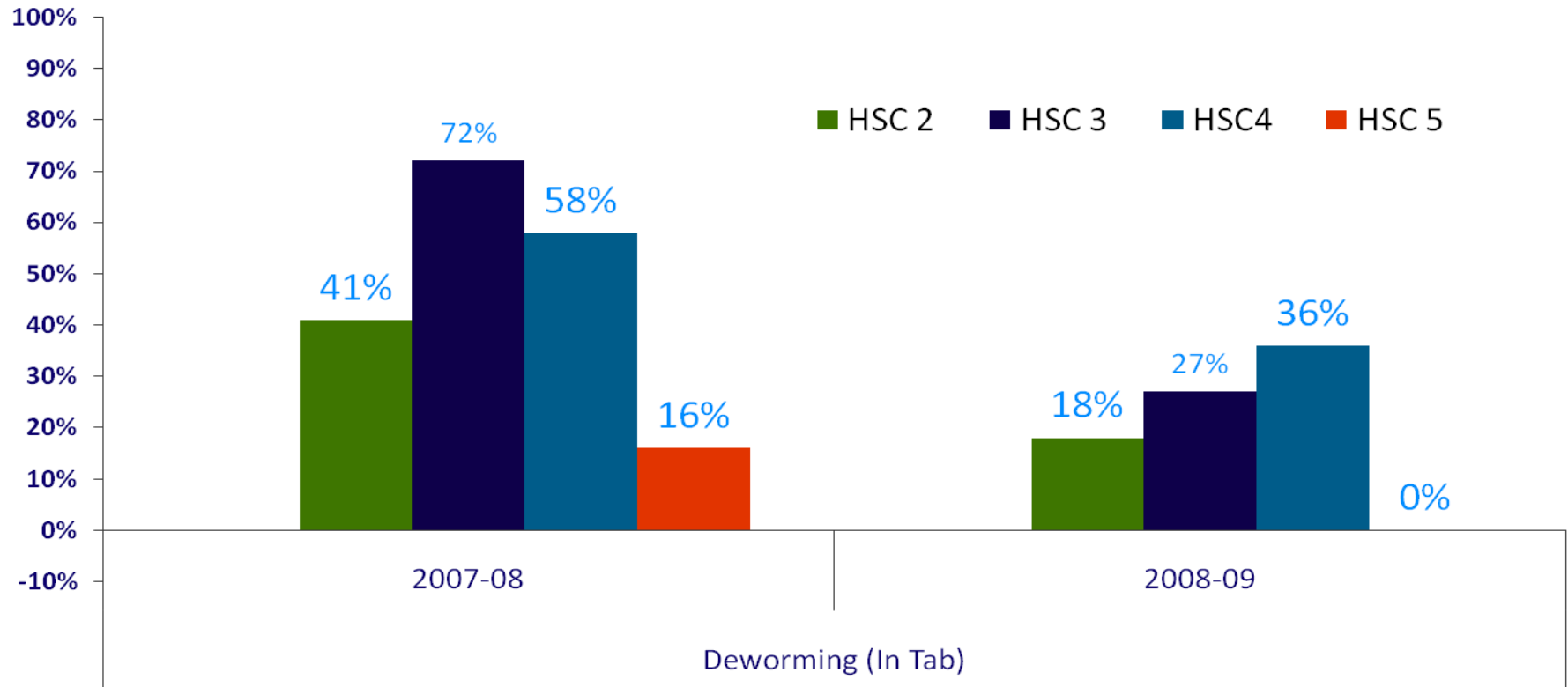
## Results: *IFA Stock outs, % of Year* *Health Sub-center & Dumka District Warehouse* *Jharkhand State, India, 2007-08 and 2008-09*





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## Results: *Deworming Medicines Stock outs, % of Year Health Sub-centers, Dumka District Jharkhand State, India, 2007-08 to 2008-09*

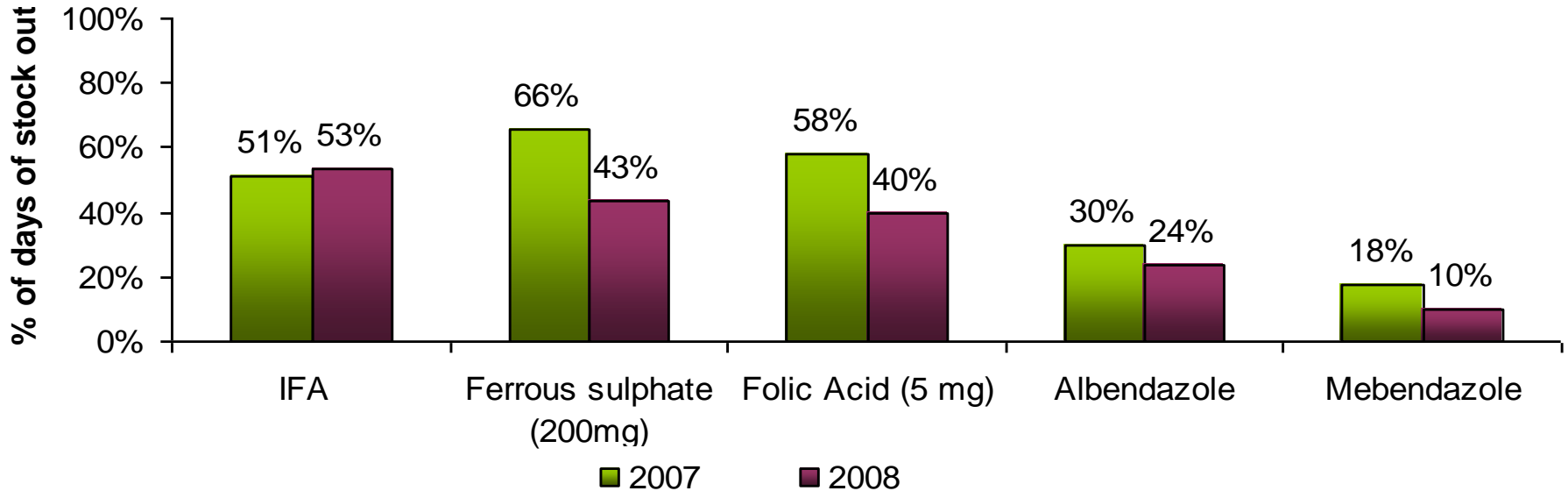




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## Results: *IFA, Ferrous, Folic Acid, Albendazole, Mebendazole, Stock outs, % of Year, Uganda, 2007 and 2008*

% of Days of Stock Out per Year  
Uganda-6 Districts





## ***Conclusion***

- **Selection of Quality IFA Tabs–Composition & Packaging**
- **Estimate based on population- Accuracy of denominators**
- **Advocacy at National, Divisional, District level to prioritize procurement & supply of Anemia reduction products**
- **Strengthen systems & procedures- Forecasting, Procurement, inventory control, distribution, HIMS at all levels**
- **Build the capacity of staffs at all level**
- **Monitor stock at all levels of supply & distribution- Assess status of stock out**



## Conclusions: Global and Country Implications

- **A systematic strategy can lead to improved availability of anemia-reduction products at service delivery points within one year**
- **The strategy includes** stakeholder collaboration, assessments, options analysis, interventions, monitoring and evaluation
- **Scaling-up the supply side of proven interventions is key to sustainable reductions in morbidity and mortality from micronutrient deficiencies**
- **Strengthening pharmaceutical management systems requires investment and a long-term sustainability strategy**





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## Thank You



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