



Maternal Mortality in India and the Million Death Study

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The Presentation covers the following topics:

1. One Million Deaths Study
2. Results of Maternal Mortality in India: 1997-2003
3. Preliminary estimates of Causes of Death, 2002-2003



1. Study of 1 Million Deaths within the Sample Registration System (SRS)

- Started in 1971, latest sample frame began in 2004
- Representative of population at state level
- Covers ~ 7 600 units (150 households or ~1 000 people/unit) = 7.0 M people
- Monthly visits by resident enumerator and half-yearly visits by RG surveyor (dual recording)
- Reasonably complete ascertainment of births and deaths (better than single surveys)
- **Earlier SRS of 6,700 units or ~6.1 M people from 1993-2003**

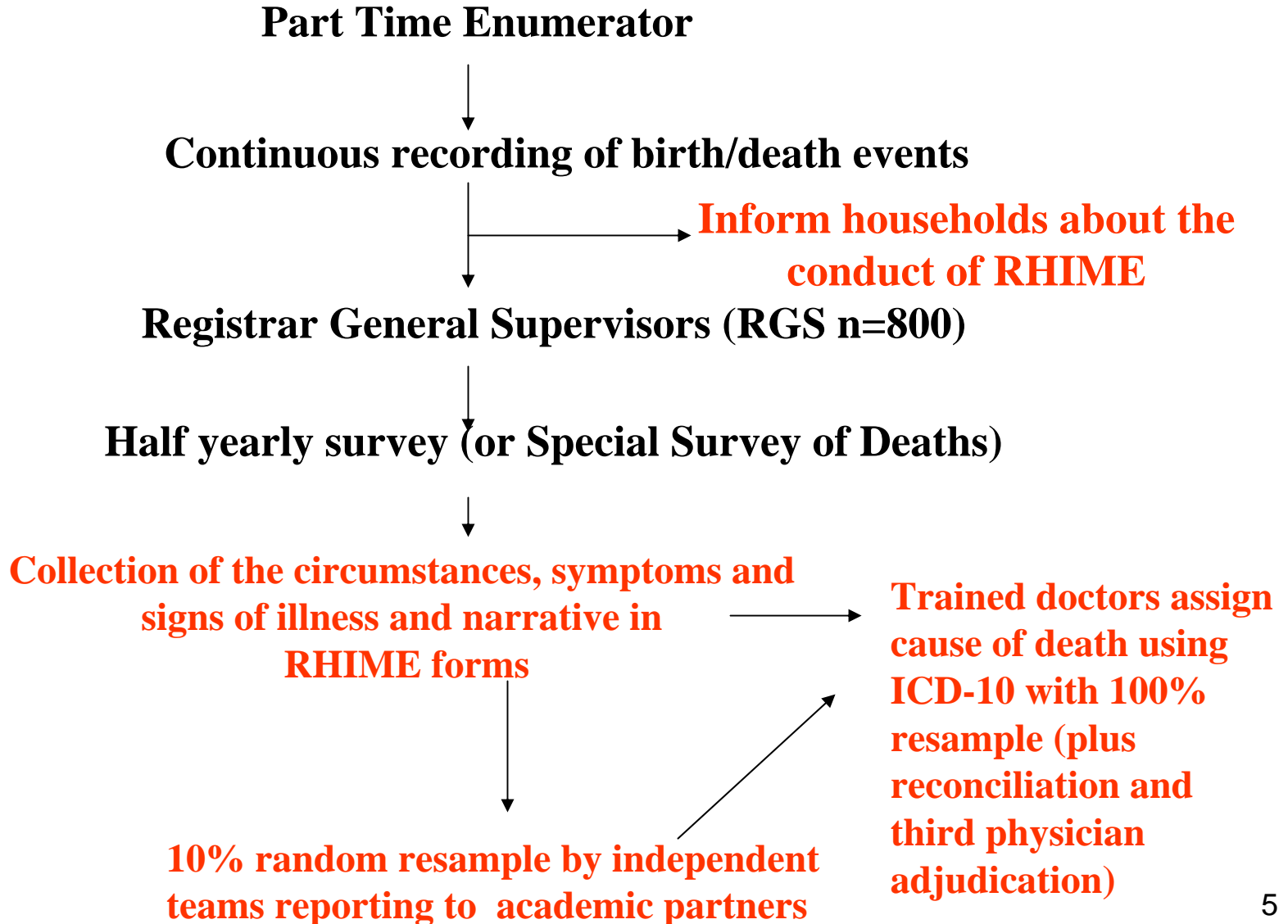


Study of 1 Million Deaths within the Sample Registration System (SRS)

- 350,000 deaths during 1997-2003 under study
- 650,000 deaths to be studied for the period 2004-2014.

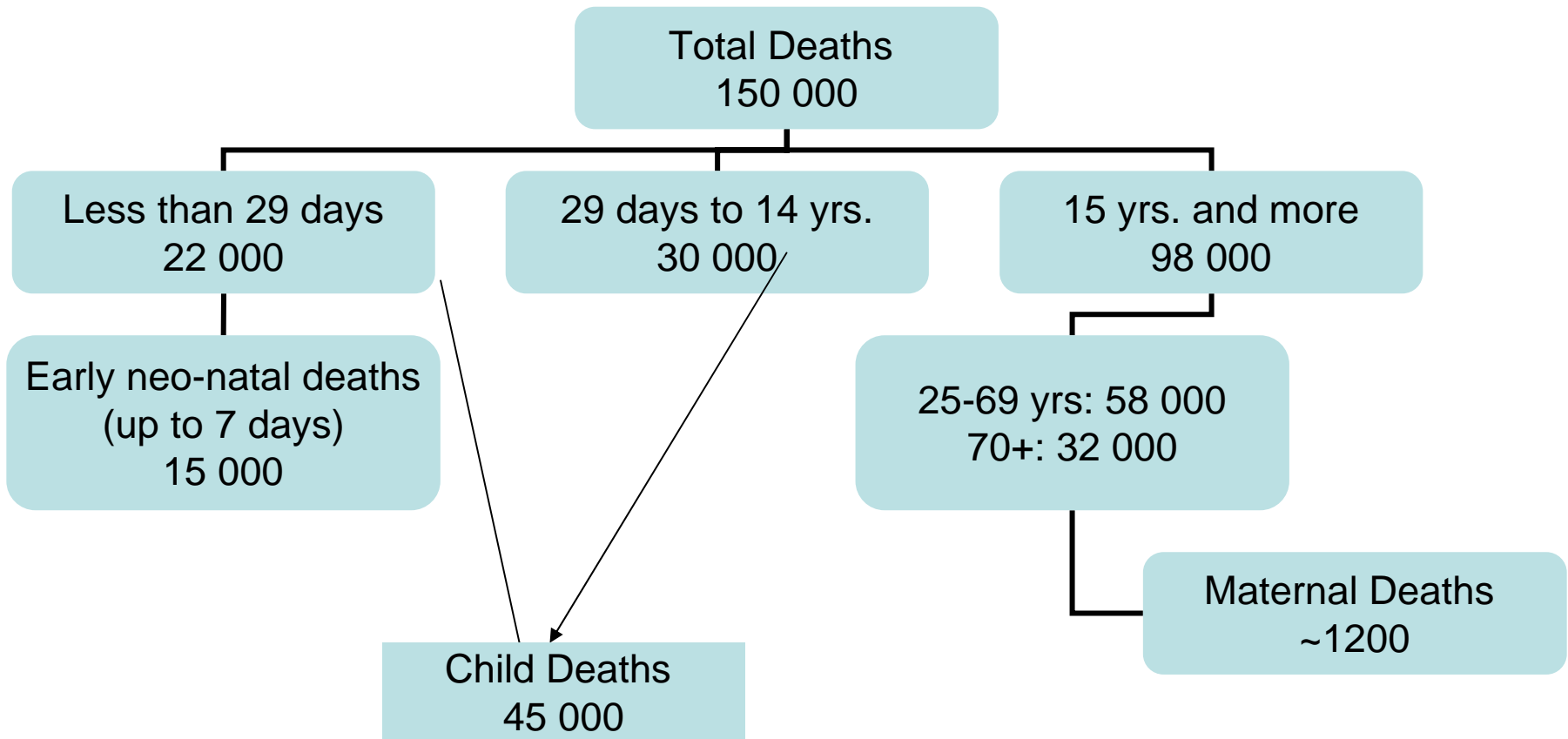


Field activities in SRS





Expected number of deaths from 2001-2003 by age groups





2. Maternal Mortality Rate (MMR) Study

- Maternal mortality is a **RARE event**.
- Study covers for 1997-2003:
 - 14.4 million female population ages 15-49 years.
 - 1.3 million births
 - **4,484 maternal deaths**

Levels of MMR - India

Item	1997- 1998	1999- 2001	2001- 2003
No. of maternal deaths	1,589	1,512	1,383
Levels	398	327	301
Confidence Interval (95%)	378-417	311-343	285-317

T1

T2

T3



Levels of MMR by Regions

Region	2001-03	Confidence interval (95%)
EAG states and Assam	438	410-467
Southern States	173	144-202
Other states	199	178-220
India	301	285-317

T3



2/3 of maternal deaths occur in 8 states (EAG + Assam)

Chart 2: Maternal Mortality Ratio (MMR) along with 95% confidence interval, India and States, 2001-2003

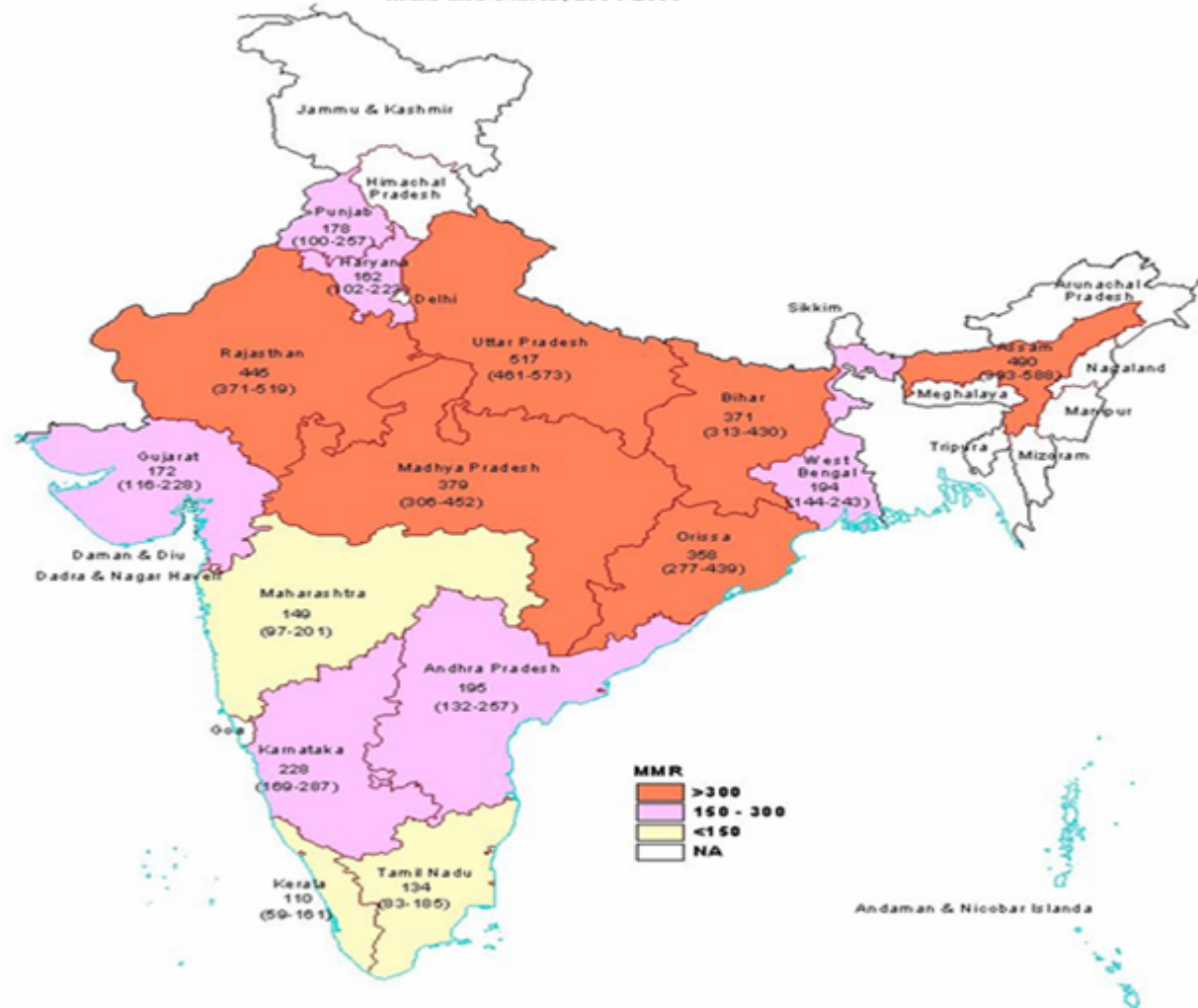
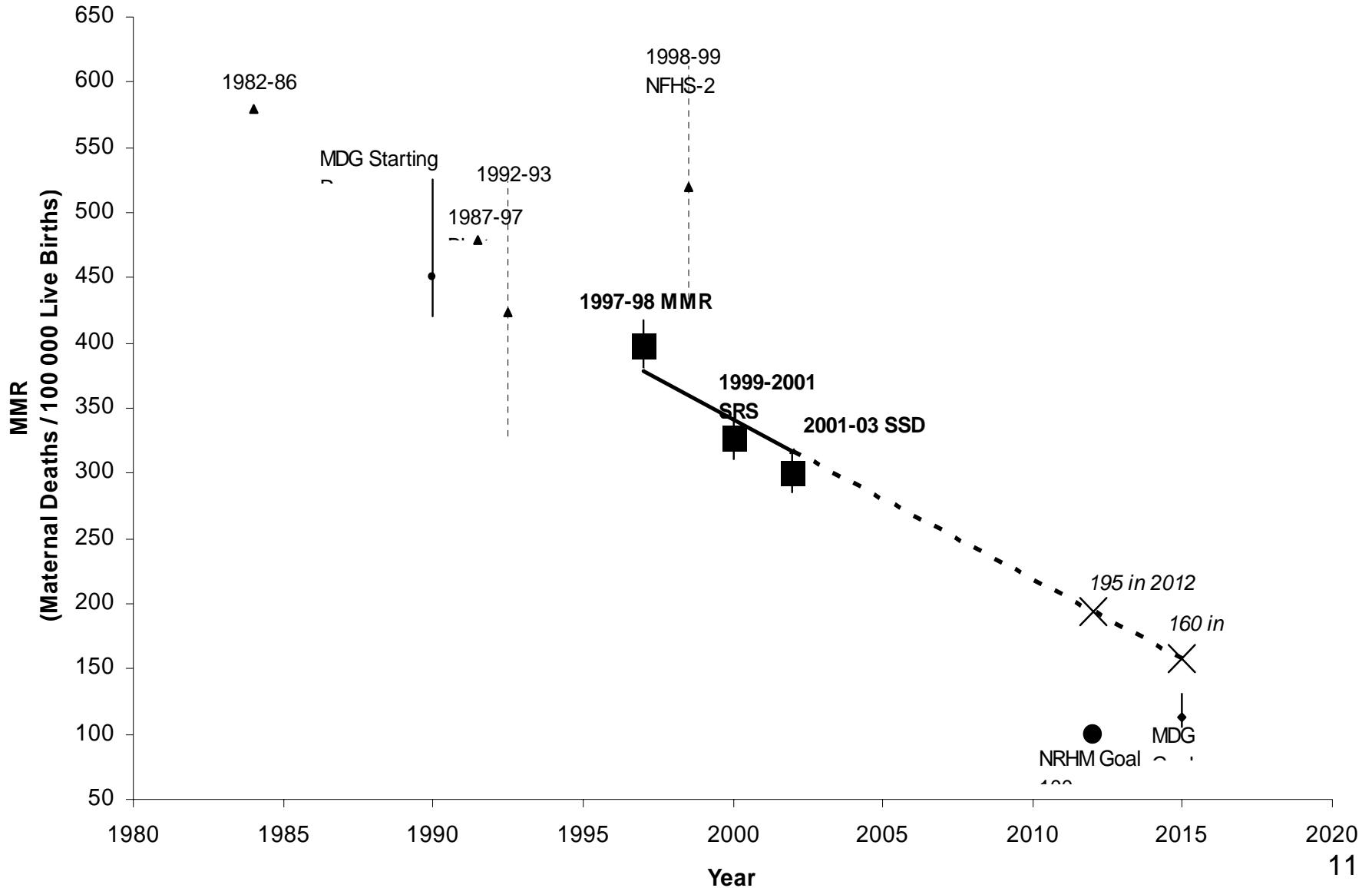


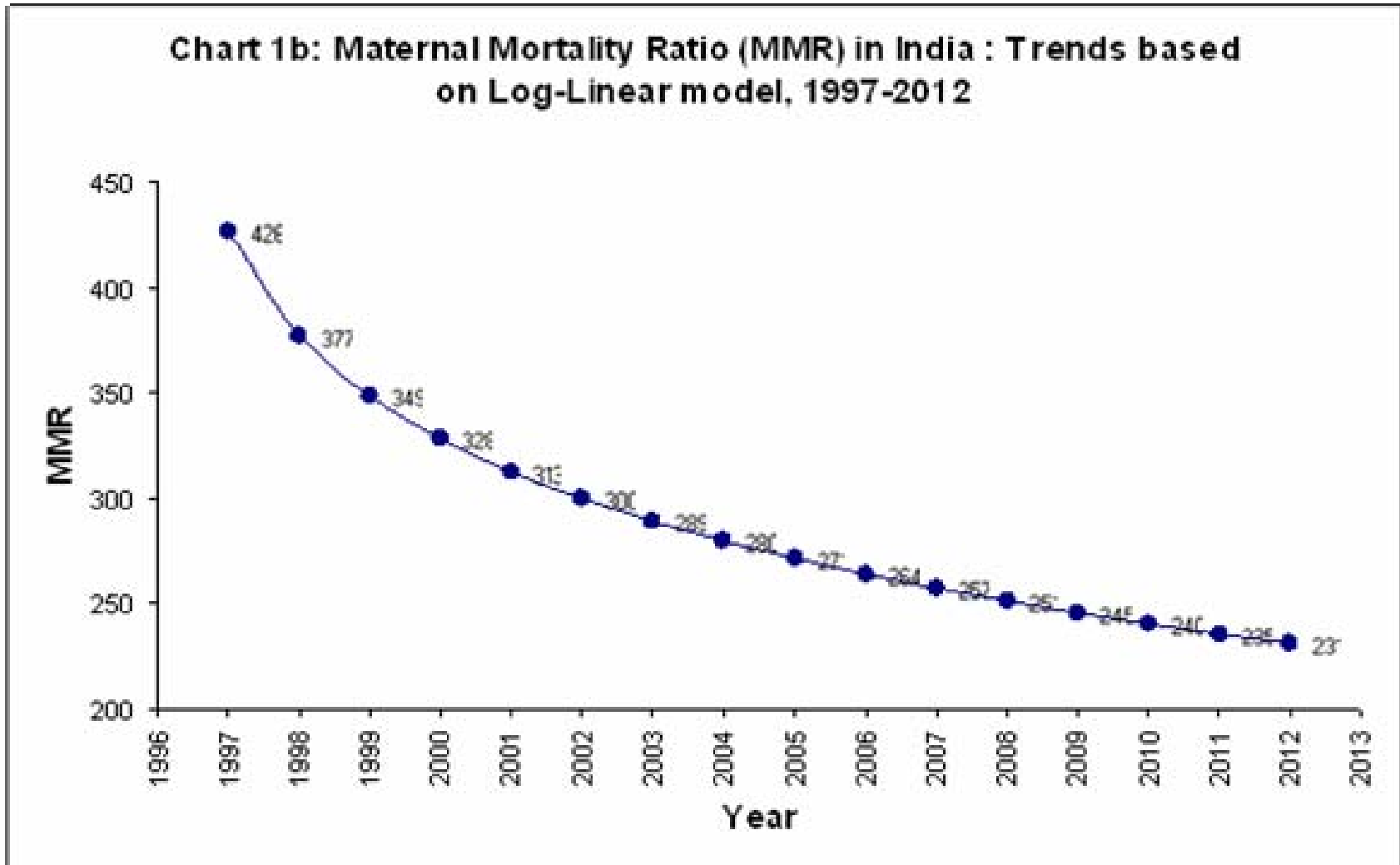


Chart 1: Maternal Mortality Ratio (MMR) in India: Trends from 1980-2020



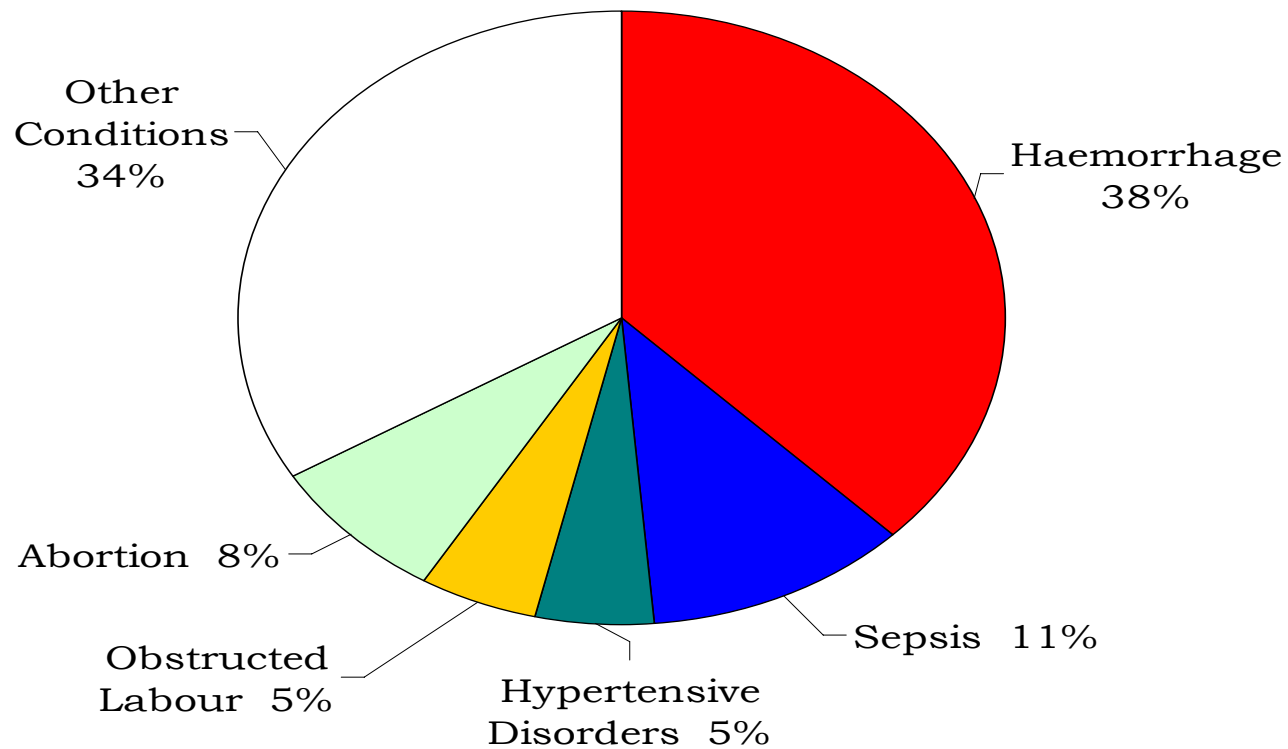
Source: RGI-CGHR Study Collaborators,

Declines in MMR- projected



Causes of maternal death, 2001-2003

Chart 3: Causes of Maternal Death in India





Top 6 Causes of Death (all ages as a %) in India, 2002-2003

Cause of Death	Male		Female		Total	
	EAG+A	Others	EAG+A	Others	EAG+A	Others
Cardiovascular diseases	16.2	26.2	13.6	23.3	15.0	25.0
Diarrhoeal diseases	9.9	5.9	14.4	10.2	11.9	7.7
Asthma/COPD	11.3	10.9	8.8	10.2	10.4	10.6
Perinatal conditions	8.8	8.2	8.4	8.3	8.3	8.3
Tuberculosis	9.7	7.1	7.0	5.0	8.5	6.2
Acute Respiratory Infection	6.3	3.7	8.3	5.3	7.2	4.4



...Thanks