Iron-Folic Acid Distribution and Consumption through Antenatal Care: Using DHS Data to Identify Barriers

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The Global Prevalence of Anemia among Women

- In 2011, the prevalence of anemia among pregnant and non-pregnant women had fallen by less than half a percentage point a year since 1995.
  - 528 million women of childbearing age were anemic.

- At this current rate of progress, it will be 2043 before “only” one-in-three pregnant women and “only” one-in-four non-pregnant women are anemic.
Iron Supplementation Programs

- Roughly half of the episodes of anemia that women of childbearing age suffer can be corrected by iron supplementation.

- Globally the most common micronutrient supplementation program implemented at national scale is iron supplementation for pregnant or non-pregnant women.
ANC Coverage (1+ ANC visits)
According to Most Recent DHS

- < 30 %
- 30-49 %
- 50-69 %
- 70-89 %
- > 90 %
IFA Coverage (Consumption of 1+ IFA) According to Most Recent DHS

< 30 %
30-49 %
50-69 %
70-89 %
> 90 %
Rationale

- Antenatal care (ANC) coverage has improved dramatically over the past few decades.
- Although the majority of countries have iron-folic acid (IFA) supplementation policies for pregnant women, IFA coverage has not kept up.

What are the barriers to IFA distribution through ANC?
Supply- and Demand-side Barriers

Supply-side
- Adequate supplies of IFA tablets
- Convenient location of ANC service
- Accessibility (e.g. ANC services provided at a convenient time and for sufficient days during the week)

Demand-side
- Care-seeking behaviors
- Understanding the significance of iron-deficiency anemia
- IFA tablet characteristics (taste, appearance, etc.)
- Beliefs about actual or potential side effects
- Technical knowledge and skill of ANC providers
Data Needs

- Well-developed monitoring systems for iron programs are often nonexistent.
- Often there is no data on coverage or compliance.
- Demographic and Health Survey (DHS) data
  1) Did you see anyone for antenatal care for this pregnancy?
  2) During this pregnancy, were you given or did you buy iron tablets or iron syrup?
  3) During the whole pregnancy, for how many days did you take the iron tablets or iron syrup?
Analysis

DHS data from 22 countries with high burdens of undernutrition were used to identify four sequential “falter points” that may inhibit women from obtaining and consuming an ideal of 180 IFA tablets during pregnancy.

Looking at:

- Women who received ANC
- Women who received IFA tablets (or syrup)
- Women who consumed IFA tablets
- The number of tablets consumed
Falter Point 1
Percentage of pregnant women who did not attend at least one ANC visit

Pregnant in Last Five Years
100% (n)

Attended at Least One ANC Visit

YES

% (n)

NO

% (n)

Falter Point 1

Trimester of First ANC Visit
1: % (n)
2: % (n)
3: % (n)

NO

% (n)

Number of ANC Visits
1: % (n)
2: % (n)
3: % (n)
4+: % (n)
Falter Point 2
Percentage of pregnant women who attended at least one ANC visit but did not receive or purchase IFA tablets
Falter Point 3
Percentage of pregnant women who attended ANC, received or purchased IFA tablets, but did not consume at least one IFA tablet

Iron Folic Acid Tablets Taken

<table>
<thead>
<tr>
<th>421</th>
<th>During this pregnancy, were you given or did you buy any iron tablets?</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>1</td>
</tr>
<tr>
<td>NO</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(SKIP TO 423)</td>
</tr>
<tr>
<td>DON'T KNOW</td>
<td>8</td>
</tr>
</tbody>
</table>

SHOW TABLETS.

<table>
<thead>
<tr>
<th>422</th>
<th>During the whole pregnancy, for how many days did you take the tablets?</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>1</td>
</tr>
<tr>
<td>NO</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>(SKIP TO 423)</td>
</tr>
<tr>
<td>DON'T KNOW</td>
<td>998</td>
</tr>
</tbody>
</table>

IF ANSWER IS NOT NUMERIC, PROBE FOR APPROXIMATE NUMBER OF DAYS.
Falter Point 4
Percentage of pregnant women who attended ANC, received or purchased IFA tablets, consumed at least one, but did not consume 180+ tablets.
The Percentage of all Pregnant Women Faltering at each of the Four Falter Points

Falter Point 1
Falter Point 2
Falter Point 3
Falter Point 4
Did Not Falter

Critical shortcoming: Falter Point 2
Number of IFA Tablets Increases with the Number of ANC Visits

- Women with No ANC Visits
- Women with 1 ANC Visit
- Women with 2 ANC Visits
- Women with 3 ANC Visits
- Women with ≥ 4 ANC Visits
Discussion

 çıkan supplementation is recommended during pregnancy whether or not anemia remains a problem
• Why is faltering so common, when ANC coverage is so high?
• How do we determine the unique supply chain and/or demand side constraints within each country?

Addressing these issues requires understanding:
• How the ANC program functions within the health system
• The knowledge, attitudes, motivations and behaviors of ANC providers and patients
Thank You

Questions or Comments?

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