Unmet need for delivery and emergency obstetric care;

A widening gap

C. Stanton
Johns Hopkins Bloomberg School of Public Health/Immpact
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Objectives:

- Provide a global summary of:
  - overall delivery care with a medical professional
  - Caesarean section rates
- Present results from a new secondary analysis of the relationship between maternal mortality and institutional delivery for 20 DHS countries
- Briefly present some of the specific results from Indonesia, an Immpact focus country

% of live births with a medical professional* at birth

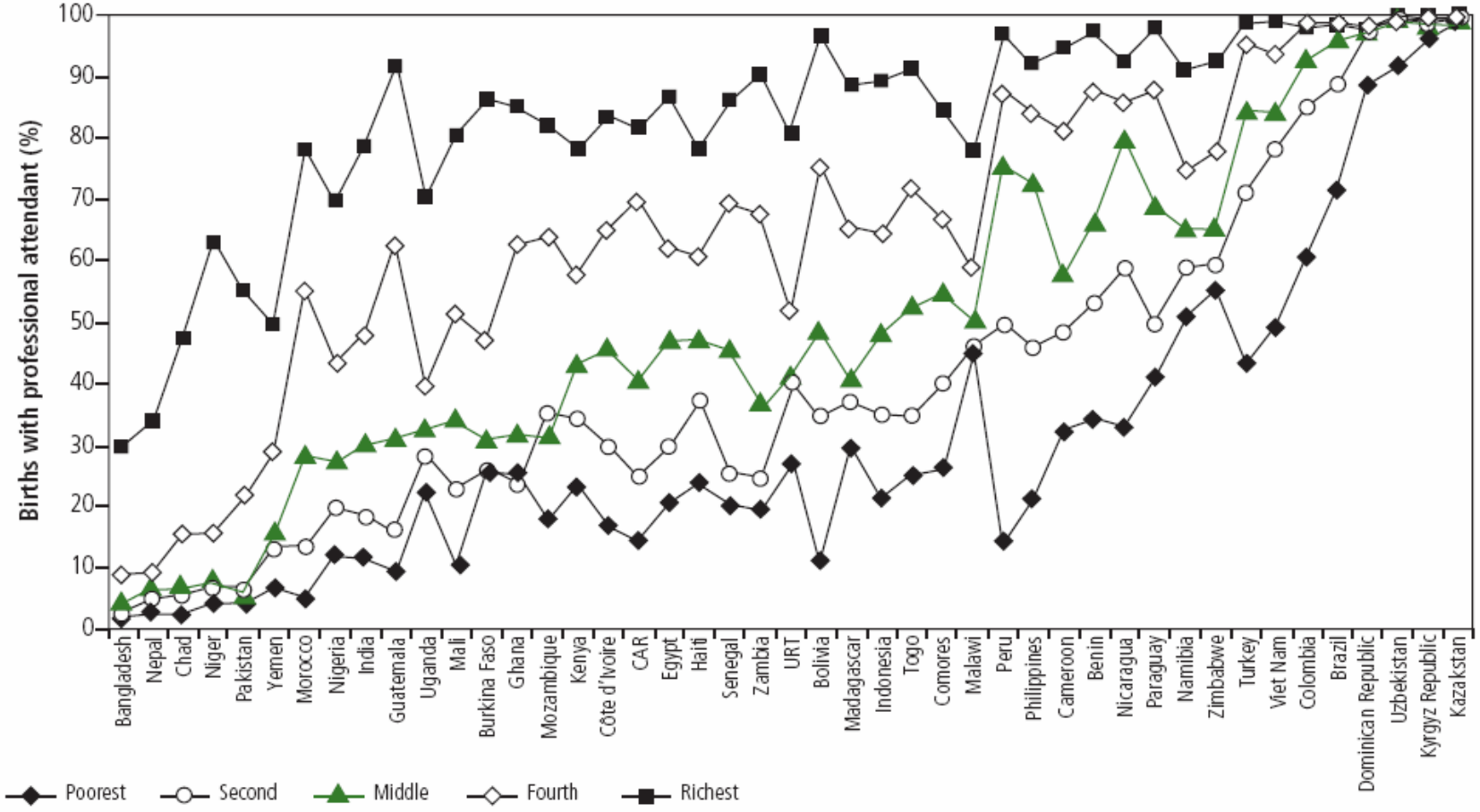
Regions**	~1990	~2000		2000 - 2005
Low & middle income	45	54		61
East Asia & Pacific	53	72		87
Europe & Central Asia				94
Latin America & Carib.	77	82		87
Middle East & N. Africa	41	67		74
South Asia	32	41		37
Sub-Saharan Africa	39	40		45

** Includes Dr/nurses/midwives; **regions not strictly comparable*

Sources: www.worldbank.org and Stanton et al 2006;

Delivery with a professional by wealth quintile

Fig. 1. **Percentage of births with a professional delivery attendant for five wealth groups, ranked by country average, for 45 developing countries**



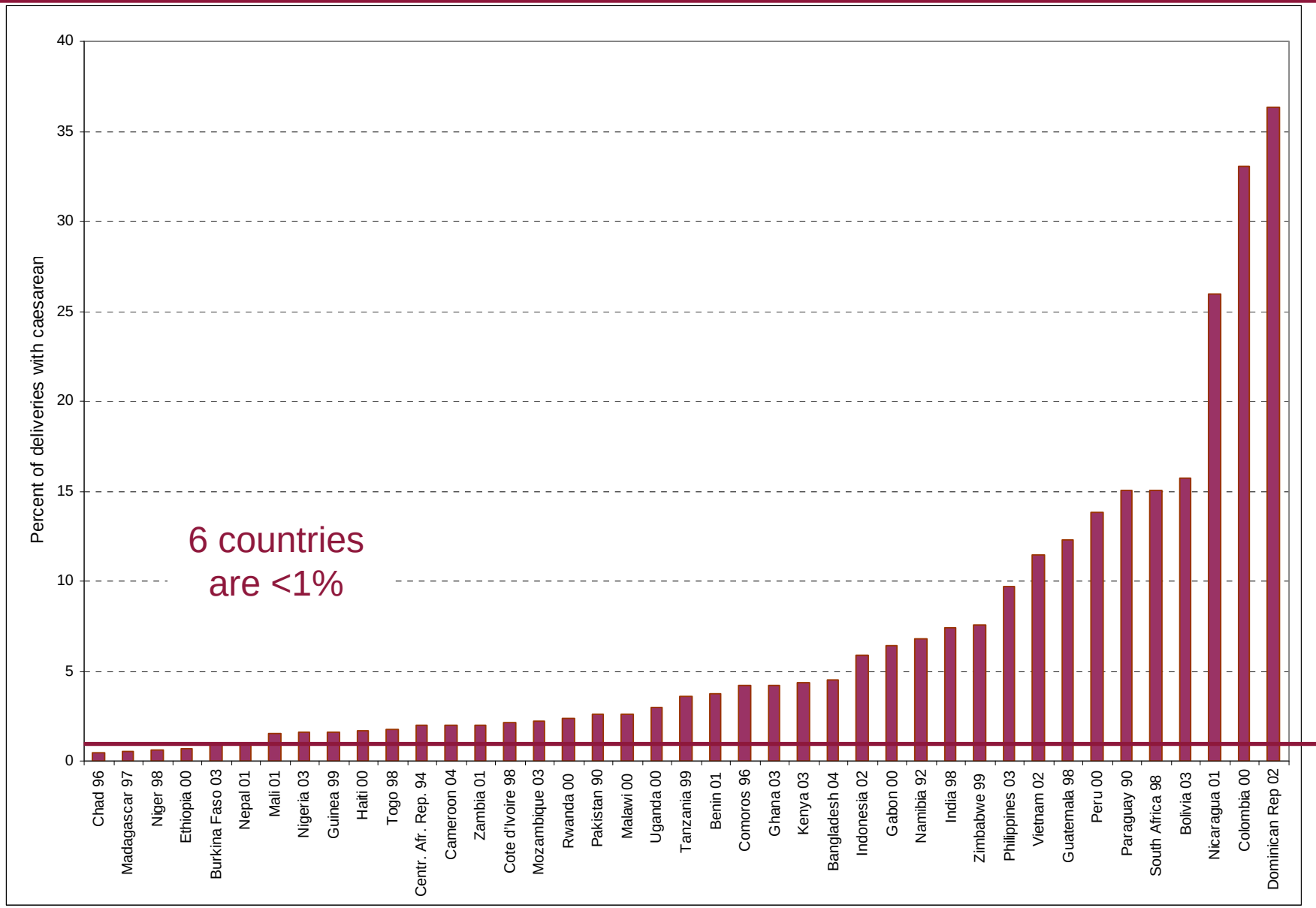
Source: Houweling et al. WHO Bulletin 2007

Caesarean section rates

Region	N of countries	% of births represented in region	Reference points (median)	Caesarean Section Rate (%)*
N Africa	5	100.0	**1992-1998 ('92)**	**8.4**
SSAfrica	29	81.0	**1990-2001 ('97)**	**2.9**
LAC	20	98.2	**1992-1999 ('96)**	**25.8**
E Asia	2	97.8	**2003 ('03)**	**26.3**
S Asia	5	96.2	**1989-1999 ('98)**	**6.8**
SE Asia	4	73.1	**1995-1999 ('97)**	**4.6**
W Asia	12	81.2	**1992-1999 ('93)**	**11.0**
Eurasia	5	76.9	**1994-1998 ('97)**	**5.4**
Developing world	82	**90.0**	**1989-2001 (1996)**	**11.7**

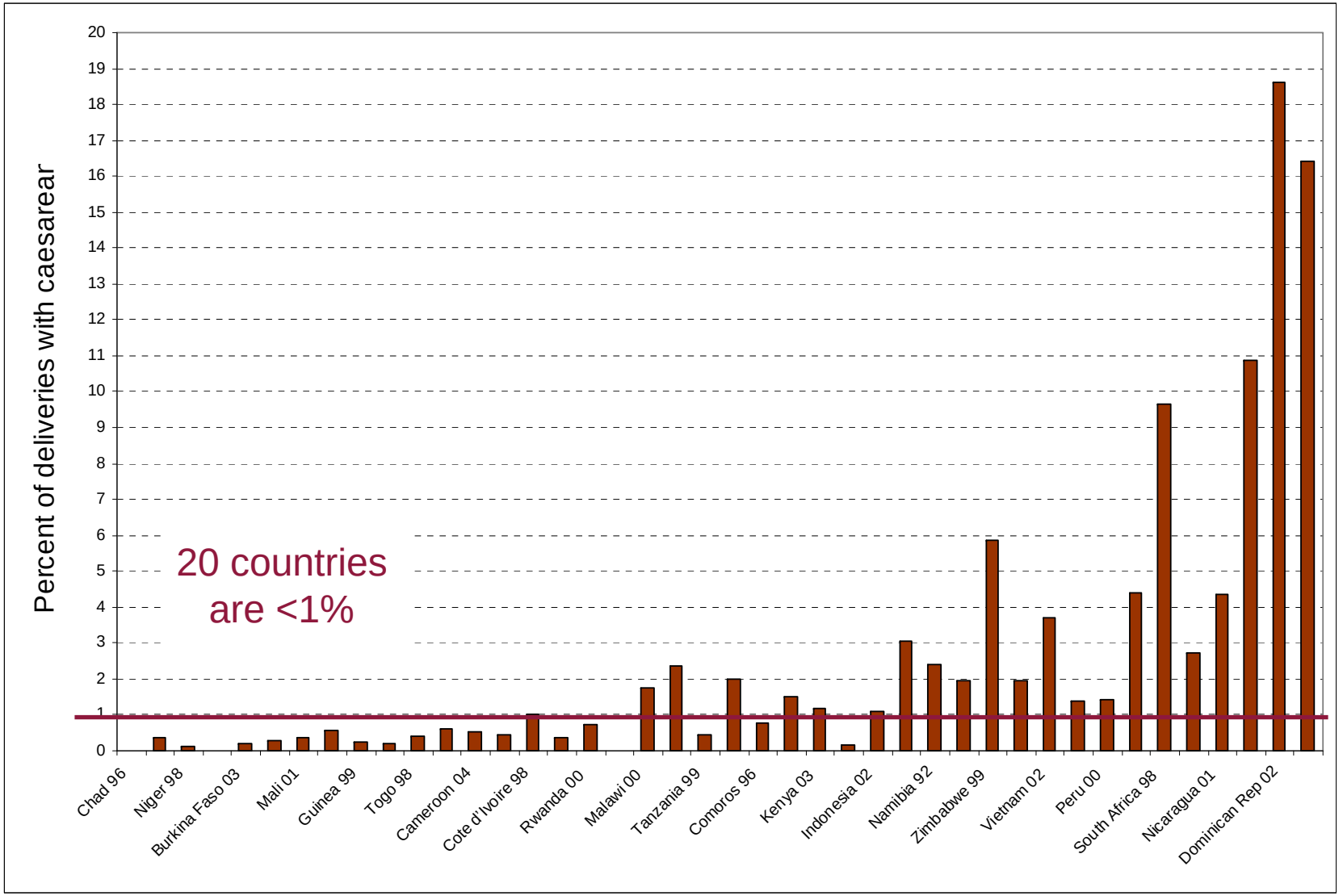
Source: Stanton and Holtz, Studies in Family Planning 2006

Caesarean section rates in 42 countries



Source: Ronsmans et al. 2006 Lancet

Caesarean section rates among the poorest in 42 countries



Source: Ronsmans et al. 2006 Lancet

Familial technique

- Graham et al. (2004 Lancet) showed a strong, positive relationship between maternal death and poverty using DHS data:
  - Assumes poverty is familial; assigns the wealth status of DHS respondents to their sisters
  - Analyzes maternal mortality/survival by wealth using the DHS sisterhood data

- Ahmed, Graham and Stanton extend the assumption to explore relationship between institutional delivery and maternal mortality:
  - Assumes behavior re: use of maternal health care is familial, assigns institutional birth of the respondent to her sisters
  - Used meta-analysis methods and pool DHS data from 20 countries

Rate of maternal death among sisters of respondents with maternal care RELATIVE TO Rate of maternal death among sisters of respondents without maternal care

	Pooled, adjusted RR estimates for maternal mortality rates (95% CI)
Total	
1+ ANC visit	0.99 (0.80-1.22)
4+ANC visits	1.12 (0.94-1.35)
Institutional delivery	0.73 (0.58-0.92)
Asia, LAC, and N. Africa	
1+ ANC visit	1.04 (0.66-1.65)
4+ANC visits	1.50 (1.03-2.20)
Institutional delivery	0.52 (0.31-0.87)
Sub-Saharan Africa	
1+ ANC visit	1.02 (0.79-1.32)
4+ANC visits	1.03 (0.84-1.26)
Institutional delivery	0.79 (.63-0.99)

Did the Skilled attendant strategy reach the poor in Indonesia?

Used 4 Indonesian DHS surveys to:

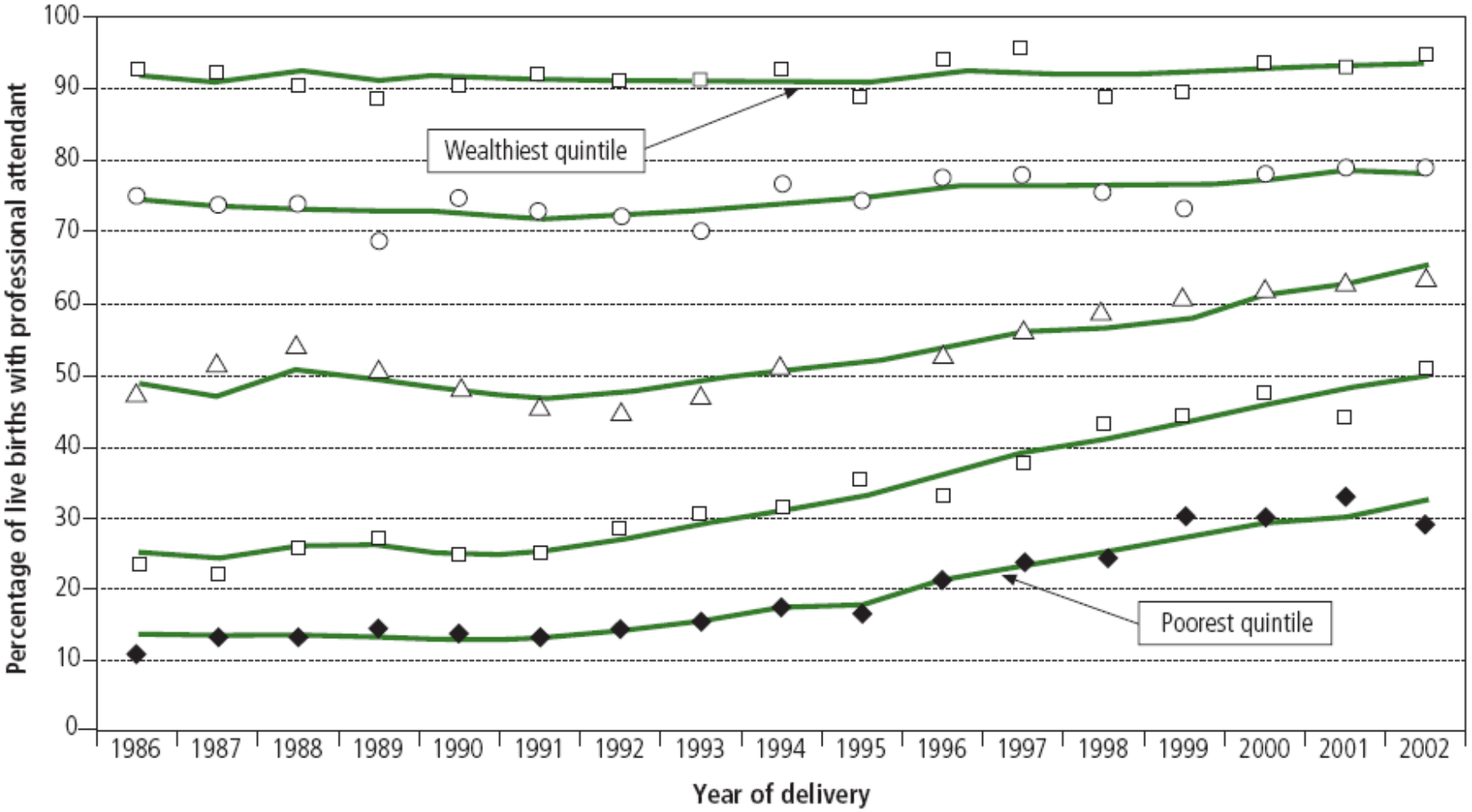
- assess overall trends in use of a skilled attendant at birth and in the caesarean section rate from before the beginning of the Midwife in the Village program (1986) to 2002

And

- assess how successful this strategy was at reaching the poor, particularly following the 1997 economic crisis

Indonesia DHS; 1986-2002

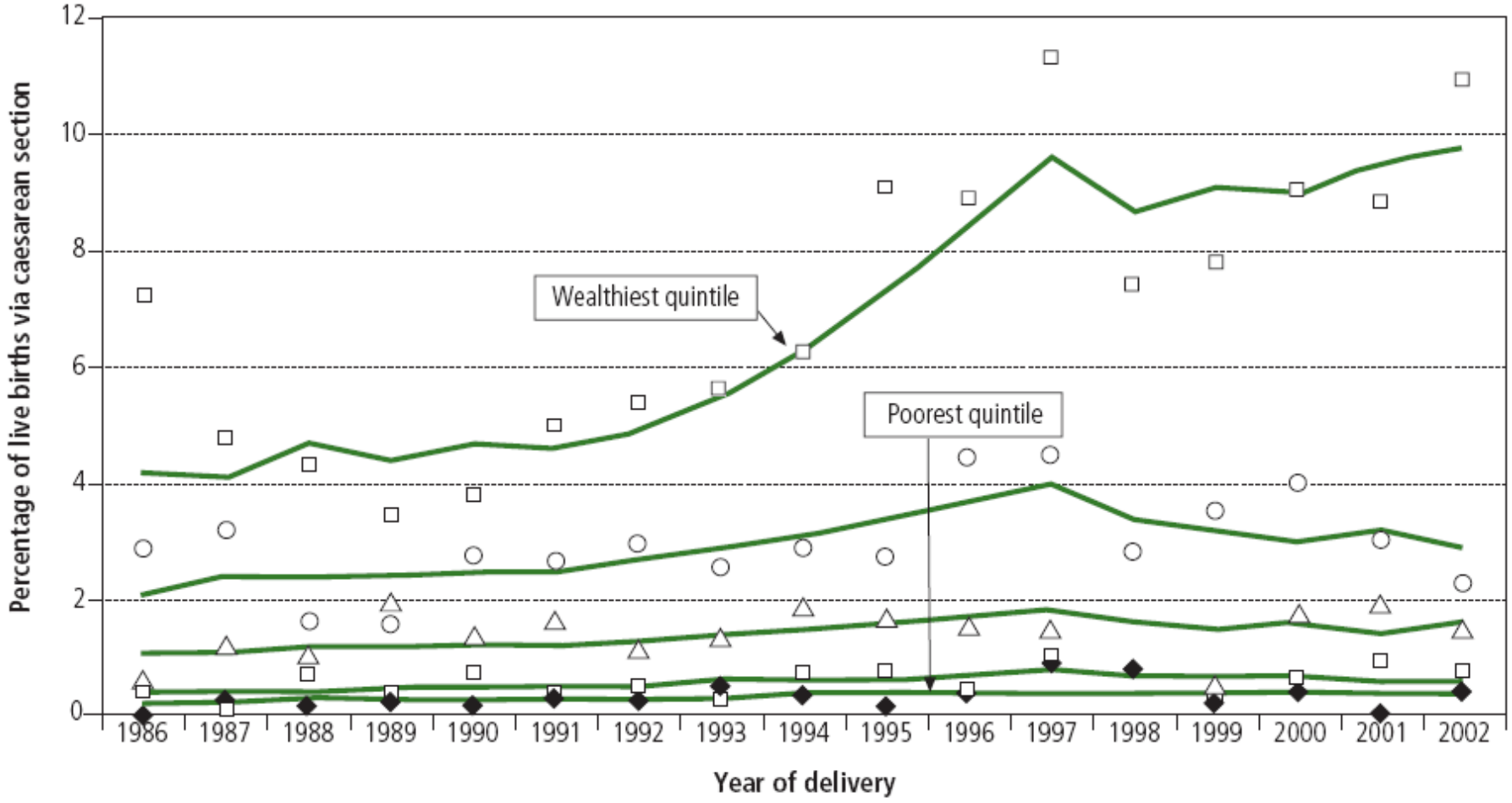
Fig. 3. **Trends in rates[a] of professional attendance in Indonesia 1986–2002, by wealth quintile**



Source: Hatt et al. WHO Bulletin 2007

Indonesia DHS; 1986-2002

Fig. 4. **Trends in rates[a] of caesarean section in Indonesia 1986–2002, by wealth quintile**

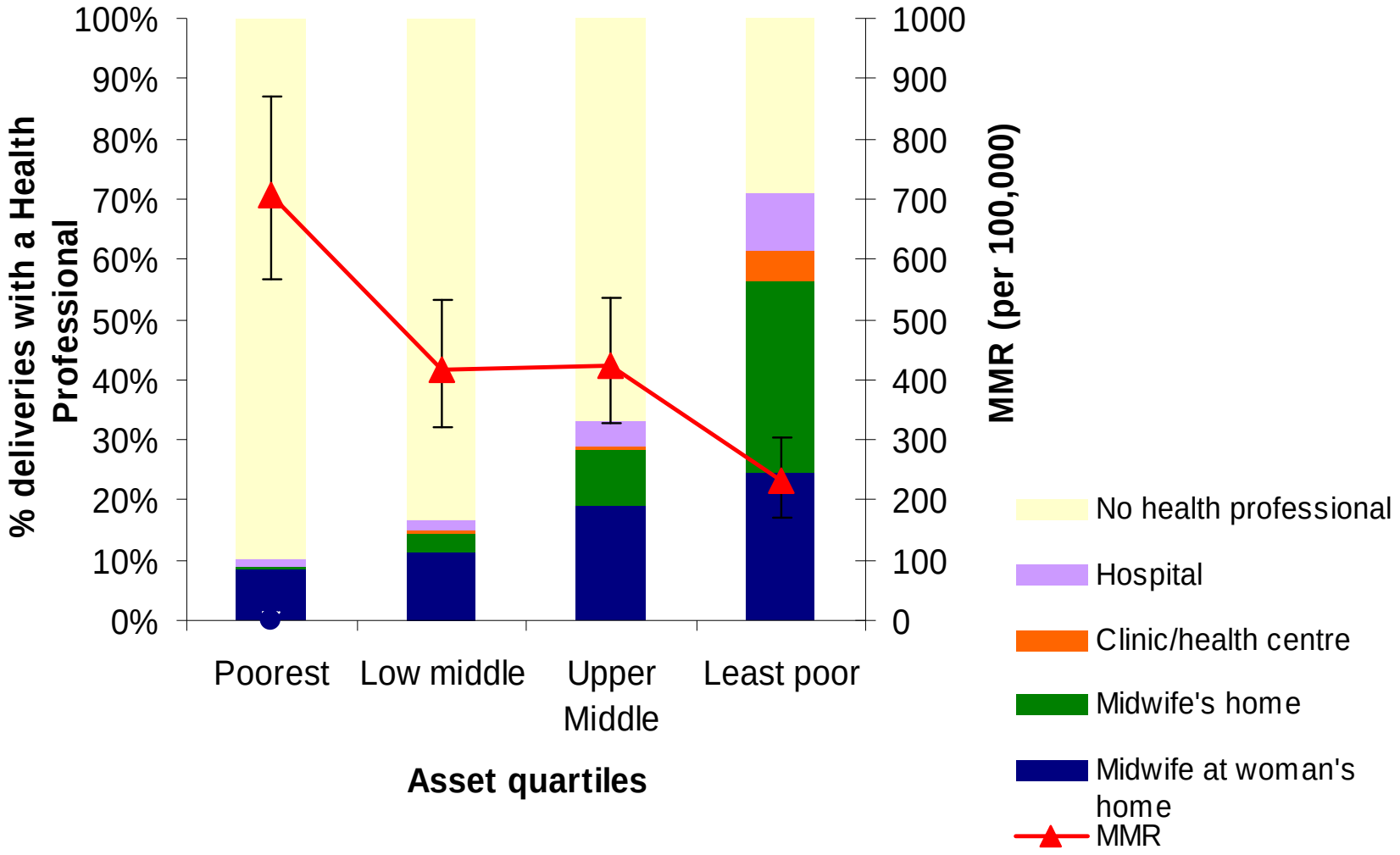


Source: Hatt et al. WHO Bulletin 2007

Indonesia DHS; 1986-2002

- Indonesian national strategy to reach the poor with professional obstetric care was successful
  - Use increased dramatically among the poorest 40% of the population and among the rural
  - Positive trends were sustained during the economic crisis following 1997
- Trends obscure the huge unmet need for emergency obstetric care
  - Increase in the Caesarean section rate was solely among the wealthiest segments of the population
- *Use of these process indicators does not answer the ultimate question re: beneficial gains in health*

Effect of the village midwife on maternal mortality in 2 districts in Indonesia



Source: Ronsmans et al. unpublished 2008

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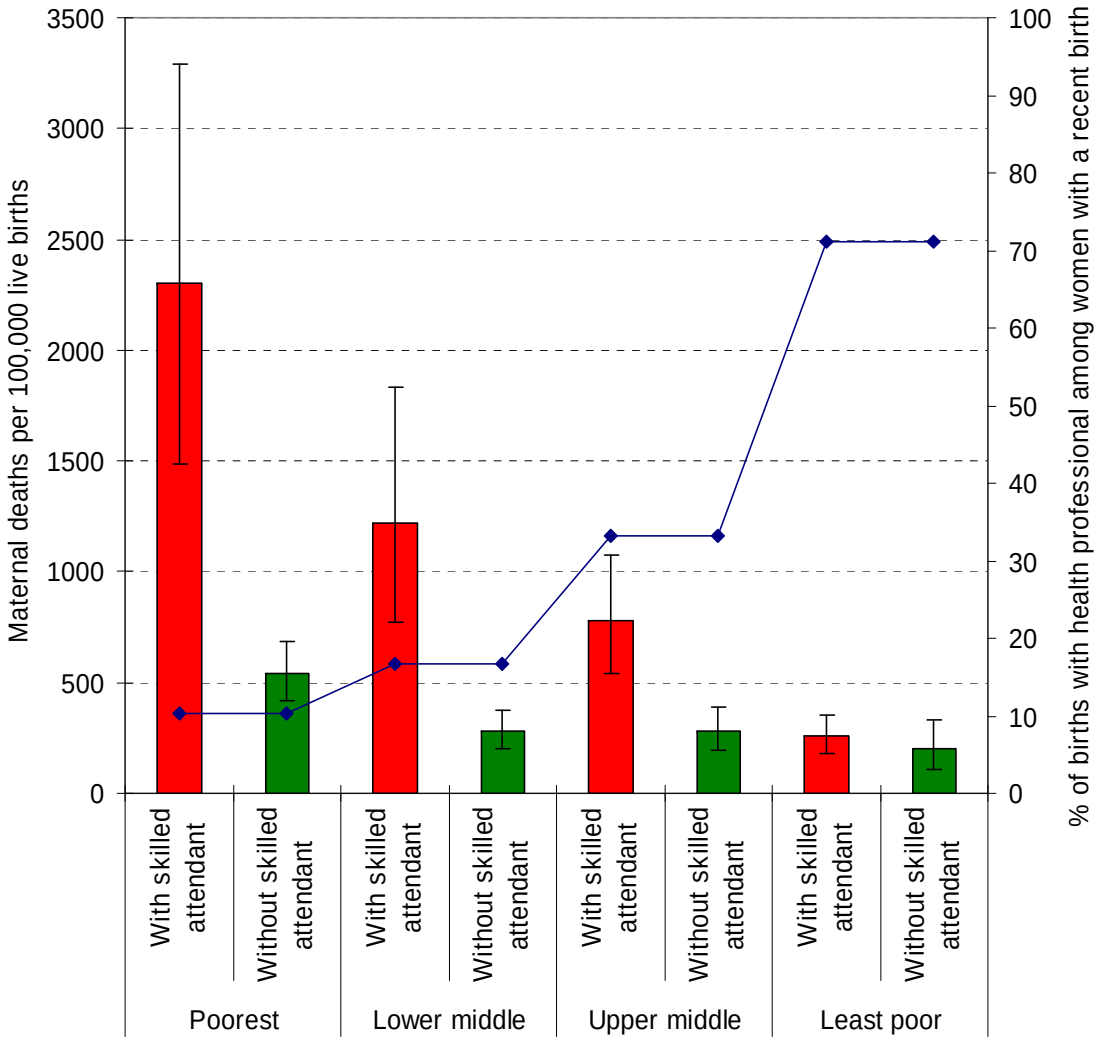

MMR:
13X higher among the Poor with a professional attendant relative to Wealthy

MM 2x as high among those with a professional at birth

Source: Ronsmans et al. unpublished 2008