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Maternal Health Global Benchmark Indicators: Time for Review?

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Report of a meeting Sept 1, 2010



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Talk Outline

- Rationale for moving beyond present global benchmark indicators
- Present efforts:
 - Benchmark indicators
 - Indicators for program managers
- Conclusions
- Next steps

MDG 5 Improve Maternal Health

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Target 5.A: Reduce by three quarters, between 1990 and 2015, the maternal mortality ratio

5.1 Maternal mortality ratio ←

5.2 Proportion of births attended by skilled health personnel ←

Target 5.B: Achieve, by 2015, universal access to reproductive health

5.3 Contraceptive prevalence rate ←

5.4 Adolescent birth rate

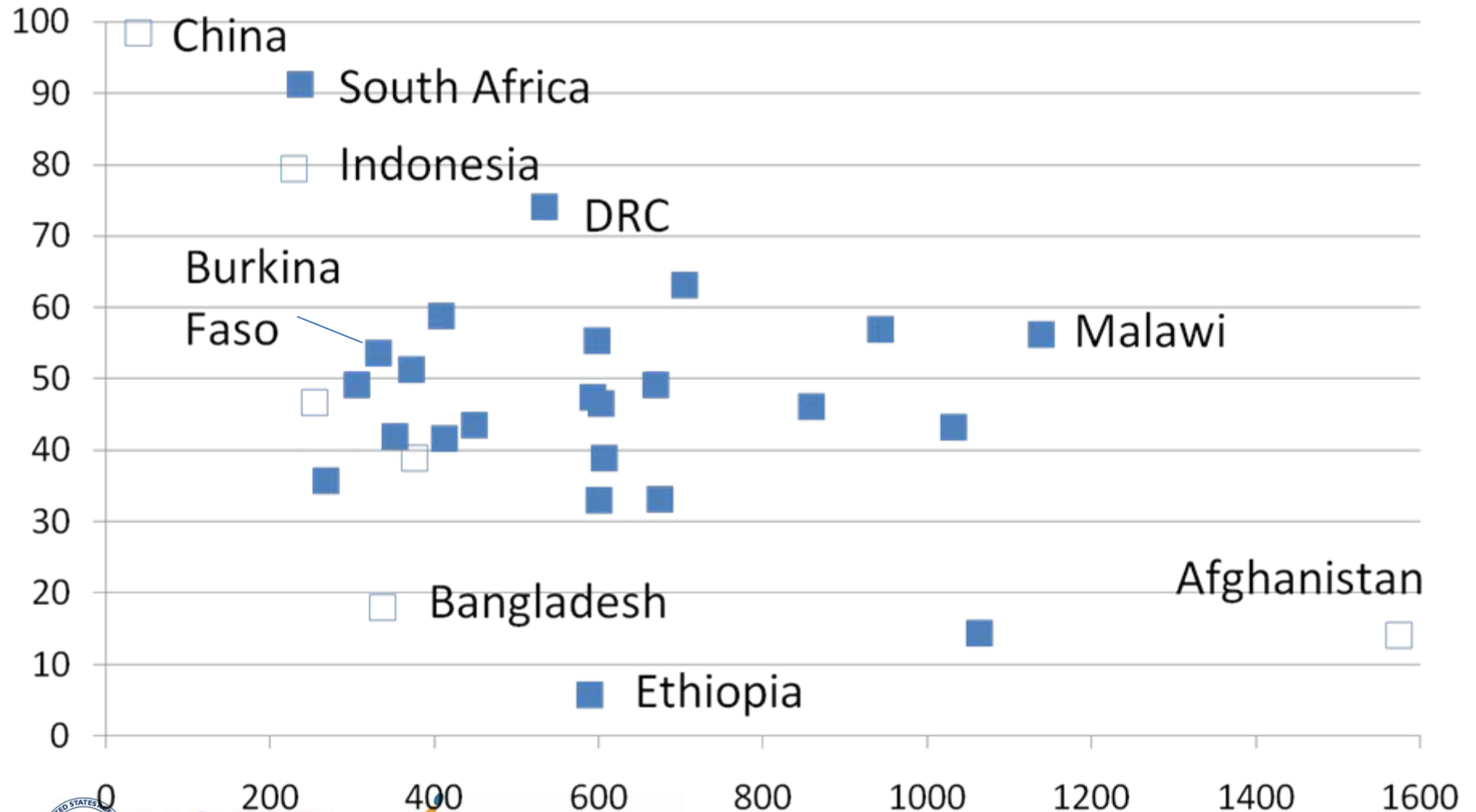
5.5 Antenatal care coverage (at least one visit and at least four visits) ←

5.6 Unmet need for family planning

□ Asia
◆ Africa

MMR vs SBA%

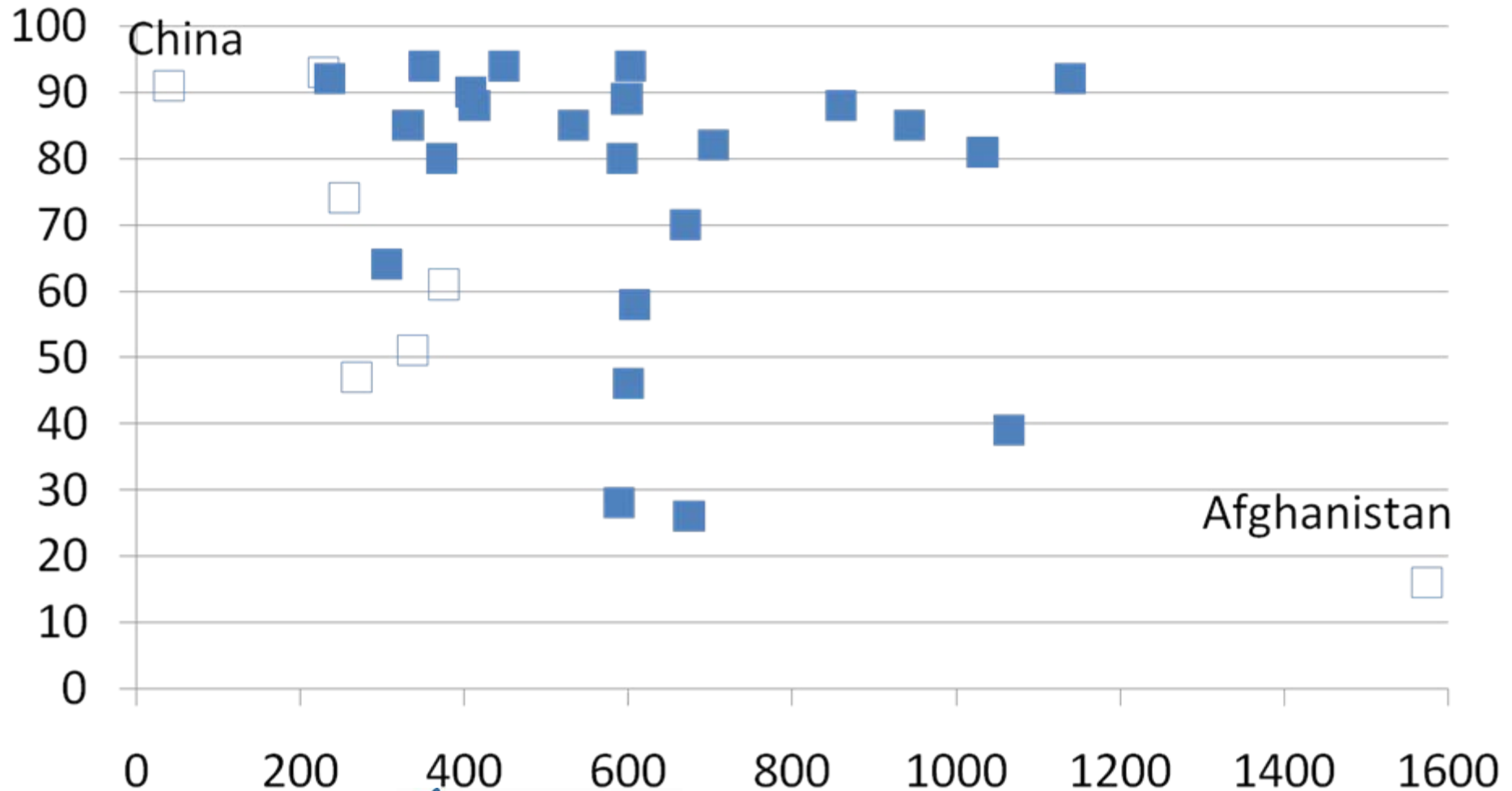
SBA %



□ Asia
◆ Africa

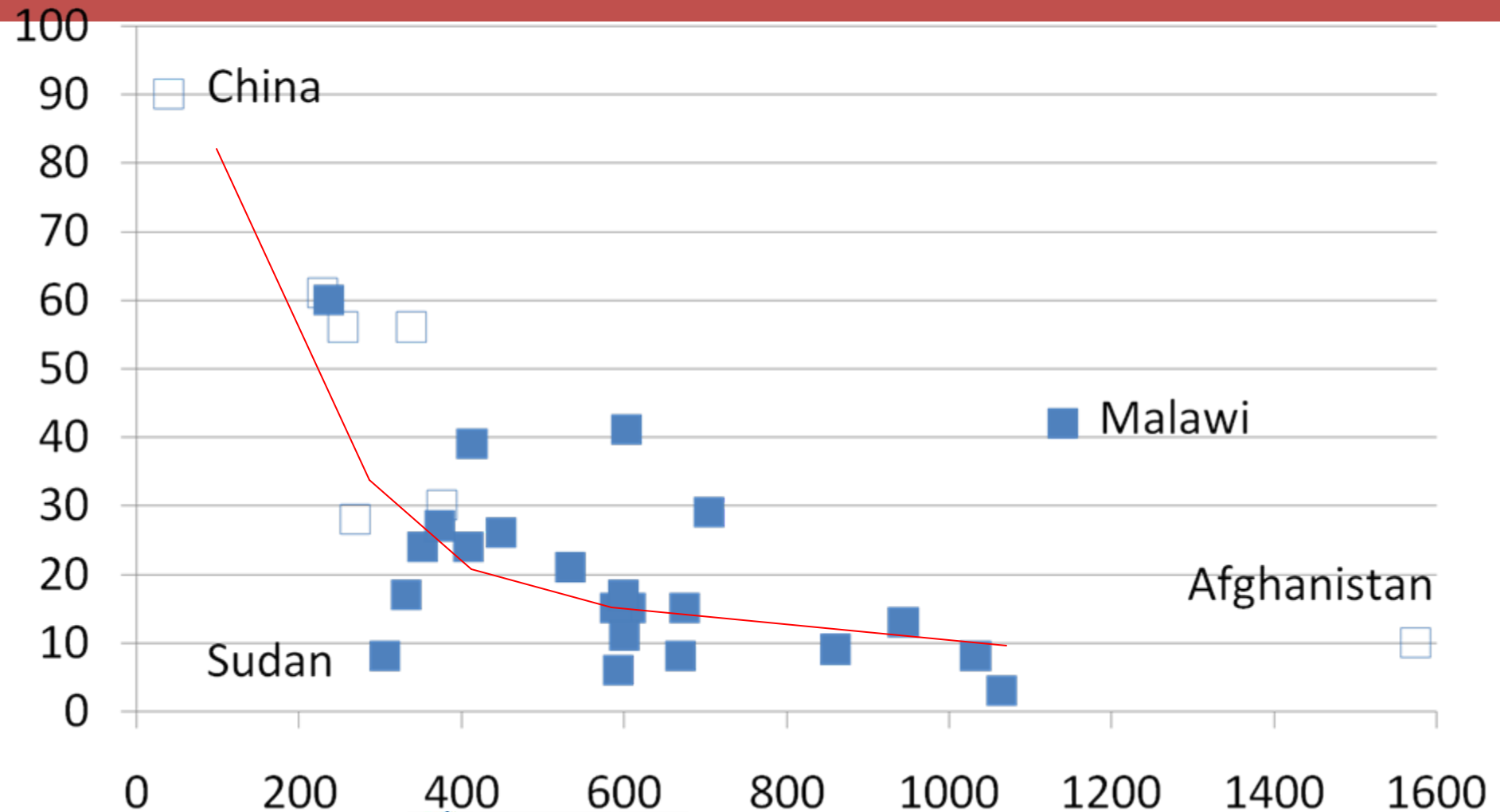
MMR vs. ANC1%

ANC1%



MMR vs. CPR (any method)

□ Asia
◆ Africa



Ethiopia Countdown Profile

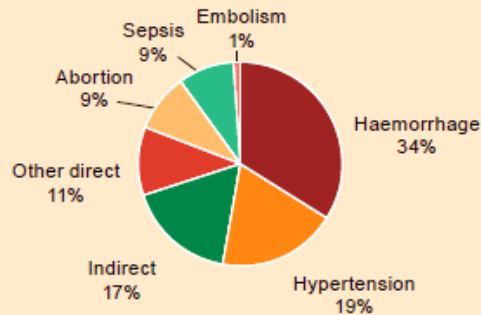
MATERNAL AND NEWBORN HEALTH

Adolescent birth rate (births per 1,000 women)	109 (2003)
Unmet need for family planning (%)	34 (2005)
Antenatal visits for woman (4 or more visits, %)	12 (2005)
Intermittent preventive treatment for malaria (%)	←*
C-section rate (total, urban, rural; %) (Minimum target is 5% and maximum target is 15%)	← 1, 9, 0 (2005)
Early initiation of breastfeeding (within 1 hr of birth, %)	69 (2005)
Postnatal visit for baby (within 2 days for home births, %)	2 (2005)

* Not applicable

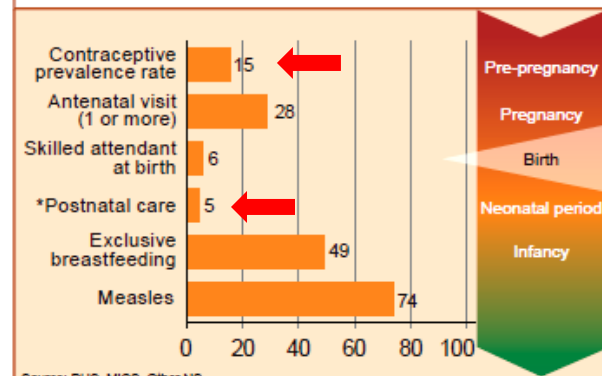
Causes of maternal deaths

Regional estimates for Sub-Saharan Africa, 1997-2007



Source: WHO 2010

Coverage along the continuum of care

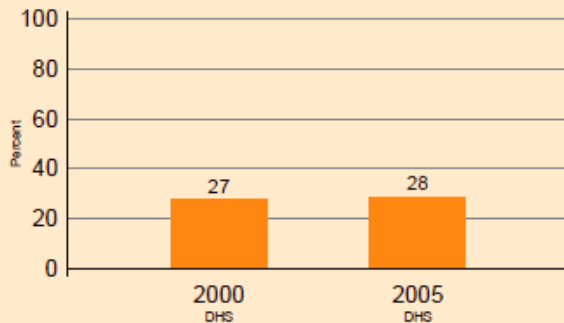


Source: DHS, MICS, Other NS

*See Annex for indicator definition

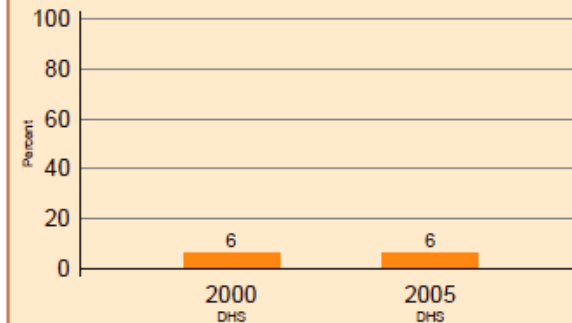
Antenatal care

Percent women aged 15-49 years attended at least once by a skilled health provider during pregnancy



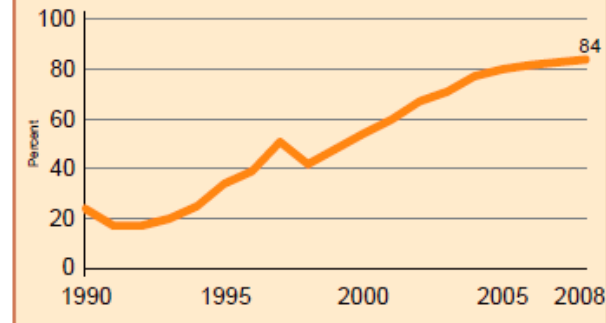
Skilled attendant at delivery

Percent live births attended by skilled health personnel



Neonatal tetanus protection

Percent of newborns protected against tetanus

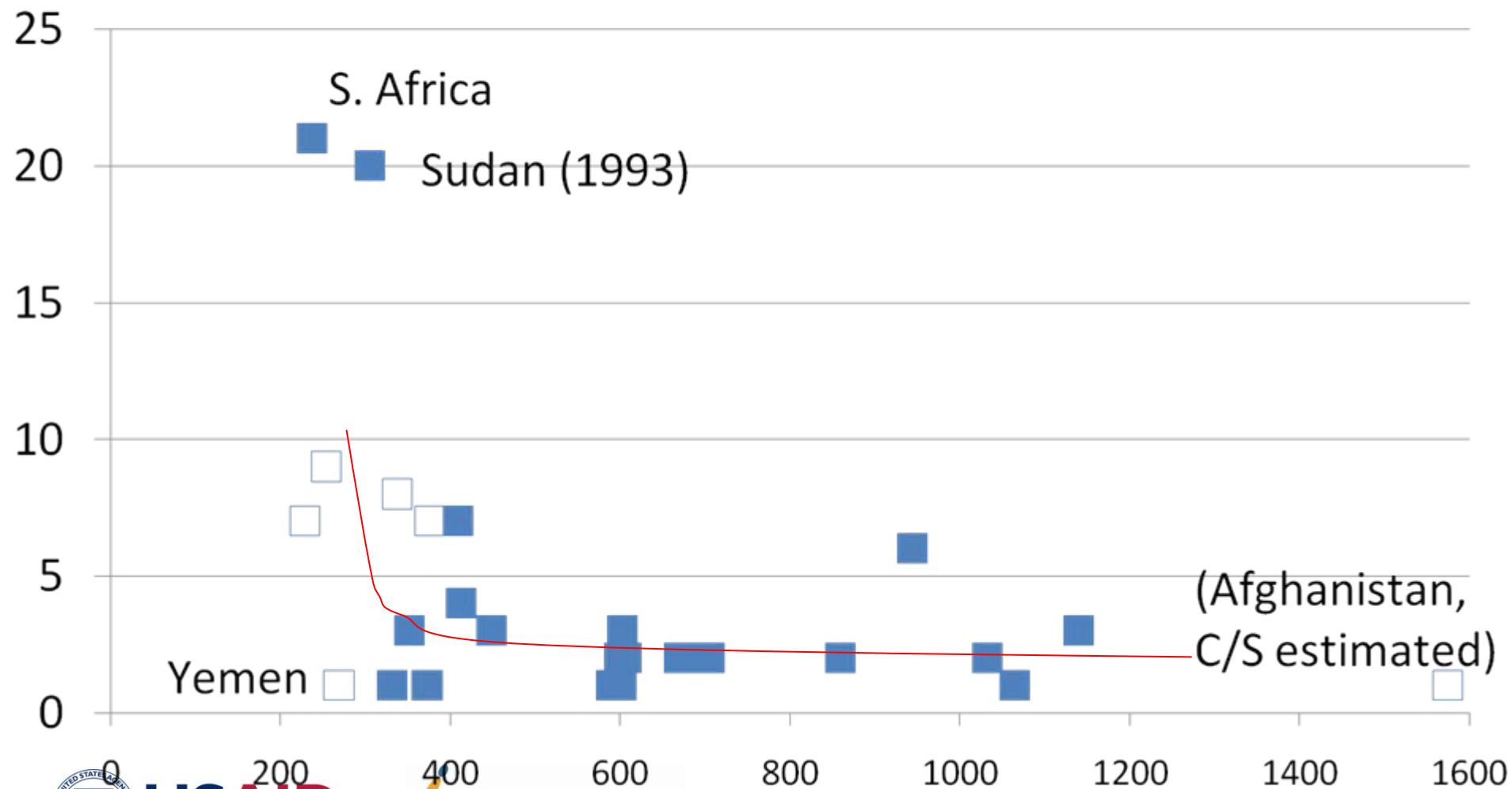


Source: WHO/UNICEF

%

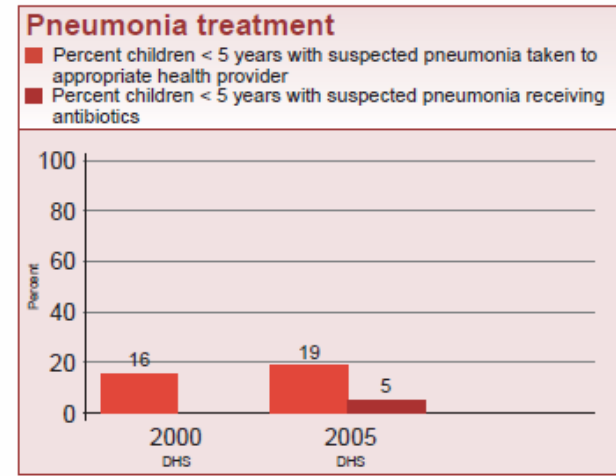
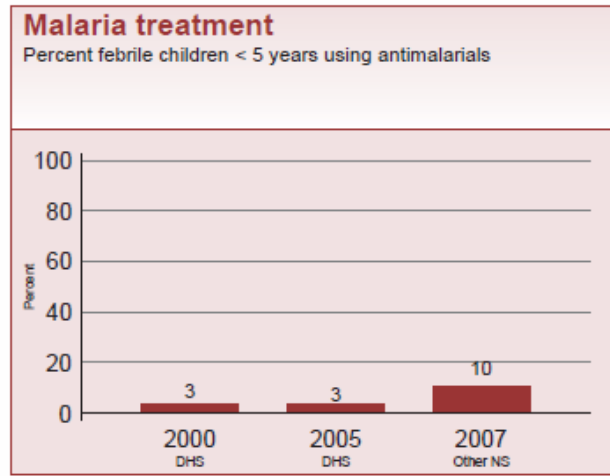
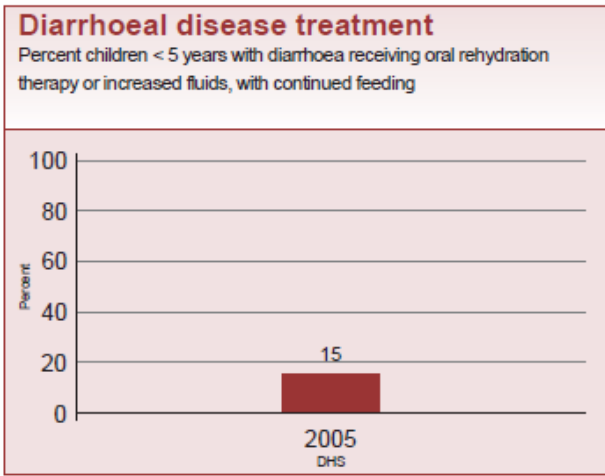
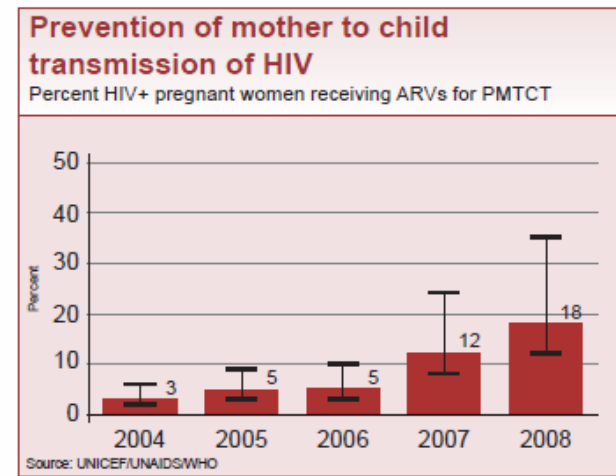
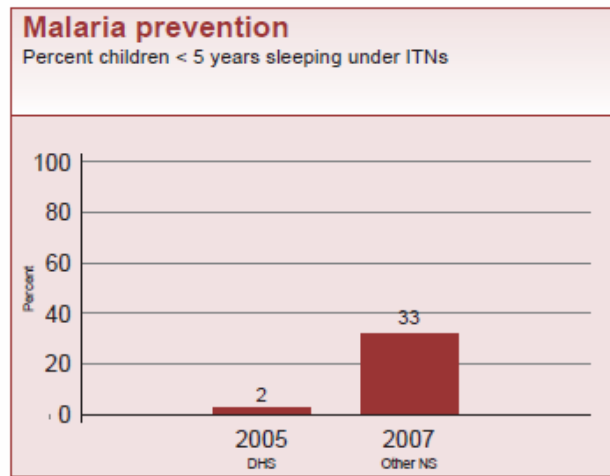
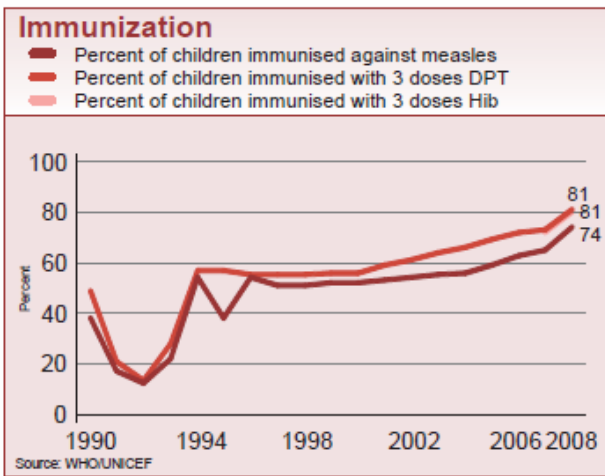
MMR vs. C-Section Rate

□ Asia
◆ Africa



Ethiopia Countdown Profile

CHILD HEALTH




For MH, are the present benchmark indicators enough? NO!

- **Possible outcomes beyond MMR**
 - Near Miss --WHO Maternal and Perinatal Survey (facility)
 - Quality of Intra-Partum Care: QUIP-Care (Vincent Fauveau)
 - Measuring survival of fetus and newborn (facility)
- **Benchmark indicators beyond contact indicators:**
 - Focus on content and quality of care of interventions that prevent/treat major maternal killers—PPH, PE/E, sepsis, obstructed/prolonged labor, septic abortion

Near Miss: WHO Maternal and Perinatal Health Survey

- New standard near miss definition and identified indicators
 - **Maternal Near Miss (MNM)** : a woman who nearly died but survived a complication that occurred during pregnancy, childbirth or within 42 days of termination of pregnancy.
 - **MNM incidence ratio**: number of maternal near miss cases per 1,000 live births
 - **MNM/Maternal death (MD) ratio**: ratio of maternal near miss cases to maternal deaths. Higher ratios indicate better care.
 - **Mortality index**: percentage of MD in all women with life threatening conditions (MNM+MD). The higher the index the more women with life-threatening conditions die (low quality of care)
- **Survey on capacity strengthening:**
 - 400 facilities in 26 countries fall 2010
 - 3 months data collection (from existing records) via electronic system
 - Near miss events and reasons + institutional indicator of capacity

 World Health Organization		Maternal Near Miss Tool		Individual data collection form WHO MNMA L0 Dec09	
IDENTIFICATION					
Facility code (1-20): <input type="text"/> <input type="text"/>		Individual identification code: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
SCREENING QUESTIONS					
In the questions 1 to 4, please specify: 0: The condition was not present during the hospital stay 1: The condition was present within 12 hours of hospital arrival 2: The condition was present after 12 hours of hospital arrival					
1. Severe complications / potentially life-threatening conditions <input type="checkbox"/> A0 Severe postpartum haemorrhage <input type="checkbox"/> A1 Severe preeclampsia <input type="checkbox"/> A2 Eclampsia <input type="checkbox"/> A3 Septic or severe systemic infection <input type="checkbox"/> A4 Ruptured uterus					
2. Critical interventions or intensive care unit admission <input type="checkbox"/> B0 Use of blood products <input type="checkbox"/> B1 Interventional radiology (uterine artery embolization) <input type="checkbox"/> B2 Laparoscopy <input type="checkbox"/> B3 Admission to Intensive Care Unit					
3. Organ dysfunction / life-threatening conditions <input type="checkbox"/> C0 Cardiovascular dysfunction <small>(shock, use of continuous vasoactive drugs, cardiac arrest, cardio-pulmonary resuscitation, severe hypoperfusion (lactate >5 mmol/L or >45mg/dL) or severe acidosis (pH<7.1))</small> <input type="checkbox"/> C1 Respiratory dysfunction <small>(acute cyanosis, gapping, severe tachypnea (respiratory rate>40 bpm), severe bradypnea (respiratory rate<6 bpm), severe hypoxemia (PAO2/FiO2<200, O2 saturation<90% for >60min) or intubation and ventilation not related to anaesthesia)</small> <input type="checkbox"/> C2 Renal dysfunction <small>(oliguria non responsive to fluids or diuretics, dialysis for acute renal failure or severe acute azotemia (creatinine >300umol/l or >3.5mg/dL))</small> <input type="checkbox"/> C3 Coagulation/hematologic dysfunction <small>(failure to form clots, massive transfusion of blood or red cells (≥ 5 units) or severe acute thrombocytopenia (≤50,000 platelets/ml))</small> <input type="checkbox"/> C4 Hepatic dysfunction <small>(jaundice in the presence of pre-eclampsia, severe acute hyperbilirubinemia (bilirubin>100umol/L or >6.0mg/dL))</small> <input type="checkbox"/> C5 Neurologic dysfunction <small>(prolonged unconsciousness / coma (lasting>12 hours), stroke, status epilepticus / uncontrolled fits or global paralysis)</small> <input type="checkbox"/> C6 Uterine dysfunction <small>(haemorrhage or infection leading to hysterectomy)</small>					
4. Maternal death. <input type="checkbox"/> D0 Death during pregnancy or within 42 days of termination of pregnancy <input type="checkbox"/> D1 Death after 42 days of termination of pregnancy Please note i. If you answered "1" or "2" to any of the questions 1 to 4, go to question 5 ii. If you answered "0" to all of the questions 1 to 4, the woman is not eligible for this assessment. Do not answer the questions 5 to 14 iii. In case of doubt on questions 1 to 4, consult the attending physician iv. In the questions 5 to 14, if information is not available, unknown or not applicable, fill with "9"(x)					
MATERNAL AND PERINATAL INFORMATION					
5. Date of hospital admission <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
6. Date of delivery or uterine evacuation <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
7. Date of hospital discharge or death <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			
Date of data collection <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>		Data Collector Name: <input type="text"/>		Signature: <input type="text"/>	
8. Final mode of delivery / end of pregnancy. Please specify: <input type="checkbox"/> B3 1: Vaginal Delivery 2: Caesarian section 3: Complete abortion 4: Carriage / vacuum aspiration 5: Medical methods for uterine evacuation 6: Laparoscopy for ectopic pregnancy 7: Other 8: Woman discharged or died still pregnant 9: Unknown					
9. Best estimate of gestational age in completed weeks (gestation/foetal) at: Delivery or abortion (not applicable if Q8="9") <input type="text"/> B4 Maternal death or hospital discharge (applicable if Q8="9") <input type="text"/> B5					
10. Regarding the vital status of the infant, please specify: 0=Alive 1=Dead At birth <input type="text"/> B6 At hospital discharge or on the 7th day of life if still in the hospital <input type="text"/> B7					
PROCESS INDICATORS					
11. About conditions at arrival in the facility and the referral process, specify: (0=No 1=Yes) <input type="checkbox"/> P0 Delivery or abortion occurred before arrival at any health facility <input type="checkbox"/> P1 Delivery within 3 hours of arrival in the health facility <input type="checkbox"/> P2 Laparoscopy within 3 hours of hospital arrival or in other hospital <input type="checkbox"/> P3 Woman referred from other health facility <input type="checkbox"/> P4 Woman referred to any higher complexity hospital					
12. About the use of interventions, please specify whether the woman received any of the following: (0=No 1=Yes) Prevention of postpartum haemorrhage: <input type="checkbox"/> Q0 Oxytocin <input type="checkbox"/> Q1 Other uterotonic Treatment of postpartum haemorrhage: <input type="checkbox"/> H0 Oxytocin <input type="checkbox"/> H1 Ergometrine <input type="checkbox"/> H2 Misoprostol <input type="checkbox"/> H3 Other uterotonics <input type="checkbox"/> H4 Tranexamic acid <input type="checkbox"/> H5 Removal of retained products <input type="checkbox"/> H6 Balloon or condom tamponade <input type="checkbox"/> H7 Artery ligation (uterine/foetal/placental) <input type="checkbox"/> H8 Hysterectomy <input type="checkbox"/> H9 Abdominal packing Anticoagulant: <input type="checkbox"/> I0 Magnesium sulfate <input type="checkbox"/> I1 Other anticoagulant Antibiotics: <input type="checkbox"/> J0 Prophylactic antibiotic during caesarian section <input type="checkbox"/> J1 Parenteral, therapeutic antibiotics Retal lung maturation: <input type="checkbox"/> K0 Corticosteroids (betamethasone or dexamethasone)					
UNDERLYING CAUSES OF DEATH / NEAR MISS					
13. Please specify: (0=No 1=Yes) <input type="checkbox"/> L0 Pregnancy with abortive outcome (abortion/ectopic pregnancy) <input type="checkbox"/> L1 Obstetric haemorrhage <input type="checkbox"/> L2 Hyperemetic disorders <input type="checkbox"/> L3 Pregnancy related infection <input type="checkbox"/> L4 Other obstetric disease or complication <input type="checkbox"/> L5 Medical/surgical/maternal disease or complication <input type="checkbox"/> L6 Unanticipated complications of management <input type="checkbox"/> L7 Concomitant condition <input type="checkbox"/> L8 Unknown					
CONTRIBUTORY / ASSOCIATED CONDITIONS					
14. Please specify: (0=No 1=Yes) <input type="checkbox"/> M0 Anaemia <input type="checkbox"/> M1 HIV infection <input type="checkbox"/> M2 Previous caesarian section <input type="checkbox"/> M3 Prolonged/obstructed labour <input type="checkbox"/> M4 Other condition specified in the local manual of operations <input type="checkbox"/> M5 Other condition specified in the local manual of operations <input type="checkbox"/> M6 Other condition specified in the local manual of operations <input type="checkbox"/> M7 Other condition specified in the local manual of operations <input type="checkbox"/> M8 Other condition specified in the local manual of operations					

Study population:

- women with severe complications in facility
- women with severe maternal outcomes (i.e., maternal death or maternal near miss)
- frequencies of underlying causes of severe maternal outcomes
- conditions at arrival at the facility and the referral status,
- use of critical interventions
- perinatal outcomes

QUIP-Care indicator (Fauveau, V)

- Facility indicator:
 - Proportion of intrapartum stillbirths + very early newborn deaths over all birth

Number of intrapartum (fresh) stillbirths + very early newborn deaths in a given facility in a year

All births in the same facility over the same period

QUIP-Care indicator: Advantages

- Indicator of quality of facility care by looking at intrapartum outcomes (fetus and newborn)
- Sensitive to changes over time within a facility
- Make comparison between facilities
- Easy to understand, intuitive
- Easy to express -- a percentage

QUIP-Care indicator: Challenges

Recording: Ideally ONE admission register with
Date/time of admission, of birth, of death; birthweight; fetal heart beat
at admission

Birthweight: Exclude all births < 2.5 kgs from numerator and
denominator

Fetal Heart Beat: Measured and recorded at admission

Benchmarking : What is the **normal** value?

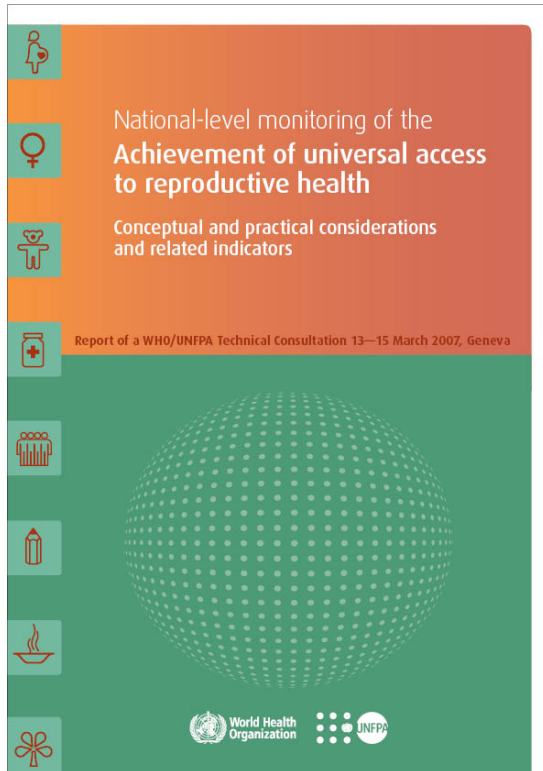
Monitoring MH programs

Indicators: A clear, appropriate signal to program managers

Criteria:

- Focus on life saving MH interventions
 - Content and quality of care
 - System capacity to deliver life saving interventions

WHO: Helping countries monitor reproductive health care access at national level



- **Based on evaluation of existing indicators**
- **Five areas of reproductive health – maternal and perinatal health, family planning, abortion, STI, sexual health**

- **Indicators**

- **Context/policy**

- **Aspects of access – availability, information, cost, quality, use**

- **Outcome/impact**

Now being used in-country in defining programme monitoring frameworks based on specific indicators, mostly re ANC content (anaemia, syphilis)

Available WHO tools including aspects of maternal health care

- **Service availability and readiness tool (PHC, and hospital levels)**
 - Service availability – density and distribution
 - Service capacity – amenities, infrastructure, management, etc.
 - Service readiness (e.g., for ANC: which services are provided – asking tetanus, iron, folic acid, IPT, HIV, PMTCT counselling, infant-feeding counselling)
- **Patient safety**
 - Maternal mortality and morbidity due to unsafe care – availability, infrastructure, protocols, availability of safe products, monitoring of care

Other available sources

- **Measure/Evaluation compendium of indicators on reproductive health**
 - 29 MH indicators
 - Lit review, expert consultation
 - www.cpc.unc.edu/measure/tools--soon!
- **AMDD surveys– 13 countries**
 - Geocoded facility data
 - Census of hospitals, health centers, and higher clinics—HR, infrastructure, signal functions
 - Public and private (for profit and not for profit)

Conclusions

- Global indicators are used prescriptively in countries—and drive plans and programs
- MH global indicators based on contact with SBAs, ANC etc, focus attention on the contact numbers, not on quality of care or even content (life saving or not).
- Focus on contact can distort MH programming
 - Community efforts to extend MH care are minimized as they may take away from SBA/facility contact (eg., Nepal)
 - New financing/incentive programs that are increasing women's use of facility for births are also monitored by contact data (e.g., India)
- **Need specific indicators re the content/quality of LS interventions and measureable outcomes**
 - **AMTSL--"suitable uterotonic" in the 3rd stage**
 - **Cesarean indications**
 - **Near miss ; QUIP-Care**

Conclusions

- “Use of SBAs” has become the strategy for all contexts. But one size does not fit all countries or subnational contexts.
- MH strategies need to differ based on context, infrastructure and life saving interventions appropriate for their setting (eg., Bangladesh, Nepal)
- With varied intervention strategies, indicator needs also vary across countries and within countries
- **Need indicators of**
 - **Context**— road density, population density, development index
 - **System capacity to deliver LS interventions (pub/priv, comm/fac)**
 - **Referral network (continuum of care)**
 - **Transport response**

Next steps

- **Determine criteria for**
 - benchmark indicators
 - program manager indicators
 - New indicators to fill gaps
- **Review efforts re quality of care/content of life saving interventions:**
 - Macro/Evaluation and WHO/UNFPA compendia,
 - indicators being pursued by IMMPACT,
 - indicators that guide Bartlett's work and
 - those that will be collected as part of the WHO facility survey on maternal perinatal health
- **Review efforts re system capacity indicators to deliver life saving care:**
 - WHO tools--Service Availability Patient Safety surveys
 - other surveys—SPA, AMDD
- **Review country specific efforts (e.g., Mexico, Thailand, S Africa)**
- **Determine need for program manager tools that allow variation in strategies and reporting instruments to capture appropriate indicator data**
- **Process: November meeting with WHO**

Thank you!

What we measure
is
what we pay attention to

