



Saving Newborn Lives: Evidence from Low-Resource Settings

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Saving Newborn Lives, Save the Children**

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Outline



1. Learn about newborn deaths:
 - How many?
 - Where?
 - When?
 - Why?
2. What can be done?
3. **What can MWIA do?**

Newborn was Invisible

- No public health focus
- No data
- Solutions were high-tech & expensive
- Lack of political & donor commitment
- Acceptance of deaths as “fate”

Saving Newborn Lives

- 11-year project
- Work in countries with highest burden of disease
- Focus on:
 - Building the evidence-base
 - Bringing solutions closer to families
 - Creating packages of key interventions
 - Piloting
 - Scaling up successes
 - Creating national & global political will to institutionalize



How Many?



3.6 Million

a silent epidemic; a human tragedy

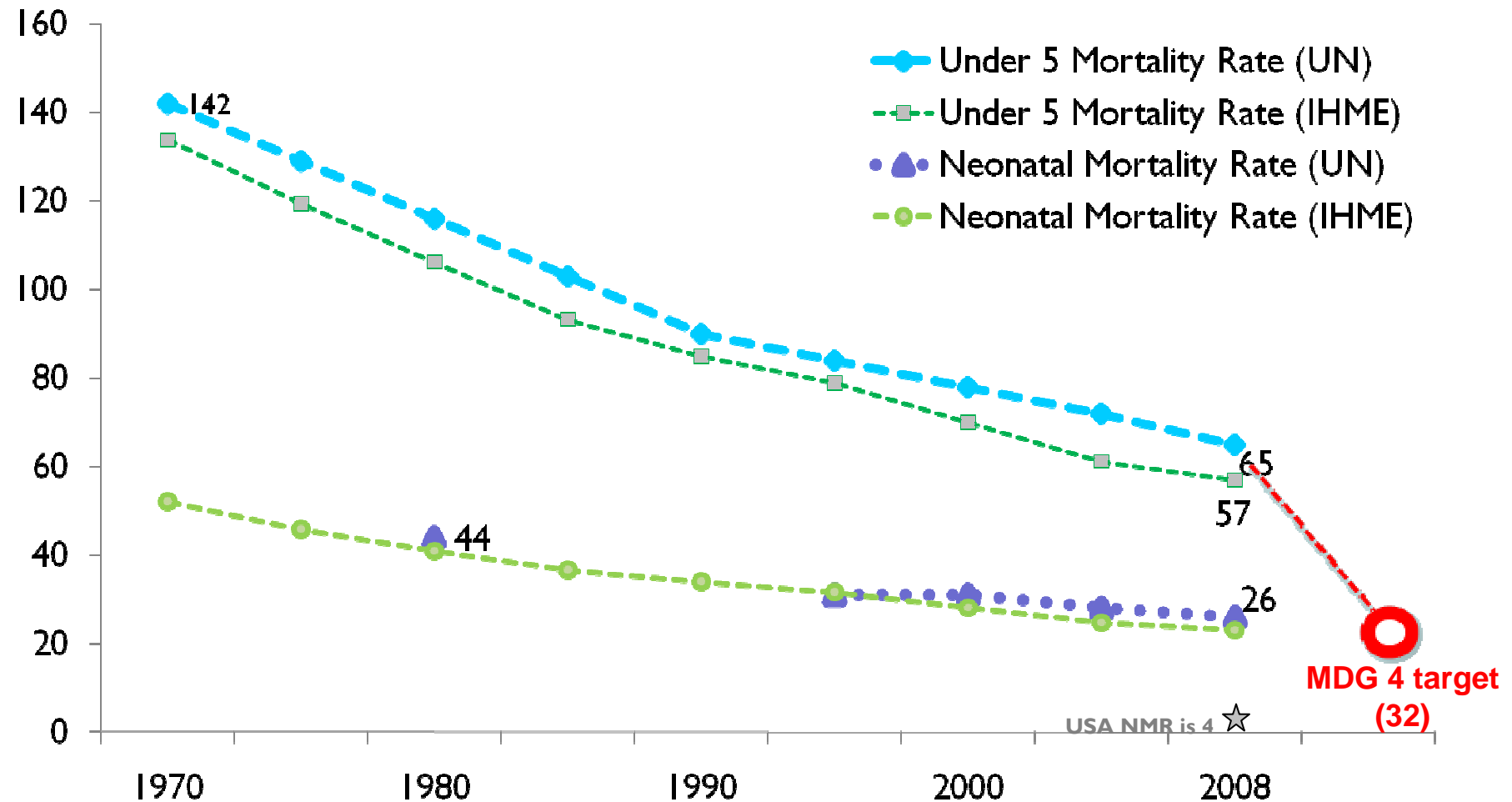
3.6 Million

**Global
significance:**

Can't achieve MDG 4
without a focus on
saving newborns



Global progress to MDG 4



3.6 million neonatal deaths, 41% of under 5 deaths
Links closely with maternal health and MDG 5
2010 is a tipping point for progress

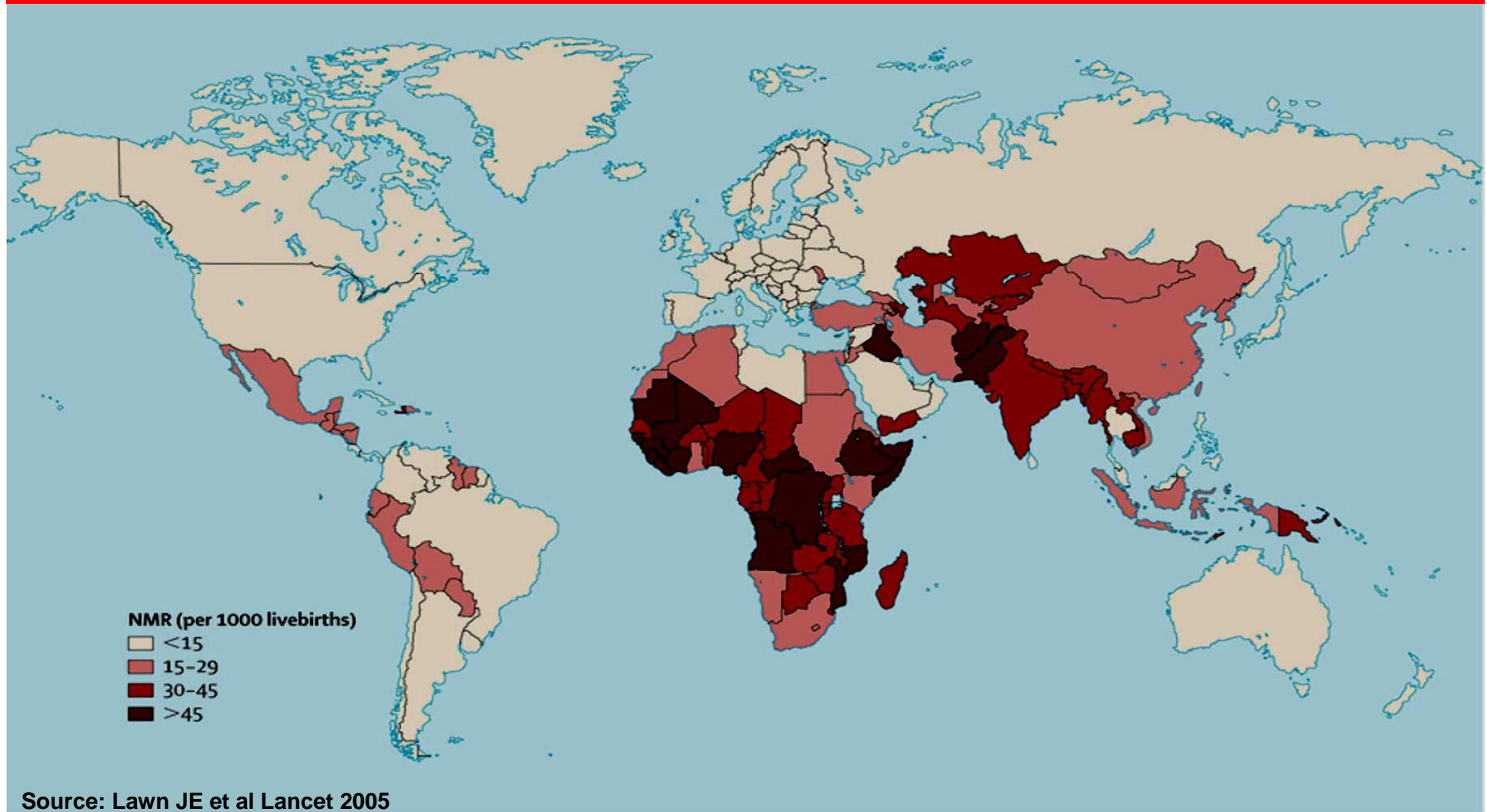


3.6 million neonatal deaths:

WHERE?



WHERE?



WHERE?

Countries with the highest numbers of neonatal deaths are similar to those with high maternal deaths

	Ranking for numbers of neonatal deaths	Ranking for numbers of maternal deaths
India	1	1
Nigeria	2	2
Pakistan	3	8
China	4	13
DR Congo	5	3
Ethiopia	6	5
Bangladesh	7	6
Indonesia	8	7
Afghanistan	9	4
Tanzania	10	9

**Approx
67%
of global
total**

**Approx
65%
of global
total**

WHERE?

- > 50% in sub Saharan Africa and South Asia
- Vast majority at home
- Primarily among the poor

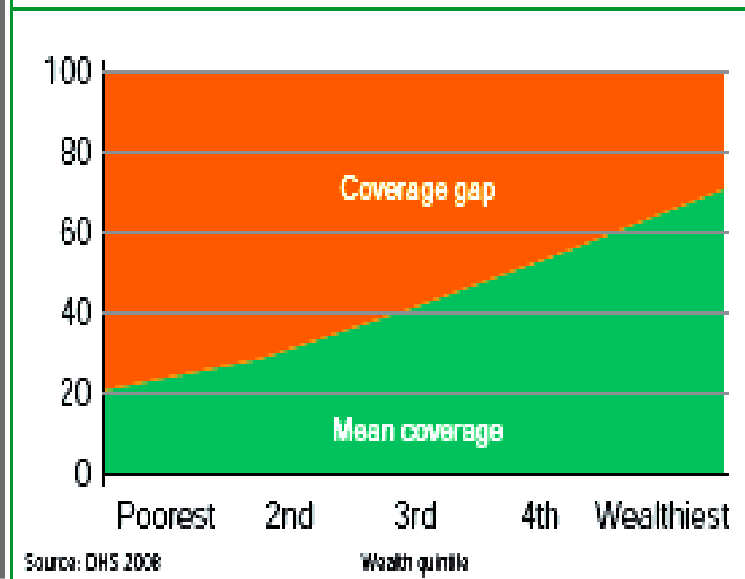
If all families in Nigeria got the same care as the richest families...

- NMR would be halved
- 127,000 newborn deaths would be saved

EQUITY

Coverage gap by wealth quintile

Average of eight key indicators





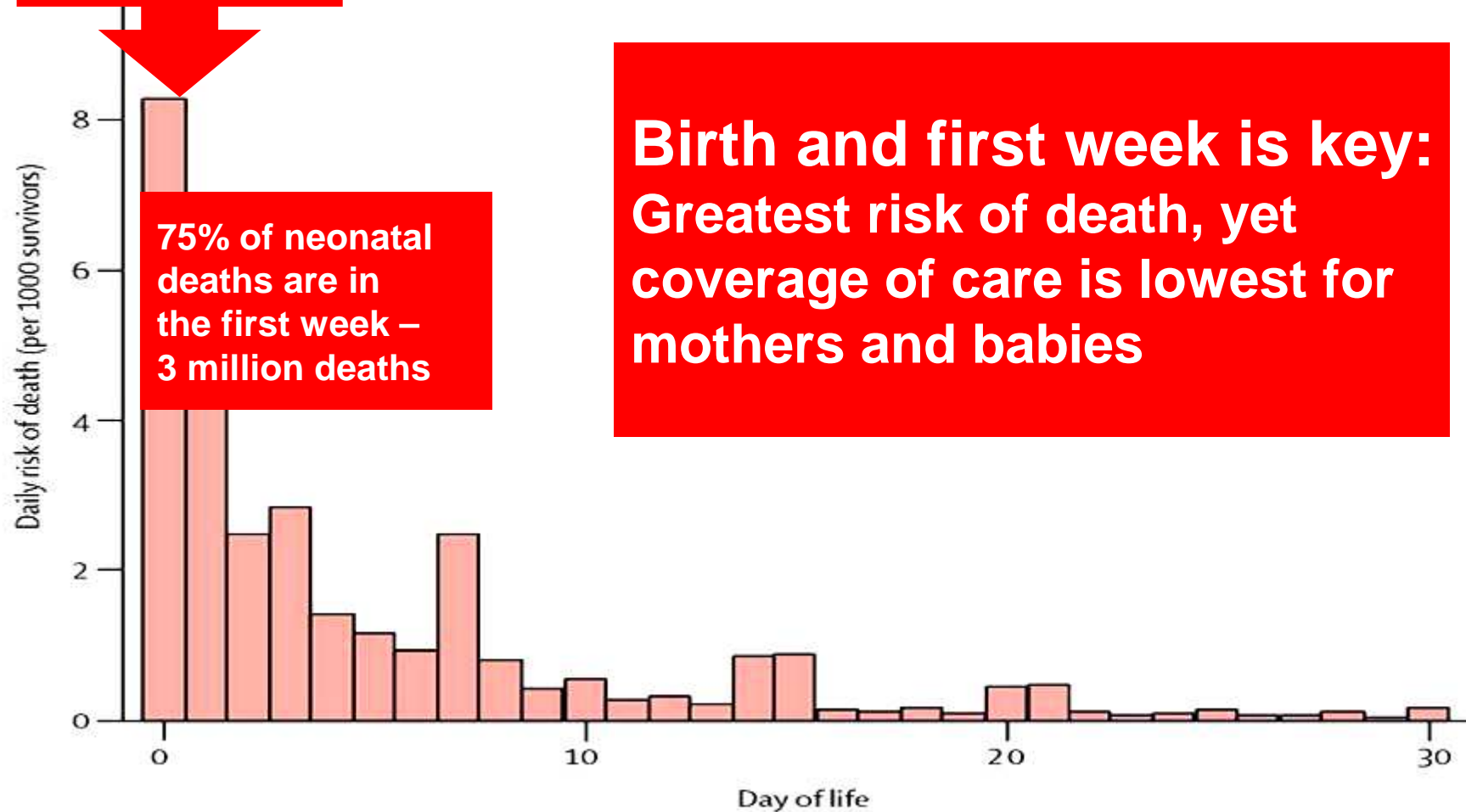
3.6 million neonatal deaths:

WHEN?



When?

Up to 50%
of neonatal
deaths are in
the first 24 hours



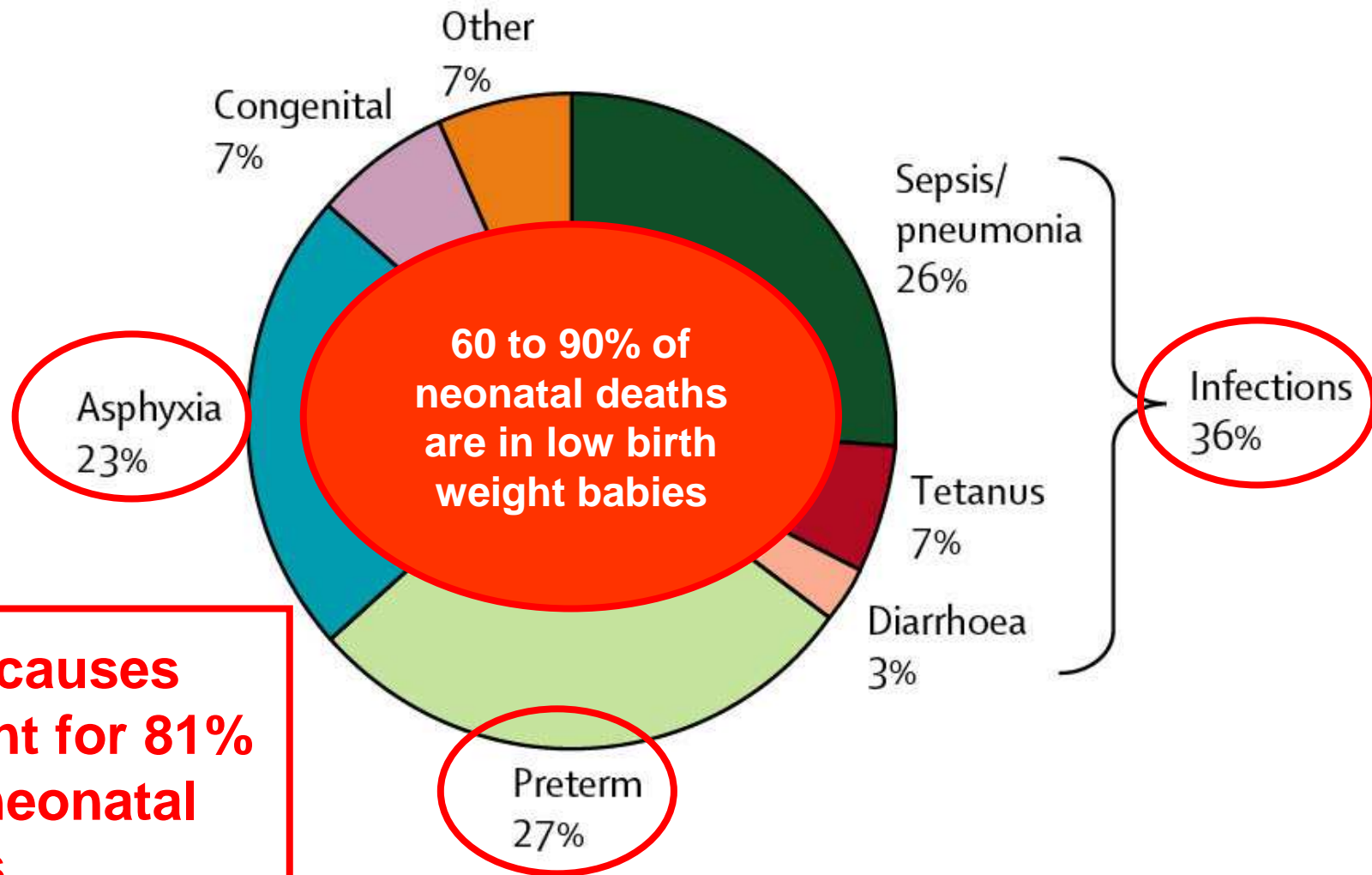


3.6 million neonatal deaths:

What are the Causes?



What are the Causes?



Three causes account for 81% of all neonatal deaths

Source: Lawn JE, Cousens SN, Zupan J Lancet 2005.



3.6 million neonatal deaths:

What can be Done?



What can be done? Maternal newborn continuum of care

Clinical

Outreach

Family/community

Pre-pregnancy

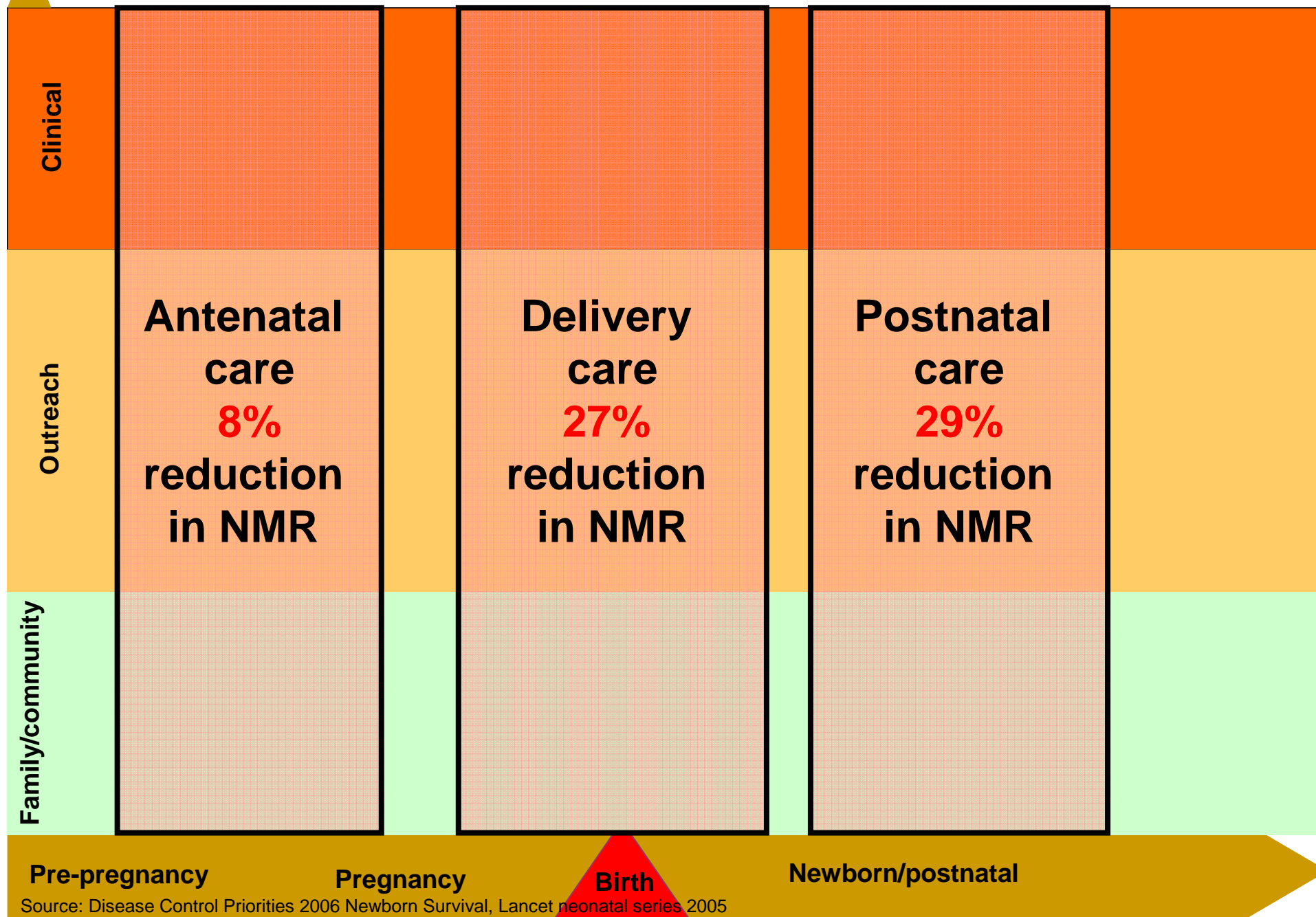
Pregnancy

Birth

Newborn/postnatal

Source: Disease Control Priorities 2006 Newborn Survival, Lancet neonatal series 2005

What can be done? Maternal Newborn continuum of care



Source: Disease Control Priorities 2006 Newborn Survival, Lancet neonatal series 2005

Coverage along the continuum of care

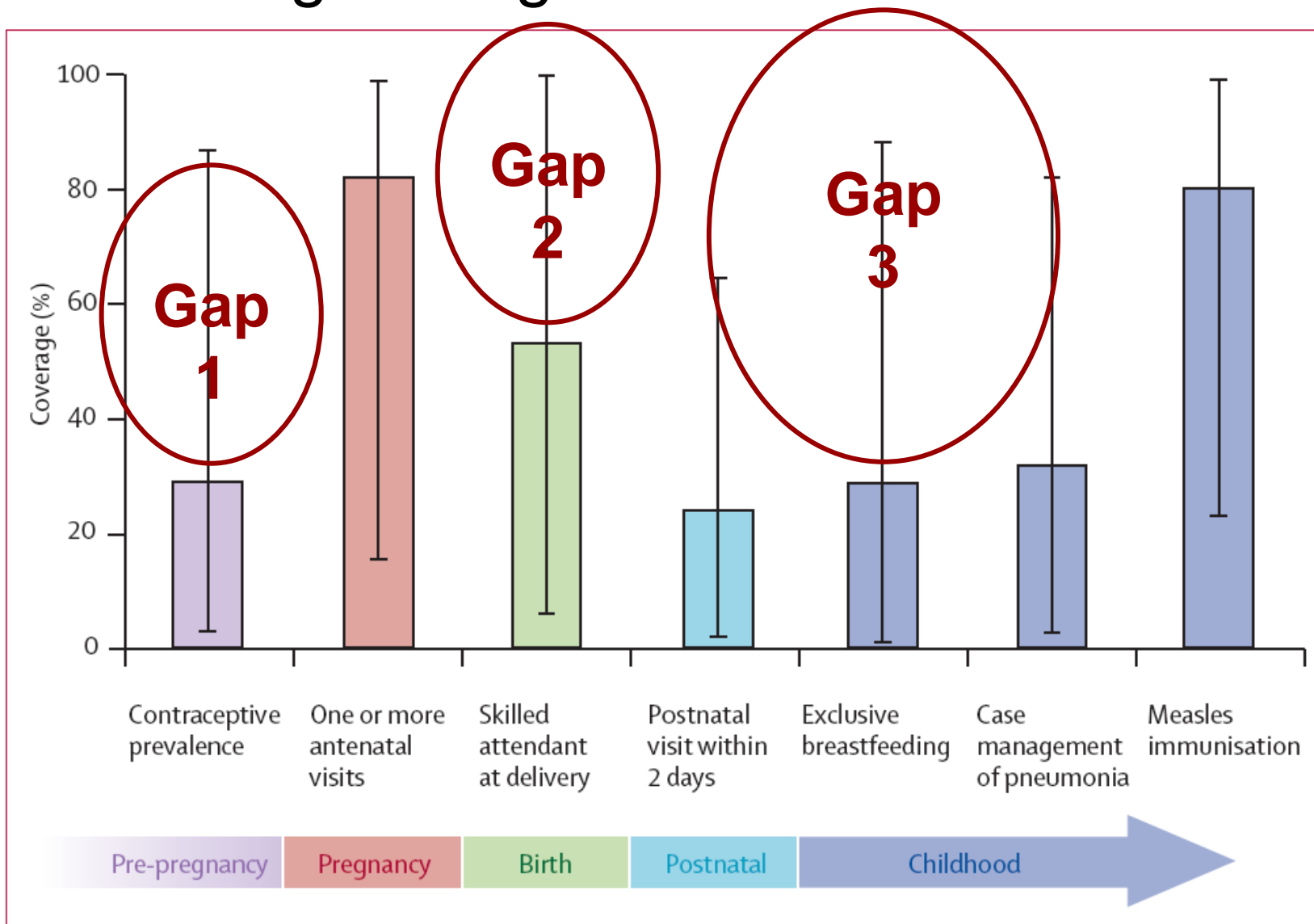


Figure 3: Coverage estimates for interventions across the continuum of care in the 68 priority countries (2000-06)

Source: Lancet Countdown Coverage writing group, Lancet Countdown special issue, 2008

Before/during Pregnancy



- Health and nutrition of adolescents
- Family planning
- Focused antenatal care
 - Birth preparedness
 - Prevention/treatment of infections
 - Optimal nutrition

During Delivery

- Routine infection prevention
- Monitoring of labor
- Active management of third stage of labor
- Hygienic cutting/tying of cord
- Resuscitation if needed
- Prevention of mother to child transmission

Postnatal Period

Essential newborn care:

- Early & exclusive breastfeeding
- Warmth
- Cleanliness
- Extra care of preterm/LBW babies
- Recognition of maternal/newborn danger signs & immediate referral



Special Care for 3 Killers



- Preterm/LBW:
 - Kangaroo Mother Care (KMC)
- Birth Asphyxia:
 - Drying and stimulation
 - Bag and mask
- Infection:
 - Community case management

Preterm/LBW Babies



VS



Kangaroo Mother Care



What?

- Kangaroo Mother Care (KMC): baby is wrapped skin to skin with mother 24 hours a day for days/weeks
- Provides thermal care, increased breastfeeding, reduced infections and links to additional supportive care

Who?

- Babies <2000g birth weight
- Babies who are stable (eg not requiring recurrent resuscitation)

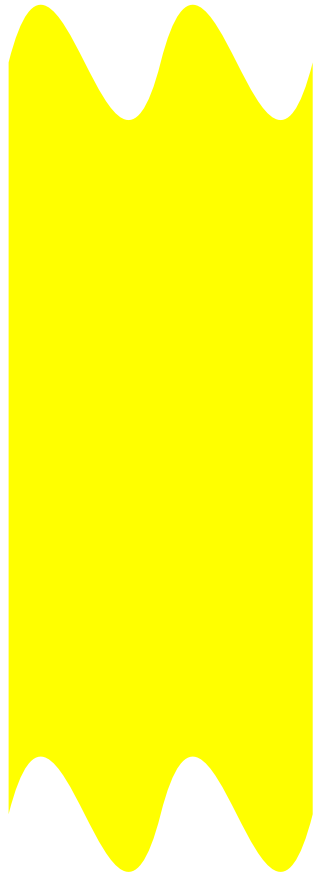
KMC Effectiveness

- Recent Meta-analysis:

51% reduction in neonatal mortality for neonates <2000 g with facility-based KMC compared to conventional care

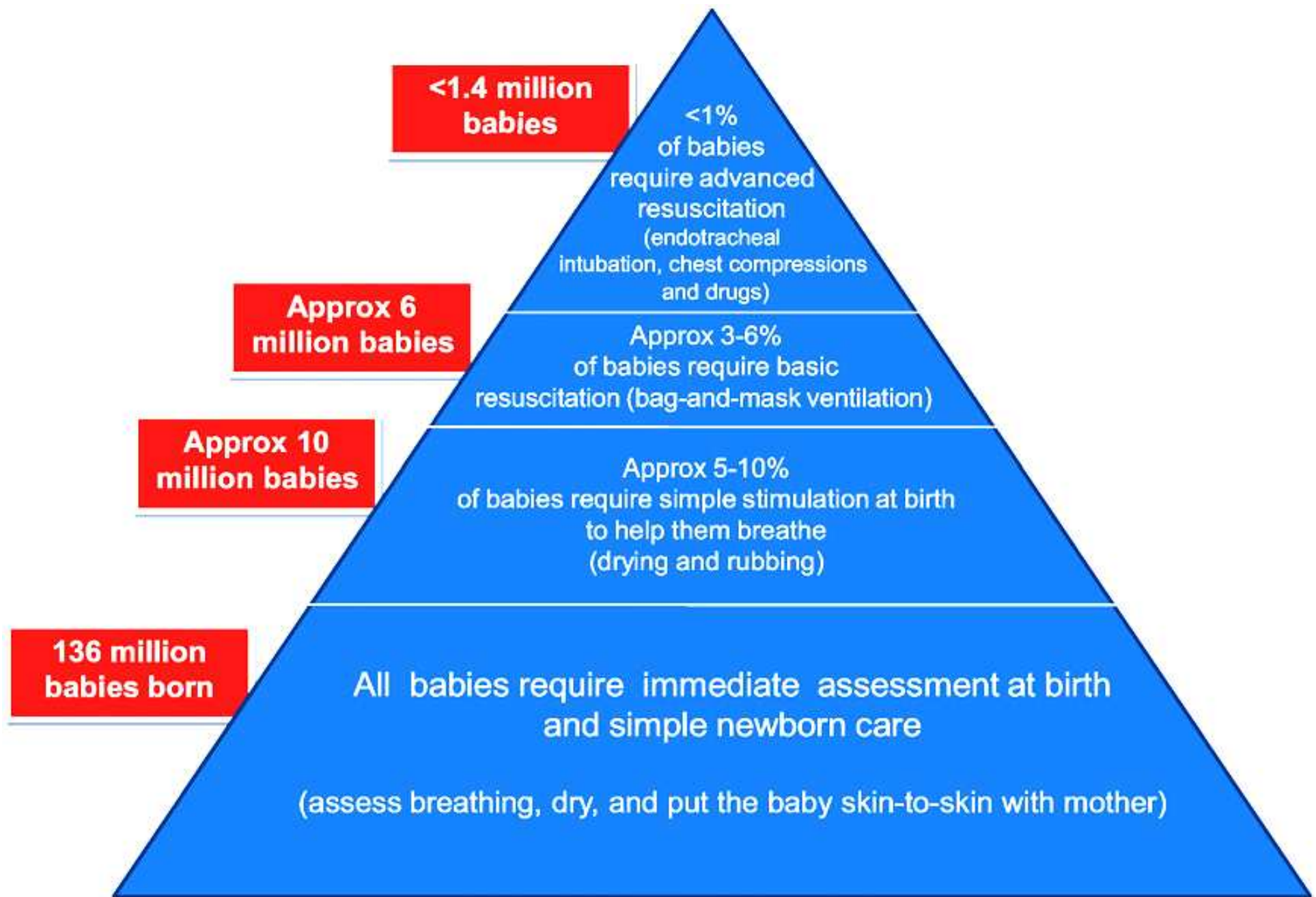


Asphyxia



VS





Source: Wall et al. Int J Gyn and Obstetr 2009; 107: s47-s64.

Neonatal Resuscitation Impact

- Training facility providers: **30%** reduction in intra-partum neonatal deaths (meta-analysis)
- Training Community health care workers (midwives): **20%** reduction in intra-partum neonatal deaths (Delphi expert opinion)

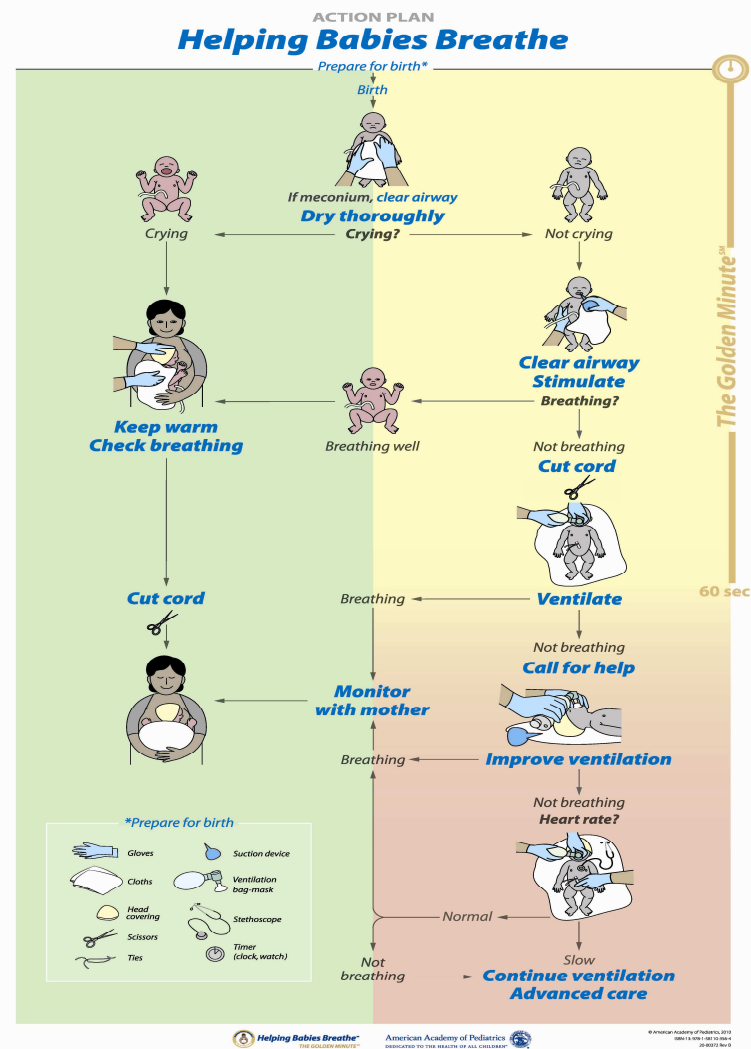
New Simplified Resuscitation Curriculum: *Helping Babies Breathe*

Simple color-coded algorithm

1. Dry thoroughly
2. Assess breathing – if not breathing then,
3. Clear airway and stimulate – if not breathing then,
4. Ventilate until breathing (or no response after 10 – 15 min)

Focus on breathing assistance and not cardiac compressions

*Developed by American Academy of Pediatrics in collaboration with Save the Children, USAID, NICHD, WHO, & UNICEF



Newborn Infection



VS



Conceptual packages of community-based newborn care

- **Model 1:** Community mobilization
- **Model 2:** Community mobilization + home visits to promote newborn care practices & care seeking
- **Model 3:** Community mobilization + home visits + home-based management of newborn infections
- **Model 4:** Community mobilization + home visits including newborn care at delivery + home-based management of newborn complications (infections & LBW)

Model I: Makwanpur, Nepal

- **Intervention:** Community mobilization using women's groups guided by facilitators to identify, formulate and implement strategies to address maternal and newborn health problems
- **Outcomes:** Increased antenatal care, institutional delivery, hand washing, clean blade
- **Impact:** **30%** reduction in newborn mortality (Intervention 26 per 1000 vs. Control 37 per 1000)

Model 2: Shivgarh, India

- **Intervention:** Community mobilization plus CHW antenatal and postnatal home visits
- **Outcomes:** Improved home care practices, eg:
 - Birth preparedness
 - Hygienic delivery
 - Thermal care
 - Clean cord care
 - Breastfeeding
- **Impact:** Reduction in NMR **52 - 54%**

Model 3: Projahnmo, Bangladesh

- **Intervention:** Community mobilization, CHW antenatal and postnatal home visits, referral or home management of infection
- **Outcomes:** Increased ANC, delivery hygiene, delayed bathing, immediate breastfeeding; decreased CFR for infection
- **Impact:** **34%** reduction in NMR; NMR reduction associated with *early* postnatal visit (24-48 hours)

Model 4: SEARCH, India

- **Intervention:** Community mobilization, CHW antenatal & postnatal home visits, CHW attendance at delivery, special care for LBW, home management of infection
- **Outcomes:** 93% coverage of home-based newborn care in 3rd year
- **Impact:** **62%** reduction in NMR; sepsis case fatality decreased from 16.6% to 2.8% for CHW-treated cases

Model 2 Example: Hala, Pakistan

- Hala – “effectiveness” trial within existing government system: Pakistan’s Lady Health Worker Program
 - **Intervention:** Community health committees, home visits, referral to facilities for complications
 - **Outcomes:** Increased SBA, delivery hygiene, breastfeeding, delayed bathing
 - **Impact:** **30%** reduction in NMR

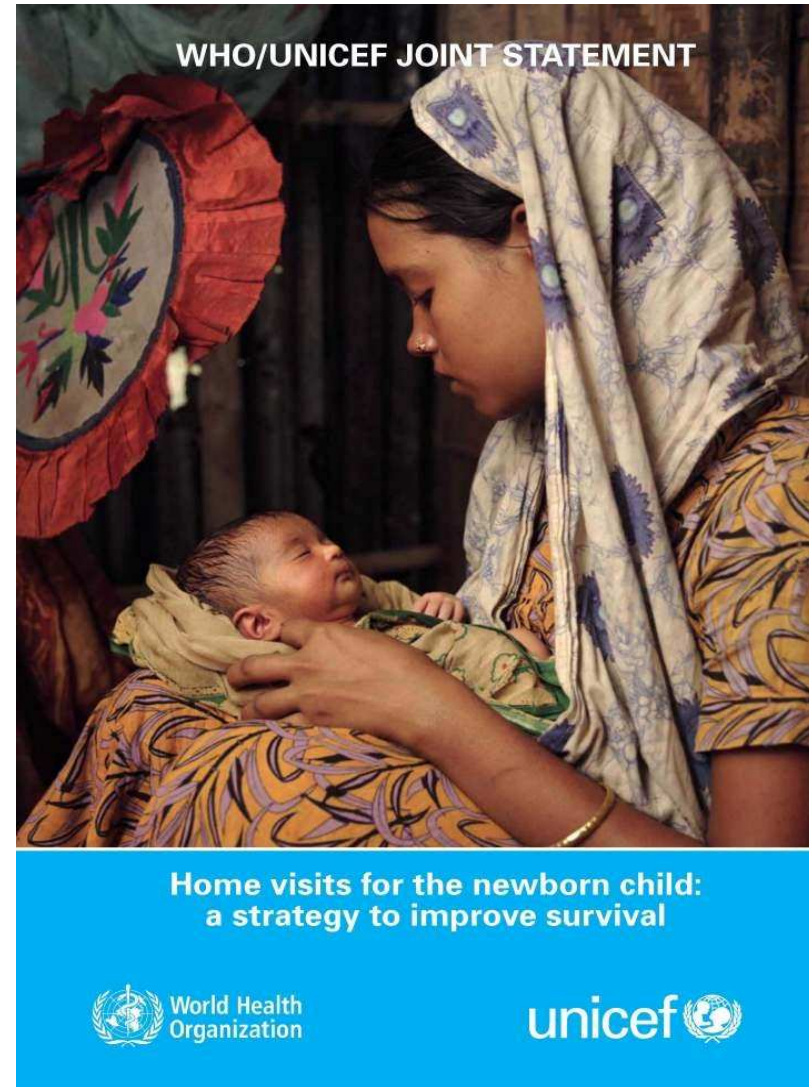
Content & Timing of Home Visits

Study	Provider	Home visits for newborn care on	Content of home visits	↓NMR
SEARCH (India) Source: Bang. Lancet 1999	Community health worker (1:1000) (Paid)	Prenatal, Delivery, Postnatal Days 1, 2, 3, 5, 7, 14, 21 and 28	<ul style="list-style-type: none"> •Prenatal counselling •Care at birth (resuscitation) •Postnatal visit (care & counselling) •Infection management •LBW care (extra visits) 	62%
Al So Ur				%
Pr (B				%
Source: Baqui. Lancet 2008	(Paid)		•Treatment of newborn infection (if refused referral)	
Shivgarh (India) Source: Kumar. Lancet 2008	Community health worker (Paid)	Prenatal, Postnatal Days 1, 3	<ul style="list-style-type: none"> •Prenatal counselling •Postnatal visits (counselling) 	54%
Hala (Pakistan) Source: Bhutta. Bull World Health Organ 2008	Lady Health Worker (1:1000) (Government, paid)	Prenatal, Postnatal Days 1, 3, 7, 14 and 28	<ul style="list-style-type: none"> •Prenatal counselling •Postnatal visits (newborn assessment, counselling, referral for danger signs) 	30%

Evidence from studies informed the Joint Statement: postnatal care home visits on days 1, 3, 7

Evidence to Policy and Programs

- Home visits should:
 - include counseling on care practices, danger signs, when to seek care
 - be scheduled for 1st visit within 24 hours, day 3 (or after hospital discharge), day 7
 - link to health system for treatment of illness



Recap of What We Know

WHERE?

Priority countries

- At home/community and 1st level facility
- Reaching the most vulnerable

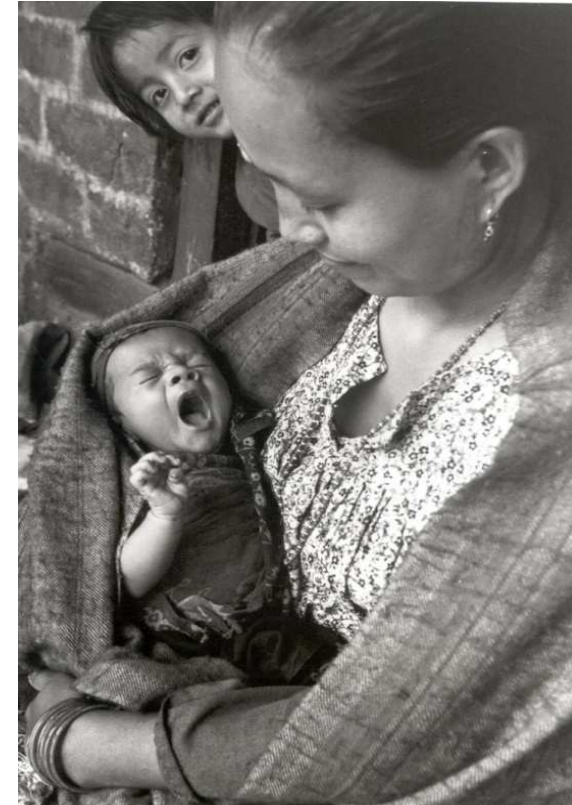
WHEN?

Birth and the first week of life

WHAT?

3 main causes of neonatal deaths

- Care of preterm babies and LBW babies
- Intra-partum maternal and newborn care including newborn resuscitation
- Neonatal sepsis case management





3.6 million neonatal deaths:

What's Next?



Research is Underway

- Chlorhexidine cord care
- Antenatal steroids at the community
- Simplified antibiotic regimens
- Community KMC
- Clean birth kits +



How can MWIA become Engaged?



- **Advocate**
- Join the Maternal Health Task Force, MHTF
- Join the Partnership for Maternal, Newborn and Child Health, PMNCH
- Target countries for policy change
- **Advocate**



Thank you!