Ending Preventable Maternal Deaths by 2035: A proposal

USAID

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WomenDeliver
Kuala Lumpur, Malaysia
Objectives of the talk

1. Contribute to setting a target for reduction of preventable maternal mortality

2. Considerations for strategies for reduction of preventable maternal mortality

3. Summary
Ending preventable maternal deaths worldwide by 2035—reaching MMR = 50

- 543,000 deaths annually
- 287,000 deaths annually

### Global MMR

<table>
<thead>
<tr>
<th>Year</th>
<th>ARR</th>
<th>Number of Maternal Deaths in 2035</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.1%</td>
<td>125,000</td>
</tr>
<tr>
<td></td>
<td>5.6%</td>
<td>66,000</td>
</tr>
</tbody>
</table>

Source: UN Estimates for Trends in Maternal Mortality 1990-2010
While maternal mortality has declined globally between 1990 & 2010, there has been considerable regional variation.


- **Sub-Saharan Africa**: 850 deaths in 1990, 500 deaths in 2010 (41% reduction, ARR=2.6%)
- **South Asia**: 590 deaths in 1990, 220 deaths in 2010 (64% reduction, ARR=4.9%)
- **East Asia and Pacific**: 120 deaths in 1990, 37 deaths in 2010 (69% reduction, ARR=5.7%)
- **LAC**: 140 deaths in 1990, 85 deaths in 2010 (41% reduction)
- **World**: 400 deaths in 1990, 210 deaths in 2010 (47% reduction)
Countries require different rates of reduction to end preventable maternal deaths by 2035 – reaching MMR = 50

Asia: Afghanistan, Bhutan, Cambodia, Indonesia, Iran, Iraq, Kyrgyzstan, Lao, Morocco, Myanmar, Nepal, Pakistan, Papua New Guinea, Philippines, Solomon Islands, Tajikistan, Turkmenistan, Uzbekistan, VietNam, Yemen


<table>
<thead>
<tr>
<th>Region</th>
<th>Current AAR 2000-2010</th>
<th>AAR to Reach MMR = 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sub-Saharan Africa</td>
<td>-3.7%</td>
<td>-8.9%</td>
</tr>
<tr>
<td>India</td>
<td>-6.5%</td>
<td>-5.4%</td>
</tr>
<tr>
<td>Asia, excluding India and China</td>
<td>-4.8%</td>
<td>-5.1%</td>
</tr>
<tr>
<td>Global</td>
<td>-4.1%</td>
<td>-5.6%</td>
</tr>
</tbody>
</table>
Ending preventable maternal and child deaths and unmet need for FP: five areas to accelerate progress

- **Geography**
  - Increase efforts in focus countries where most deaths and high fertility occur
  - Re-focus country health systems on scaling-up access for underserved populations
- **High burden populations**
  - Target implementation based on local causes plus known solutions—FP, intrapartum care and immed postpartum + referral
  - Scale & sustain demand and supply side solutions
  - Invest in innovations to accelerate results
- **High impact solutions**
  - Educate girls and women—as well as men
  - Empower women to make decisions
  - Enact smart policies for inclusive economic growth
  - Improve community and household environment
- **Enabling Environment**
  - Create transparency and mutual accountability
  - Define shared goals and common metrics
  - Invest in information systems
- **Mutual accountability**
Proven interventions can address the leading causes of maternal death, both direct and indirect.

**Underlying causes:**
- Unintended pregnancy
- Under-nutrition
- Co-infections

**High Impact Practices**

- Calcium
- Magnesium Sulfate
- Aspirin
- Anti-hypertensives
- Cesarean section

- Active management of the third stage of labor
- Uterotonics: oxytocin & misoprostol
- Blood transfusion

- Family planning
- Post-abortion care

- Tetanus toxoid
- Clean delivery
- Antibiotics

- Iron folate supplements
- De-worming
- Malaria intermittent treatment
- Anti-retrovirals

- Family Planning
- Diet, supplementation and fortification

**Causes:**

- **Hemorrhage** 35%
- **Indirect and Other Direct** 30%
- **Sepsis** 8%
- **Unsafe Abortion** 9%
- **Preeclampsia** 18%
- **Eclampsia**

Source for Causes: Countdown to 2015
1. **Use local causes of maternal deaths**

2. Recognize the impact of the shift worldwide in pattern of birth and high unmet need

3. Build on contextual opportunities

4. Accelerate with innovations available
Growing evidence of co-infections as the major cause of maternal death in SSA

- Non pregnancy related Infections, (28% AIDS) 40%
- Obstetric haemorrhage 14%
- Hypertension 14%
- Pregnancy Related Sepsis 5%
- Ectopic pregnancy 4%
- Miscarriage 2%
- Embolism 2%
- Acute Collapse 3%
- Anesthetic related 3%
- Unknown 4%

Source: Saving Mothers 2008-2010. Fifth report of Maternal Deaths, South Africa
Heterogeneity of HIV Epidemics Worldwide

Prevention responses need to be tailored to diverse epidemics
Maternal mortality is also high in areas of epidemic and endemic malaria

Clinical burden of Plasmodium falciparum, 2007

<table>
<thead>
<tr>
<th>Country</th>
<th>MMR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mozambique</td>
<td>490</td>
</tr>
<tr>
<td>Zambia</td>
<td>440</td>
</tr>
<tr>
<td>Malawi</td>
<td>460</td>
</tr>
<tr>
<td>Kenya</td>
<td>360</td>
</tr>
<tr>
<td>Uganda</td>
<td>310</td>
</tr>
<tr>
<td>Tanzania</td>
<td>460</td>
</tr>
<tr>
<td>Nigeria</td>
<td>630</td>
</tr>
<tr>
<td>DRCongo</td>
<td>540</td>
</tr>
<tr>
<td>Rwanda</td>
<td>340</td>
</tr>
<tr>
<td>Senegal</td>
<td>370</td>
</tr>
<tr>
<td>Ethiopia</td>
<td>350</td>
</tr>
<tr>
<td>Rwanda</td>
<td>340</td>
</tr>
<tr>
<td>Mali</td>
<td>540</td>
</tr>
<tr>
<td>Ghana</td>
<td>350</td>
</tr>
<tr>
<td>Liberia</td>
<td>770</td>
</tr>
<tr>
<td>Senegal</td>
<td>370</td>
</tr>
<tr>
<td>Madagascar</td>
<td>240</td>
</tr>
</tbody>
</table>

Source: 2010 Malaria Atlas Project, available under the Creative Commons Attribution 3.0 Unported License.
Focus on implementation!

1. Use local causes of maternal deaths

2. **Recognize the impact of the shift worldwide in pattern of birth and high unmet need**

3. Build on contextual opportunities

4. Accelerate with innovations available
Shift in birthing pattern

Modern and Traditional Method Utilization and Unmet Need among Married Women in MCH Priority Countries

Women with unmet need vs women using MCPR: SSA 1-5/1 vs 1:1 In Asia

Source: DHS
Focus on implementation!

1. Use local causes of maternal deaths
2. Recognize the impact of the shift worldwide in pattern of birth and high unmet need
3. **Build on contextual opportunities**
4. Accelerate with innovations available
Nearly 50% of people (LMIC) live in urban areas!
There is usually greater access to care in urban areas – but not among the poor.

Matthews Z and Adanu R, 2013, Arusha
Changing context: Privatization of facility births is increasing especially in Asia

78% of facility deliveries are in the private sector in Indonesia

Private sector deliveries have doubled in Bangladesh, almost tripled in Cambodia and more than tripled in Nepal.

Pomeroy, Koblinsky, and Alva 2010
Changing Context: Financial Incentives – Increase use of maternity services

<table>
<thead>
<tr>
<th>Incentives</th>
<th>Effects</th>
</tr>
</thead>
</table>
| Performance based incentives | • Most show association with \( \uparrow \) quality  
  • DRC (small study) did not show association between PBI and institutional deliveries |
| Insurance                | • Most show positive correlation with SBAs and facility delivery  
  • 6 studies show positive correlation with C/S |
| User fee exemptions      | • \( \uparrow \) facility delivery rates  
  • \( \uparrow \) C/S rates, in some cases |
| Conditional cash transfers | • 6 studies show positive effect on birth with SBAs  
  • 3 studies show positive effect on birth in a hospital |
| Vouchers                 | • Most show \( \uparrow \) SBA or facility delivery |

Source: Forthcoming PLoS Med Collection on Financial Incentives for Maternal Health Services
Focus on implementation!

1. Use local causes of maternal deaths

2. Recognize the impact of the shift worldwide in pattern of birth and high unmet need

3. Build on contextual opportunities

4. Accelerate with innovations available
Innovations—mHealth has potential to be a powerful accelerator of progress.
Innovations: Mapping progress by local areas

Pregnancy-Related Maternal Mortality Ratio
Ghana Census 2010

Matthews Z et al 2013, Arusha
1. Target setting—plausible/aggressive target (number or %), timing—by when; milestones every 5 years?
2. Reaching the target—Strategies based on local causes of maternal death, infrastructure and contextual factors
3. More data needed—in shorter time periods (real time?)
   • Link maternal, newborn and child strategies with targets
   • Know epidemiology and demographics of maternal mortality
   • Contextual issues
     • Privatization of services
     • Financing initiatives
     • Decentralization
     • Urbanization
Many thanks