In pregnancy, infections are a key cause of anemia and can be prevented by sleeping under a bednet and taking intermittent preventive treatment (IPTp) for malaria and deworming pills.

For infants, young children, and mothers, delayed cord clamping, sleeping under a bednet, exclusive breastfeeding, and birth spacing reduce the risk of becoming anemic.

For young children, continued breastfeeding and adequate complementary feeding (including micronutrients), preventing and treating malaria, and taking deworming pills can prevent anemia and promote healthy growth.

In adolescence, IFA supplements and deworming pills help prevent anemia. Family planning delays the age at first birth.

In pregnancy, anemia can be prevented by taking iron folic acid (IFA) supplements.

In 2011, only 3.9% of pregnant women in Uganda consumed 90 or more IFA tablets.

Not enough women are taking IPTp to prevent malaria during pregnancy (25%, 2011).

63% of infants in Uganda are exclusively breastfed during the first six months after birth (2011).

In 2011, 34% of children 6-23 months of age consumed foods rich in iron*.

Nearly one-third (31%) of married adolescent girls expressed an unmet need for family planning (2011).

*A includes meat (including organ meat).

A multisectoral approach to prevent anemia will save lives and improve the wellbeing of mothers, infants, and children.
Anemia has substantial negative effects on the health and economic wellbeing of nations and communities. Children with anemia experience irrevocable cognitive and developmental delays and exhibit decreased worker productivity as adults.\(^1\) Globally, maternal anemia increases the risk of pre-term delivery and low birth weight, and iron-deficiency anemia underlies 115,000 maternal deaths and 591,000 perinatal deaths each year.\(^2\)

### Prevalence of anemia among children 6-59 months and women 15-49 years, by region

Source: Uganda DHS, 2011

<table>
<thead>
<tr>
<th>Region</th>
<th>Prevalence 6-59 months of age</th>
<th>Prevalence 15-49 years of age</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karamoja</td>
<td></td>
<td></td>
</tr>
<tr>
<td>West Nile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central 2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>East Central</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastern</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Central 1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kampala</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southwest</td>
<td></td>
<td></td>
</tr>
<tr>
<td>North</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The DHS hemoglobin levels used to diagnose anemia in non-pregnant women 15-49 years of age in grams/dL are: Mild 10.0-11.9; Moderate 7.0-9.9; Severe <7.0; Any <12.0.

The DHS hemoglobin levels used to diagnose anemia in children 6-59 months in grams/dL are: Mild 10.0-10.9; Moderate 7.0-9.9; Severe <7.0; Any <11.0.

### Trends in the prevalence of anemia in Uganda

#### Children 6-59 months of age

<table>
<thead>
<tr>
<th>Year</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>22.4</td>
<td>43.4</td>
<td>6.8</td>
<td>72.6%</td>
</tr>
<tr>
<td>2011</td>
<td>22.3</td>
<td>25.5</td>
<td>1.5</td>
<td>49.3%</td>
</tr>
</tbody>
</table>

The DHS hemoglobin levels used to diagnose anemia in children 6-59 months in grams/dL are: Mild 10.0-10.9; Moderate 7.0-9.9; Severe <7.0; Any <11.0.

#### Women 15-49 years of age

<table>
<thead>
<tr>
<th>Year</th>
<th>Mild</th>
<th>Moderate</th>
<th>Severe</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>2006</td>
<td>34.9</td>
<td>13.3</td>
<td>0.8</td>
<td>49.0%</td>
</tr>
<tr>
<td>2011</td>
<td>17.7</td>
<td>4.8</td>
<td>0.6</td>
<td>23.0%</td>
</tr>
</tbody>
</table>

The DHS hemoglobin levels used to diagnose anemia in non-pregnant women 15-49 years of age in grams/dL are: Mild 10.0-11.9; Moderate 7.0-9.9; Severe <7.0; Any <12.0.

### Status of Policies or Strategies to Support Reductions in Anemia

- IFA for pregnant women
- IFA for women of reproductive age
- IFA for adolescent girls
- Iron and/or folic acid fortification legislation
- Delayed cord clamping
- Dietary diversity for complementary feeding
- Micronutrient powders for children
- Long-lasting insecticidal nets (LLINs) for household use
- Indoor residual spraying
- National policy on sanitation
- IPTp for pregnant women
- Malaria diagnosis and treatment
- Deworming for children
- Deworming for pregnant women
- Breastfeeding

*Information from the Global database on the Implementation of Nutrition Action (GINA) (https://extranet.who.int/nutrition/gina/en) or country documentation. The status of policies and strategies have been identified to the best of our knowledge. Revisions and updates are welcome.

Evidence-informed WHO guidance can be found here: http://www.who.int/elena/en/
Anemia is a Preventable Condition—Simple Interventions Can Have a Huge Impact

Increase iron uptake and stores

IFA supplementation among pregnant women increased from 2006 to 2011

- Received any IFA during pregnancy
  - Took <60
  - Took 60-89
  - Took 90+

Contraception use steadily increased among married women from 2000 to 2011

Few children 6-23 months old were fed according to 3 key Infant and Young Child Feeding (IYCF) practices in 2011

Breast milk, milk, or milk products

4+ food groups

Minimum meal frequency

All 3 IYCF practices

Reduce iron losses and infection

Insecticide-treated mosquito net (ITN) use has increased dramatically from 2000-2001 to 2011*

About half of children and women received deworming medication in 2011*

Exclusive breastfeeding of children <6 months has not changed in the last decade

The percentage of households with an improved latrine/toilet increased dramatically from 2000 to 2011*

*Definition of 'improved latrine/toilet' has changed slightly across years. See Demographic and Health Surveys

All data is from Uganda Demographic and Health Surveys unless otherwise noted.
Multiple Sectors Play a Role in Anemia Prevention and Treatment

Stunting and anemia share similar risk factors and are responsive to many of the same interventions.

**Agriculture**
- Increase income and reduce poverty
- Production of biofortified and iron-rich crops
- Small livestock/poultry
- Dietary diversity

**Health**
- Iron supplementation
- Deworming
- Breastfeeding and complementary feeding
- Family planning
- Malaria prevention and treatment
- Delayed cord clamping

**Water and Sanitation**
- Improved latrines
- Handwashing
- Access to clean water
- Livestock management
- Infectious disease prevention

**Education**
- Female literacy
- Health education
- Hygiene education
- Family planning education
- Nutrition education

Data Sources:
Uganda Bureau of Statistics (UBOS) and Macro International Inc. 2007. Uganda Demographic and Health Survey 2006. Calverton, Maryland, USA: UBOS and Macro International Inc.
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