



# Maternal and Perinatal Death Surveillance and Response [MDPSR]

## - Introduction to MPDSR -



नेपाल सरकार  
स्वास्थ्य मन्त्रालय  
स्वास्थ्य सेवा विभाग  
परिवार स्वास्थ्य महाशाखा



# Session Objectives

- By the end of the session, the participants will be able to
- describe the status of maternal and perinatal mortality in Nepal,
  - describe the rationale, goal, objectives and components of MPDSR and
  - share the implementation status of MPDSR in Nepal.



# Case Scenario

A 26-year old had her third baby at home. Her first baby died after a difficult delivery. Her second baby was premature and survived.

- During this pregnancy, she attended one antenatal care at the local health center on her fifth month.
- She started bleeding 1 hour after delivery of a healthy baby.
- The local skilled birth attendant (SBA) came within 1 hour. She found the woman very pale and collapsed and gave her oxytocin and misoprostol and referred her to the district hospital.



# Case Scenario contd..

- Her husband refused to take her to the hospital and it took 2 hours to convince her husband.
- She died on the way to hospital.
- Her family and the village grieved for her death.
- After three months, another maternal death occurred in the village due to similar cause of hemorrhage.



# Questions

- What was the cause of the first mother's death?
- Was her death preventable? How?
- What could have been done to prevent the second mother's death?



**“Maternal Mortality is a very sensitive indicator. All you need to look at is a country’s maternal mortality rate. That is a surrogate for whether the country’s health system is functioning. If it works for women, I am sure it will work for men.”**

**-Margrate Chan, Director General, WHO**



# Background

- Development of any country is reflected by the status of health of mothers and children
- There are approximately three lakh women dying each year globally due to obstetric causes and 99% of these are occurring in developing countries
- Around 1700 women die each year in Nepal due to obstetric causes

*(WHO Estimates 2015)*



# Background

- Even though maternal mortality is reduced considerably in Nepal following various safe motherhood initiatives, this is still unacceptably high.
- If each maternal death is reviewed, causes are identified and maternal deaths due to similar causes are prevented then there is high possibility of further reduction of maternal mortality.





# Maternal Mortality Ratio: Where does Nepal Stand?



Sierra Leone	1,360
Central African Republic	882
Chad	856
Nigeria	814
South Sudan	789
Somalia	732
Liberia	725
Burundi	712
Gambia	706
Congo	693

Austria	4
Belarus	4
Czech Republic	4
Italy	4
Kuwait	4
Sweden	4
Finland	3
Greece	3
Iceland	3
Poland	3

**Nepal - 258/100,000 live births**



# Questions answered by Maternal Death Review



- Who are dying?
- Where are women dying?
- When (stage of pregnancy) are women dying?
- What is the main cause of death?



# Who: High MMR for women over 35 years ...



Age group	% of WRA maternal deaths	% of maternal deaths	MMR
< 20	13.1	14.4	297
20-24	22.0	23.1	119
25-29	24.4	23.8	191
30-34	19.8	14.4	323
35+	5.5	24.4	962
Total	10.7	100	229

Source: Nepal Maternal Mortality Morbidity Study 2008/09



# Who: Variation between ethnic groups ...

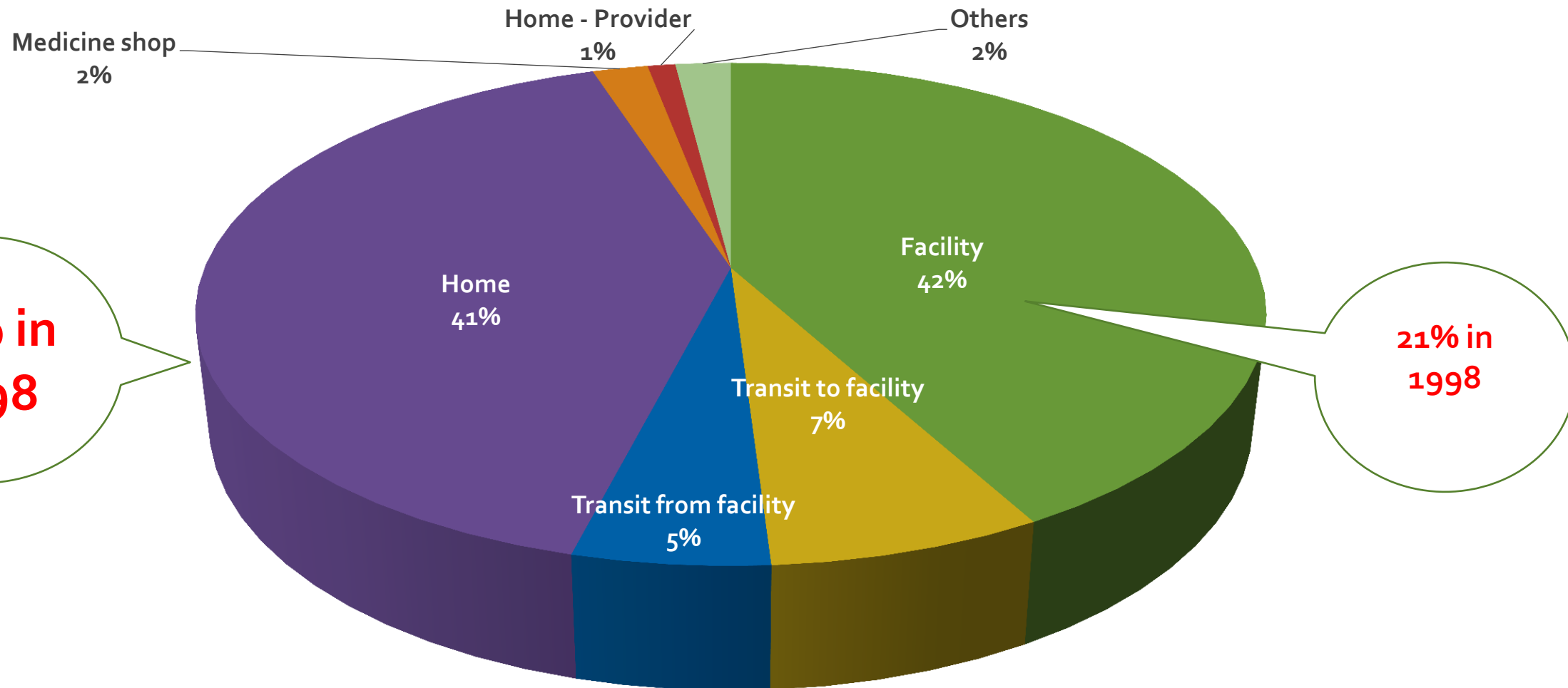


Ethnic groups	MMR
Muslim	318
Terai / Madhesi / Other Caste	307
Dalits	273
Janjati	207
Brahman / Chhetri	182
Newar	105

Source: Nepal Maternal Mortality Morbidity Study 2008/09



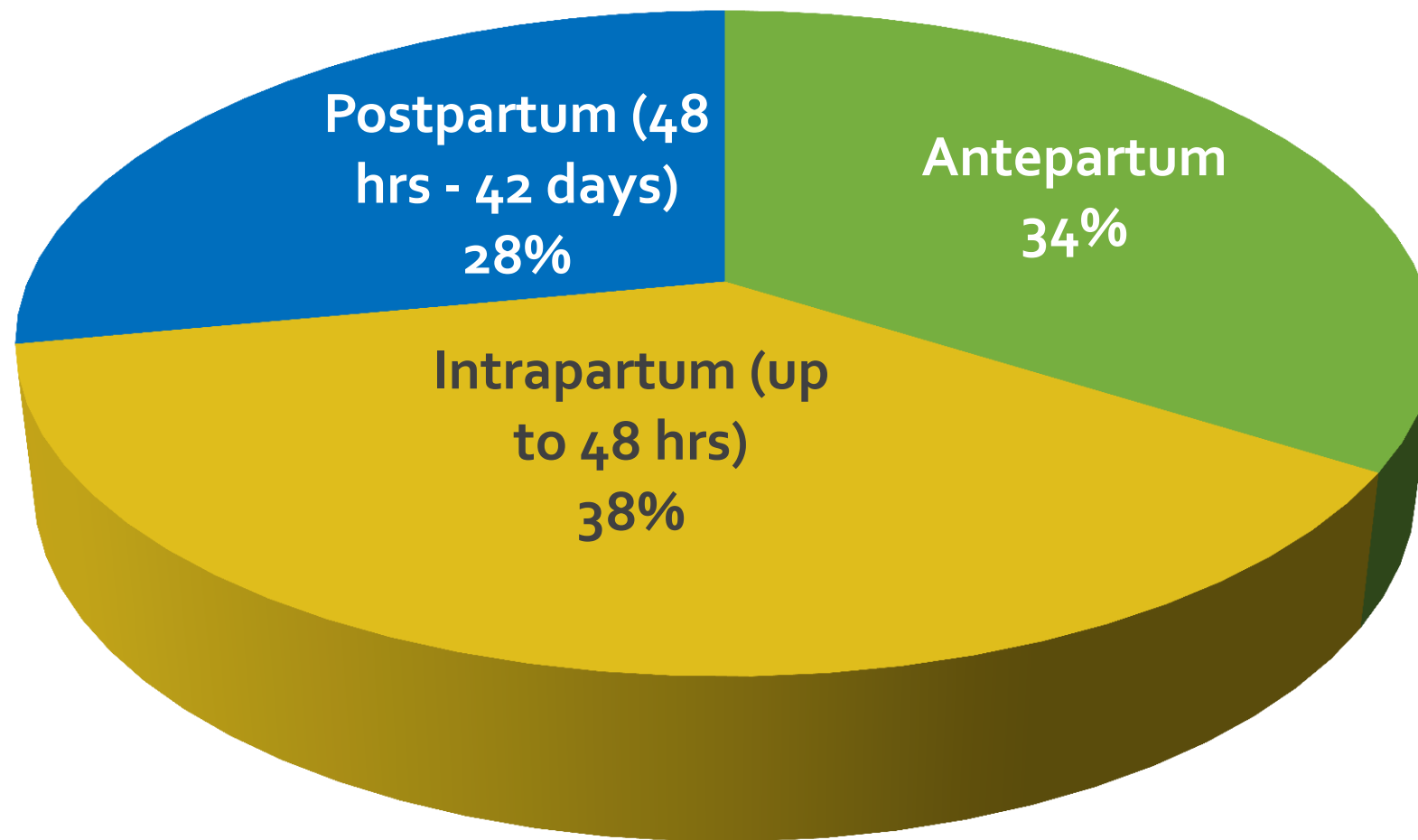
# Where? Maternal mortality.....



Source: Nepal Maternal Mortality Morbidity Study 2008/09



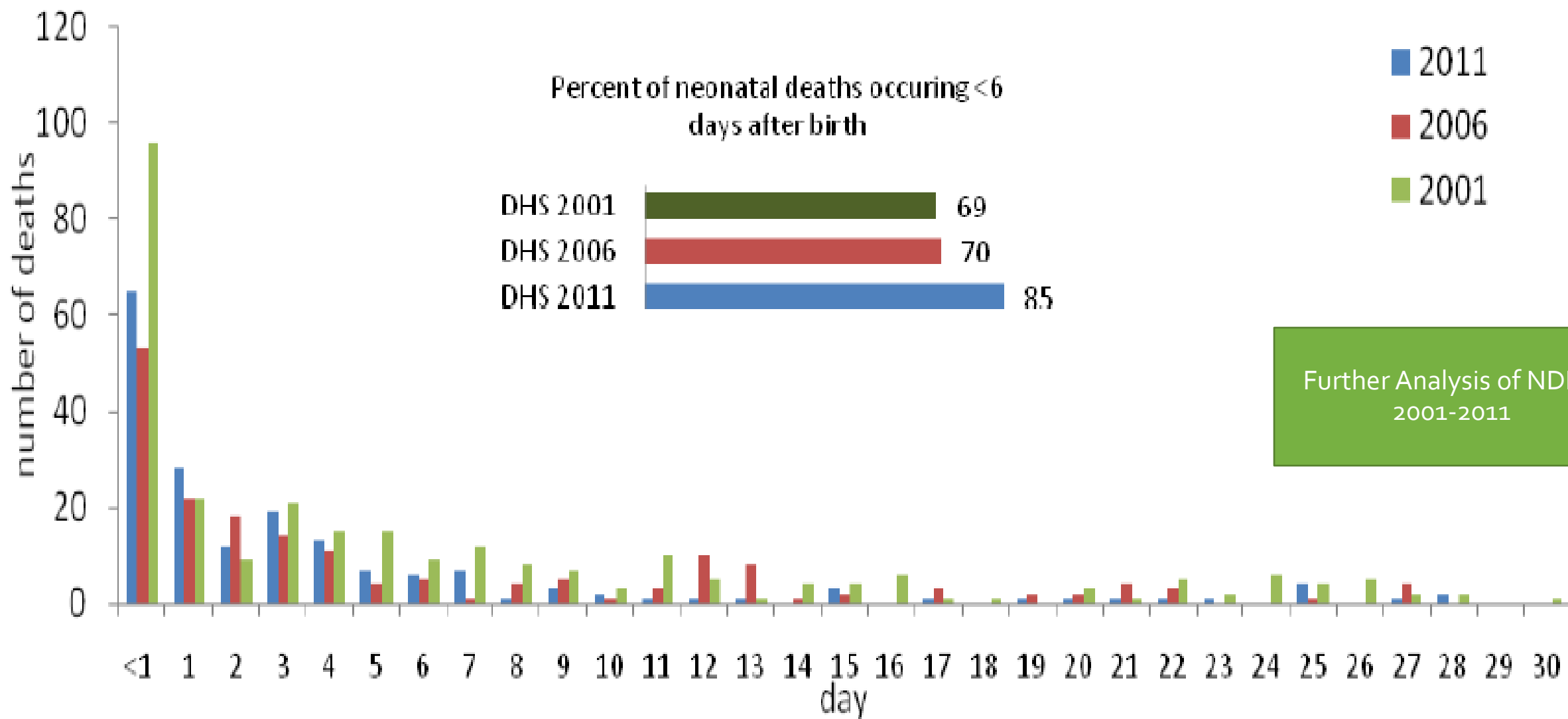
# When: Death can occur at all stages of pregnancy ...



Source: Nepal Maternal Mortality Morbidity Study 2008/09

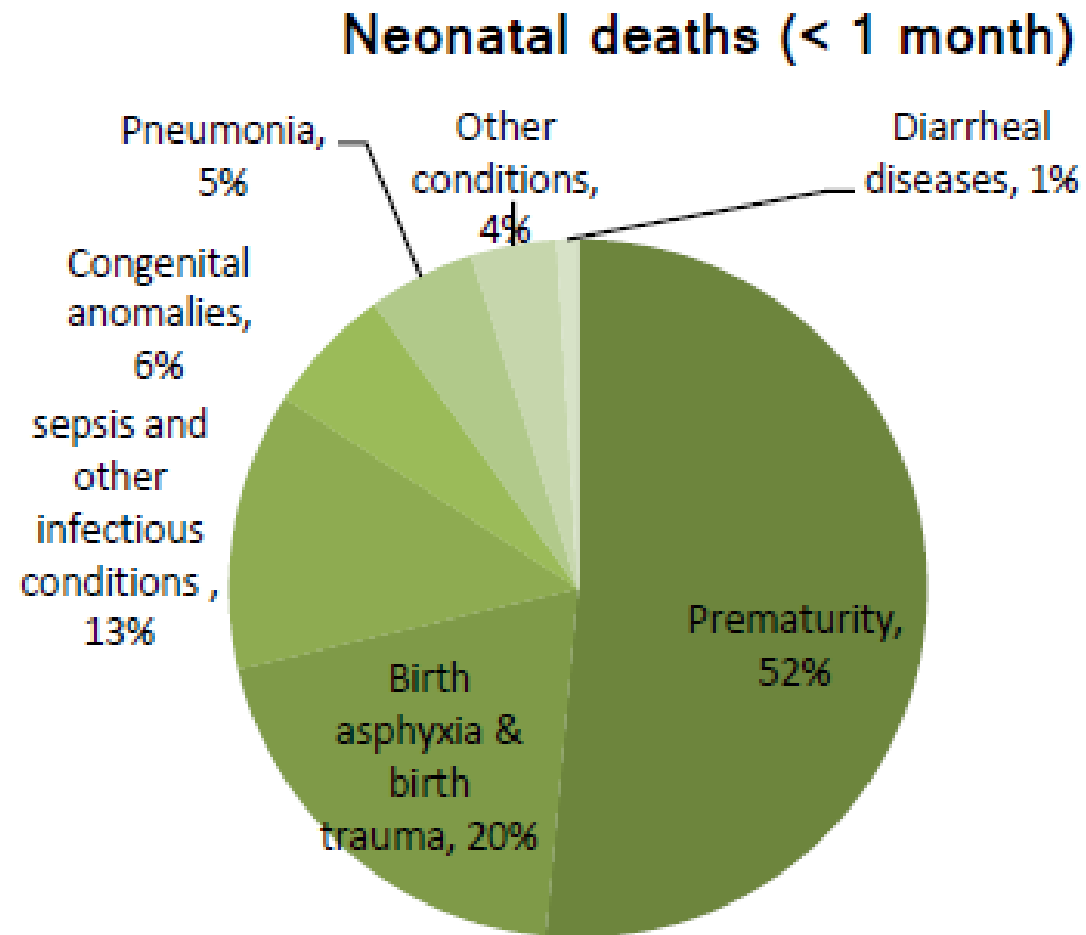


# Distribution of reported Neonatal Deaths by age at death in days





# Causes of Neonatal Deaths

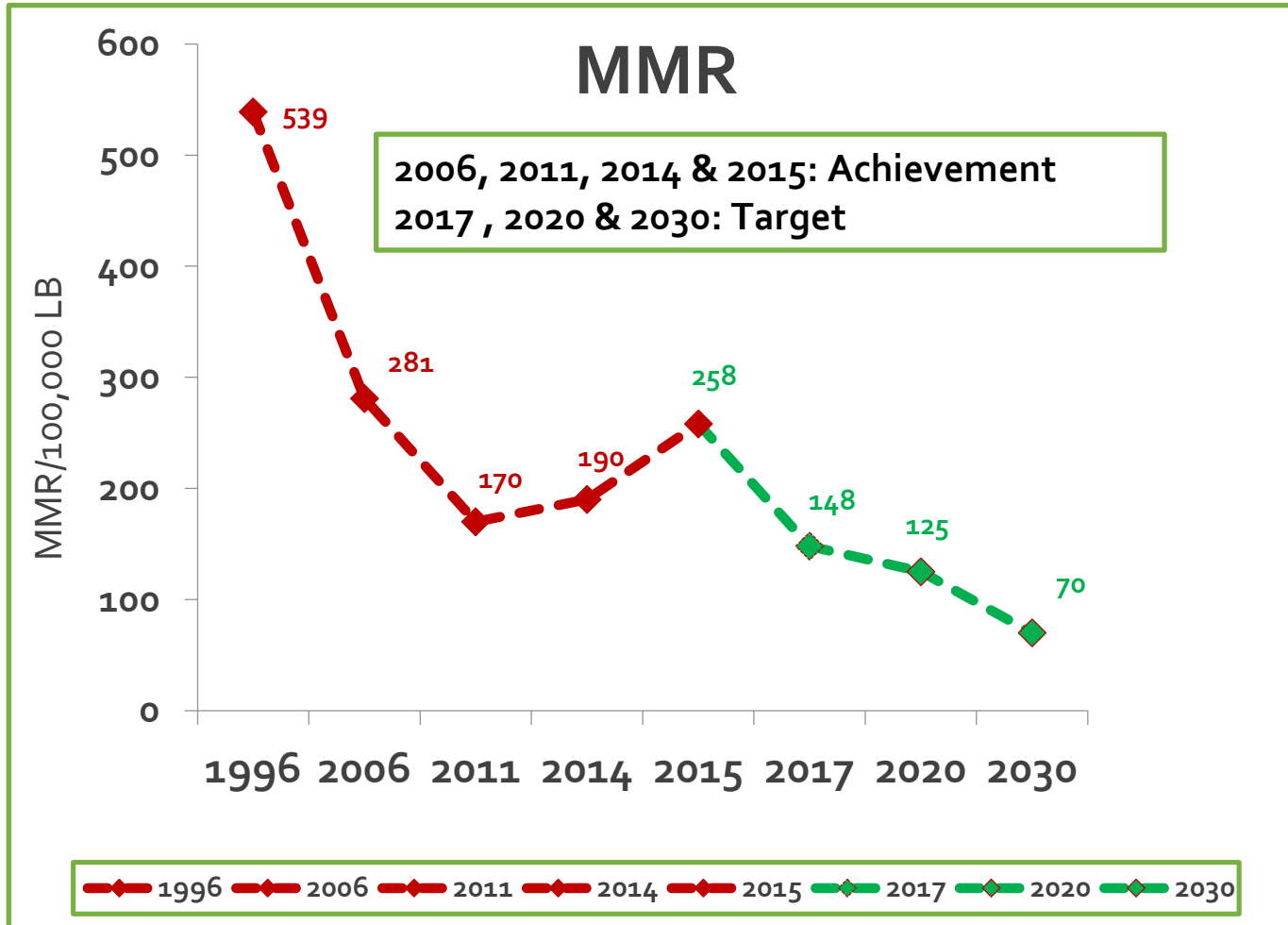


**Source:** CHERG/WHO/UNICEF for distribution of causes of neonatal and under-five deaths (published in Liu et al, *Lancet* 2012).





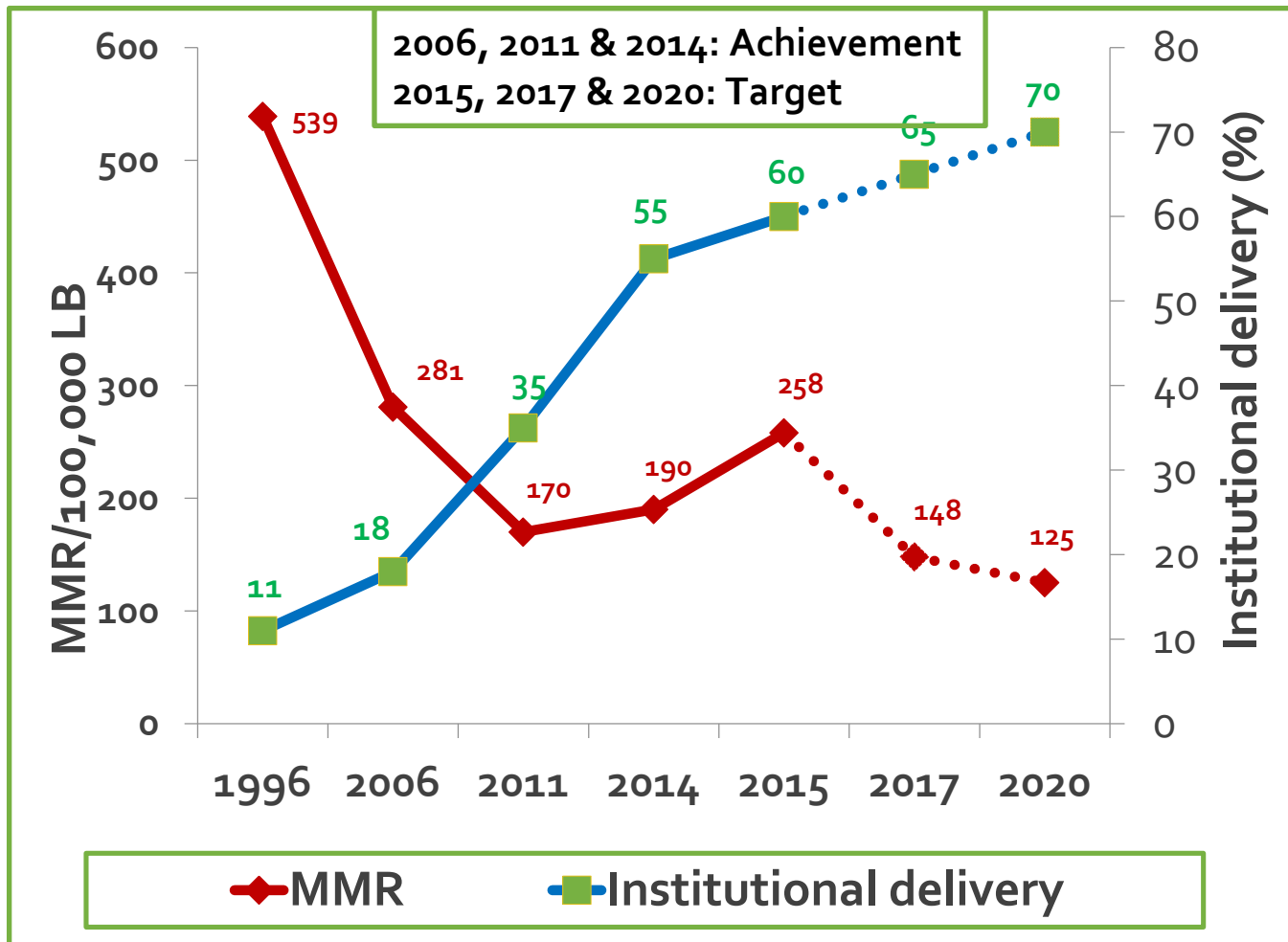
# Rationale of MPDSR



- Nepal had target to reduce Maternal Mortality Ratio (MMR) to 134 by 2015
- Nepal Health Sector Strategy (2015-2020) has target to reduce MMR to 125 by 2020.
- Sustainable Development Goals has targets to reduce MMR to 70 per 100000 live births by 2030.
- It is possible to achieve the targets if MPDSR is effectively implemented.



# Rationale of MPDSR



- Institutional delivery is inversely associated with maternal mortality
- If institutional delivery can be increased with improved quality of care then further decline in maternal mortality.



# Rationale of MPDSR

- How death review improves QoC

Clinical audit's distinctive feature is that the very process of revealing that an **agreed level of care is not being met** also identifies the **specific changes needed in clinical practice to improve** the situation. Therefore, the emphasis in clinical audit is on directly improving the quality of care.

- **Beyond the Numbers**



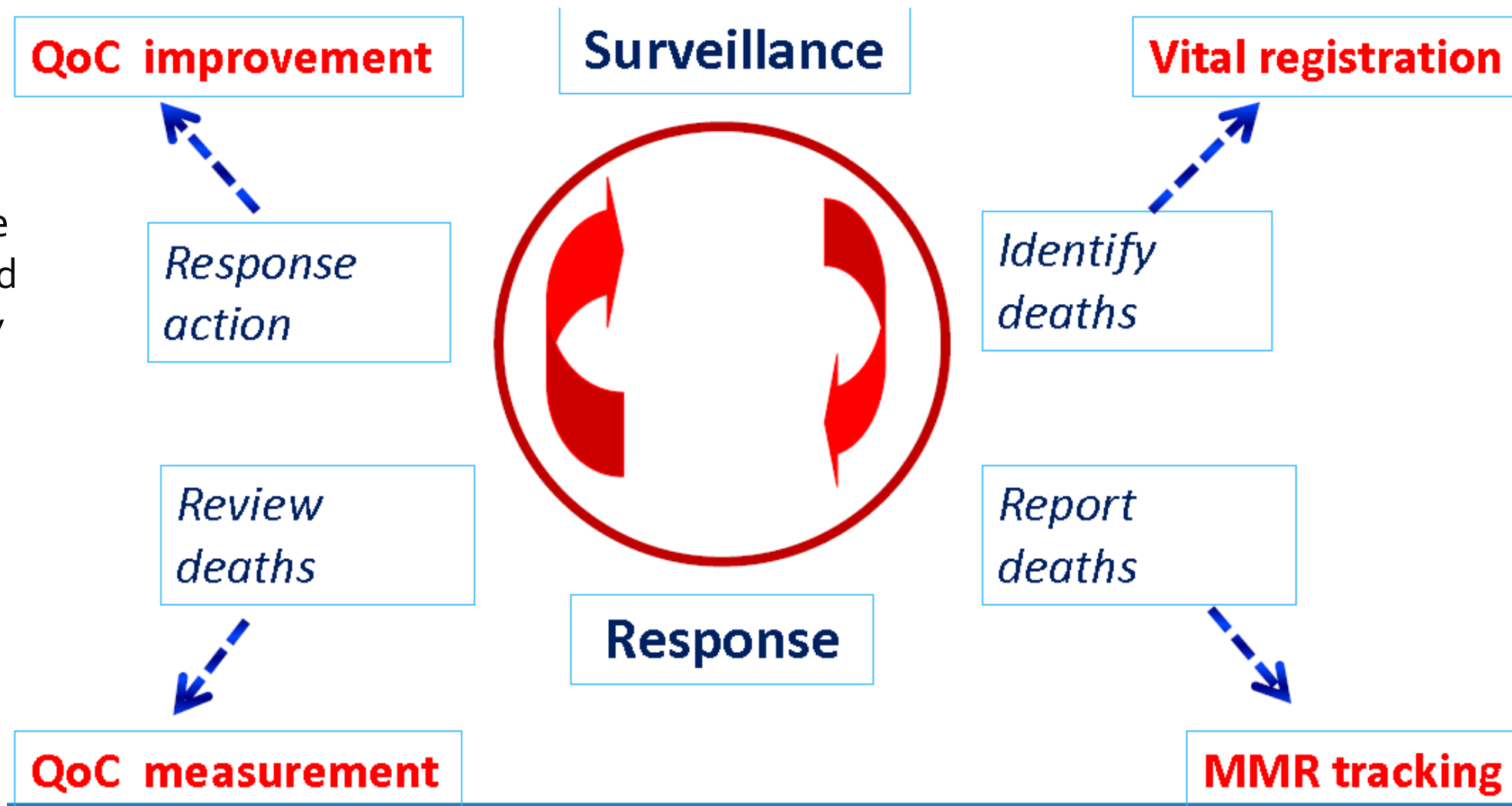
# Rationale of MPDSR

- Taking actions and implementing recommendations from MDSR has proven to improve the quality of care and different levels
  - Recommendations from community-based MDSR approaches such as verbal autopsy may lead to development of community interventions including education, health promotion
  - Recommendations from facility-based MDSR approaches may lead to changes in clinical practice and reorganization of health facilities
  - Recommendations from national-level enquiries have the capacity for change on a larger scale by acting at institutional, local and national levels



# MPDSR and QoC

MDSR can improve the quality of care provided to pregnant women by identifying gaps in health services that contributed to a maternal death.





# Responses from MPDR in Nepal

- Establishment and mobilization of MPDR Fund
- Availability of ambulance and referral support
- Improvement in recording and reporting
- Provision of SBA training
- Establishment of blood banks
- Magnesium sulphate to manage eclampsia
- Improved coordination between DPHO and Hospital



# Barriers to MPDR Implementation

- Lack of political buy-in and long-term vision
- Under reporting of suspected maternal deaths due to inefficient and incomplete systems of notification
- Blame culture at some places that inhibits health professionals and others from participating fully in the MDSR process
- Incomplete or inadequate legal frameworks
- Inadequate staff numbers, resources and budget
- Cultural norms and practices that inhibit the operation of MDSR
- Problems of geography and infrastructure that inhibit the operation of MDSR.



# Rationale of MPDSR

- Nepal has committed to reduce maternal and perinatal mortality by implementing MPDSR at international forums.
- Following this commitment, Family Health Division, Department of Health Services has developed National Guidelines and tools and implementing MPDSR from FY 2072/73.





# MPDSR: Definition

Continuous identification, notification, quantification and determination of causes and avoidability of all maternal and perinatal deaths, as well as the use of this information to respond with actions that will prevent future deaths



# MPDSR: Goal

“To eliminate preventable maternal and perinatal mortality by obtaining and using information on each maternal and perinatal death to guide public health actions and monitor their impact”

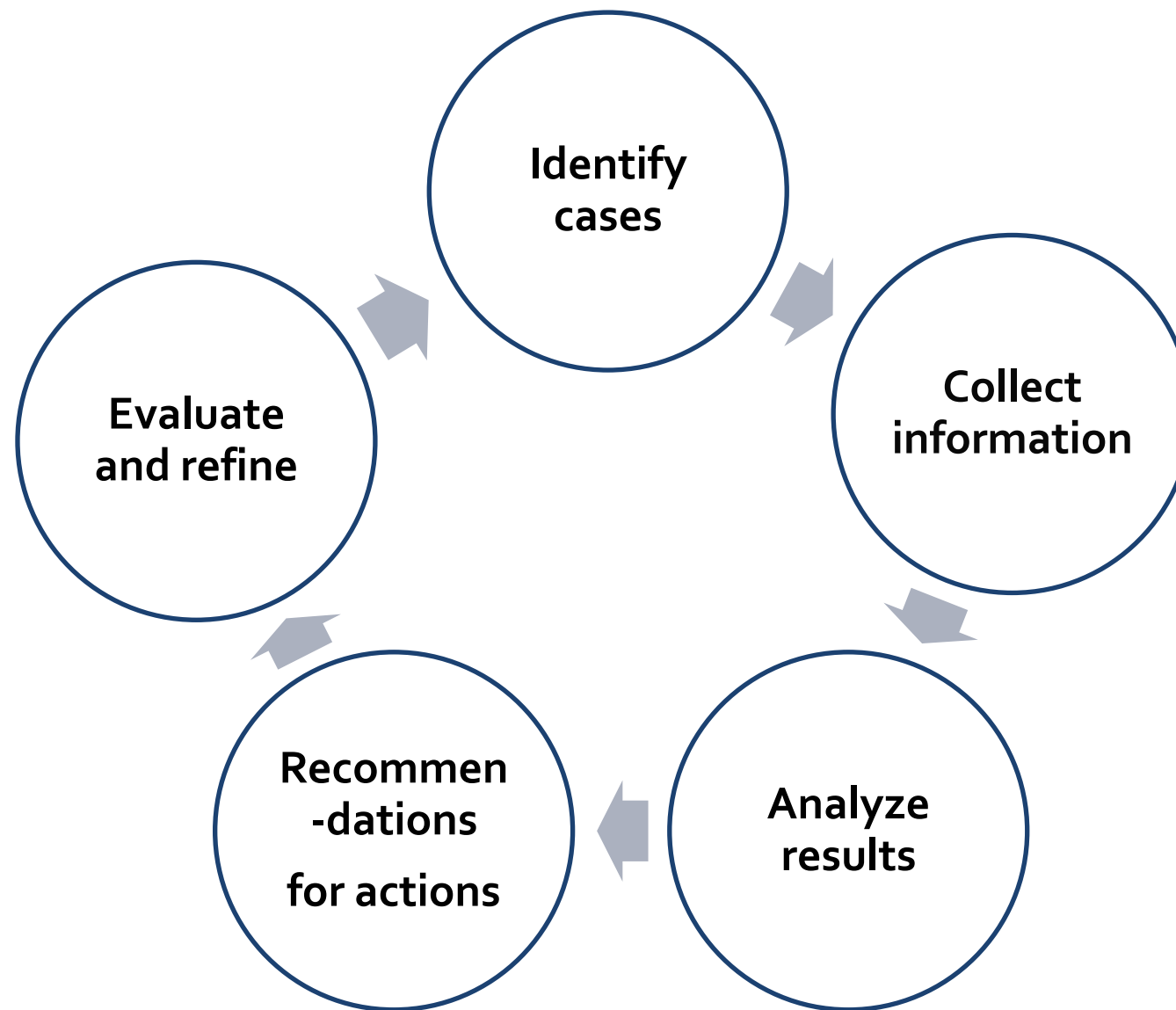


# MPDSR: Objectives

- To provide information that effectively guides immediate as well as long-term actions to reduce maternal mortality at health facilities and community and perinatal mortality at health facilities.
- To count every maternal and perinatal death, permitting an assessment of the true magnitude of maternal and perinatal mortality and the impact of actions to reduce it.

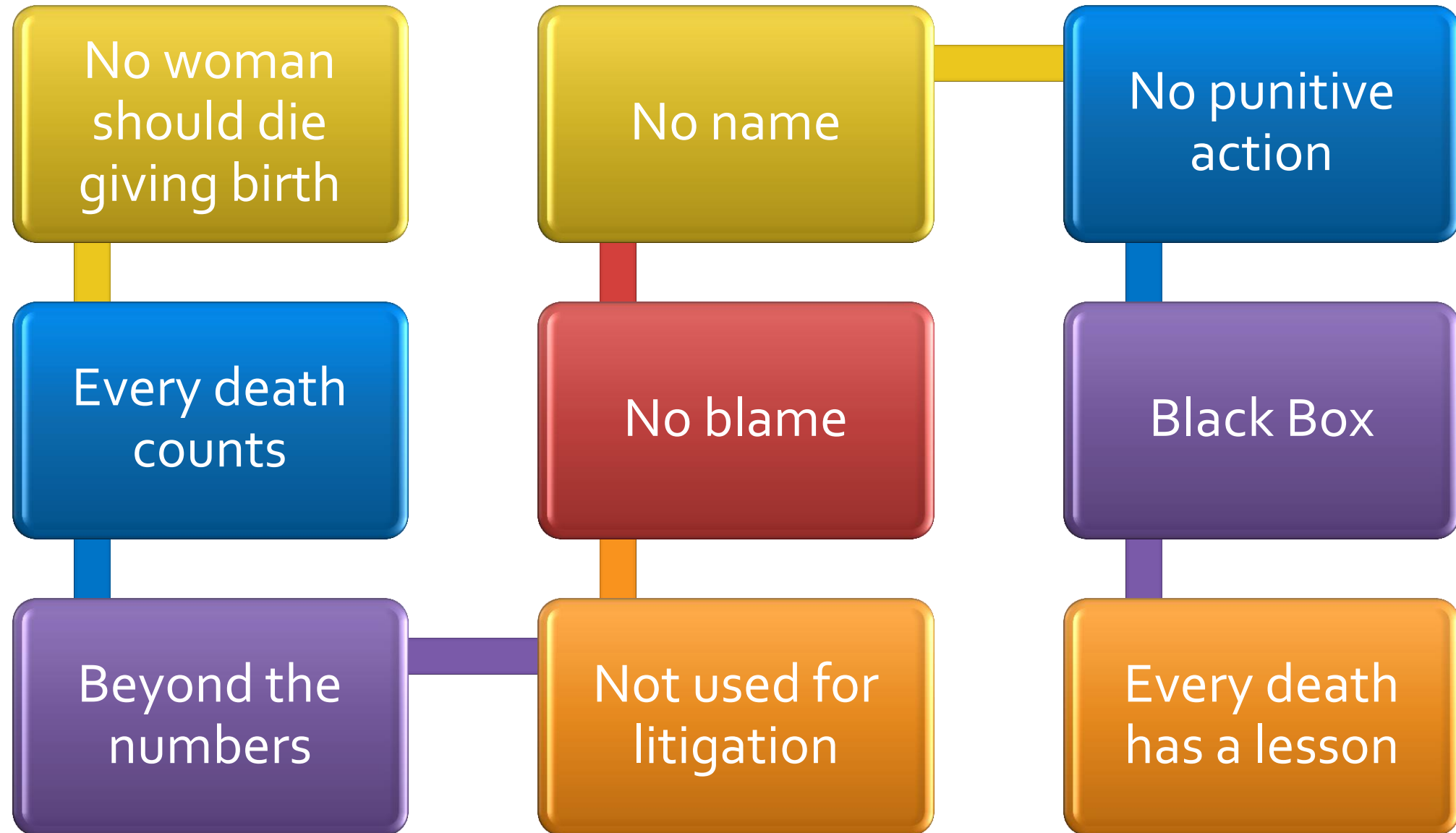


# Components of MPDSR



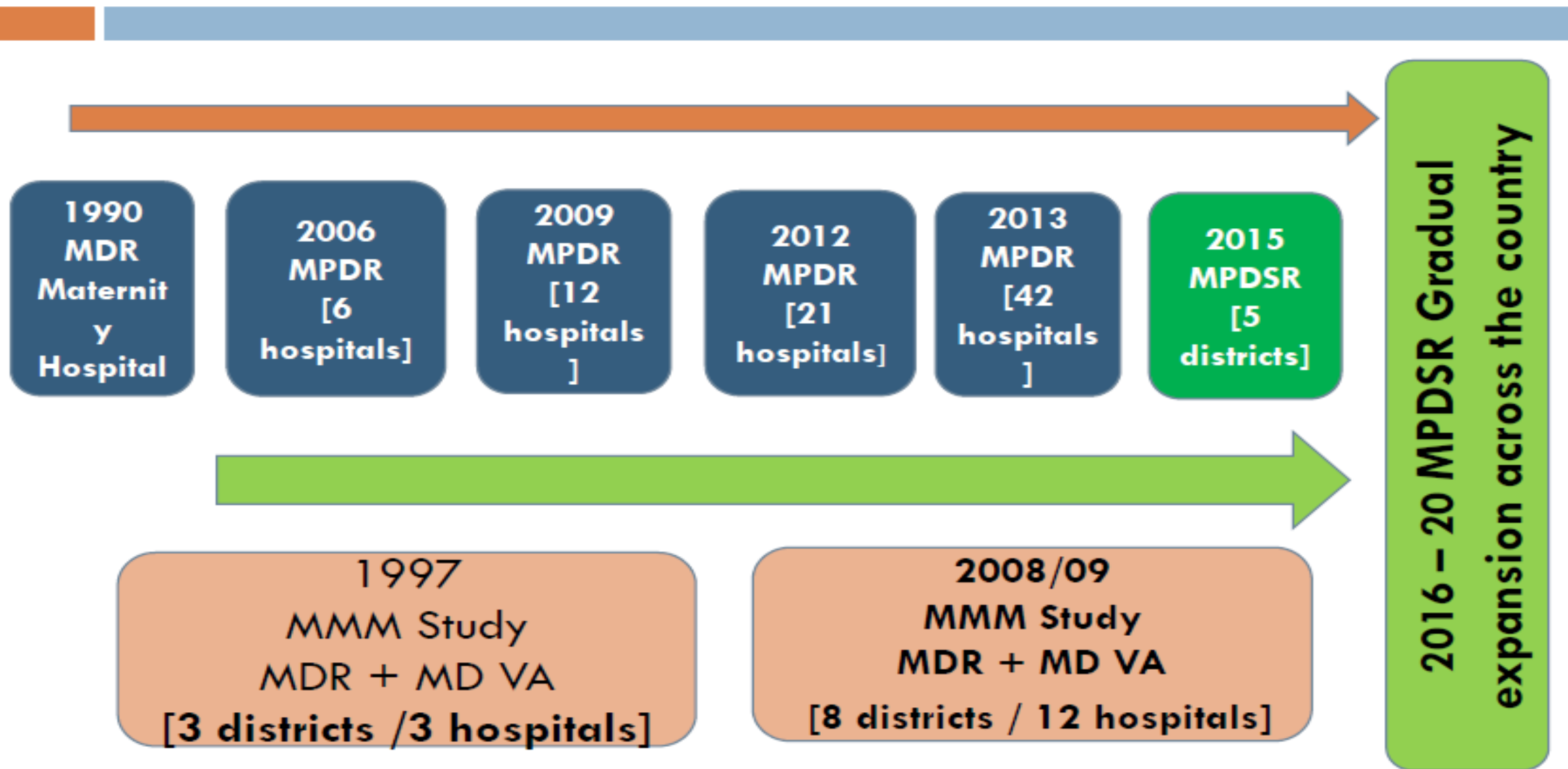


# Key Principles/Concepts of MPDSR





# Move From MDR to MPDSR





# MPDSR Implementation Status

- National MPDSR implementation plan and guideline developed
- Tools for MPDSR revised (MDR, PDR) and developed (Verbal Autopsy)
- National MPDSR committee, Technical Working Committees in place



# MPDSR Implementation Status

- Trainings in districts for district stakeholders, hospital and community health workers
- Orientations for FCHVs
- Training and instruction manuals for hospital and community MPDSR





# Way Forward

- Gradual expansion of community-based MPDSR implementation across the country
- Expansion of facility-based MPDSR to all public hospitals
- Strengthening and Institutionalization of MPDSR



# मातृ मृत्यु निगरानी तथा प्रतिकार्य

## Maternal Death Surveillance and Response [MDSR]

### - 3.3 Video Show - Why Did Mrs X Die?

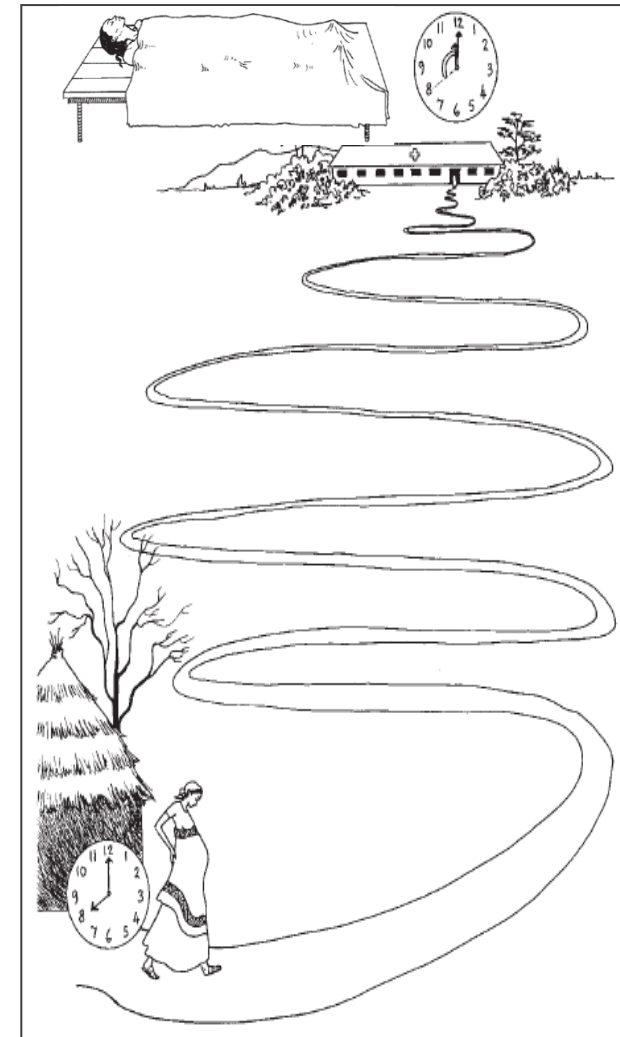


नेपाल सरकार  
स्वास्थ्य मन्त्रालय  
स्वास्थ्य सेवा विभाग  
परिवार स्वास्थ्य महाशाखा



# The Story

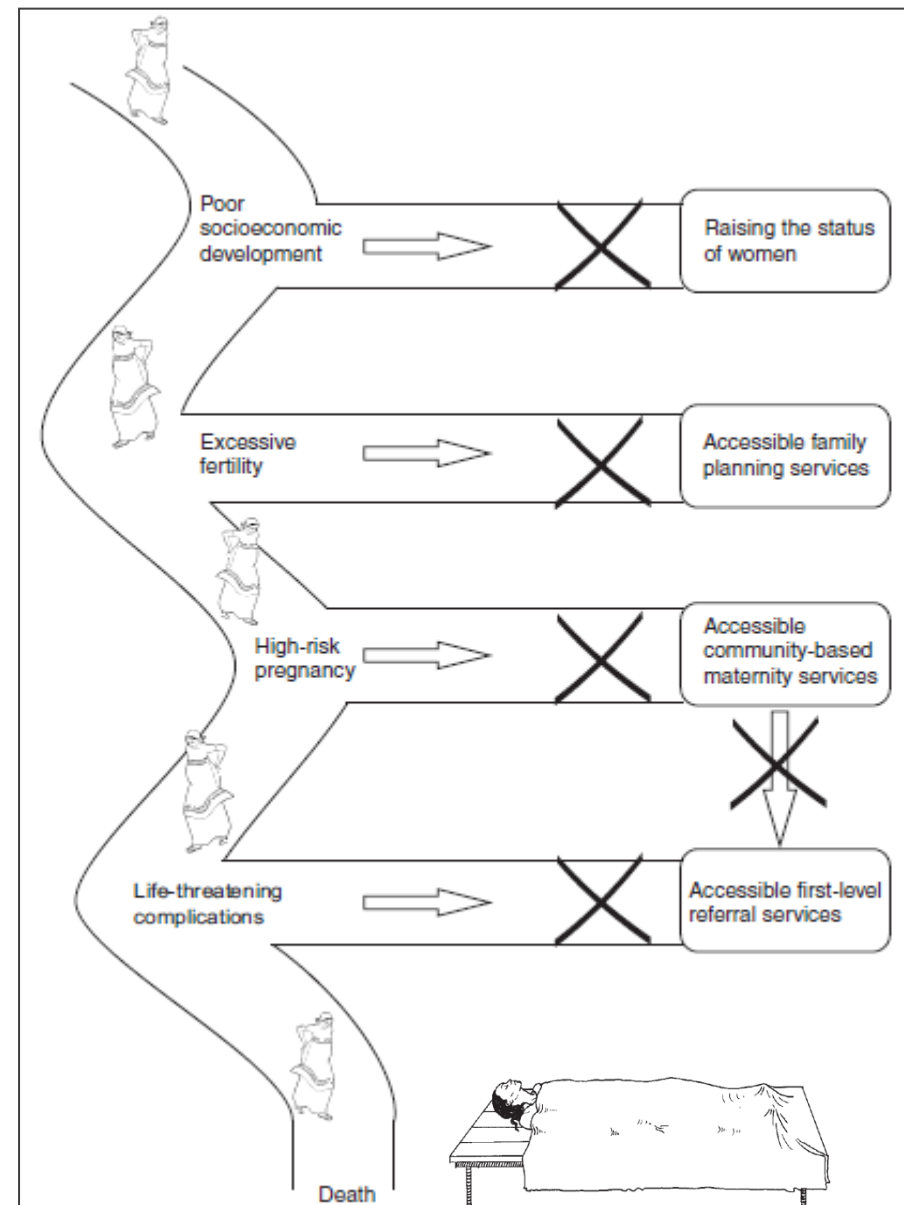
- ☞ This is a story of one case of maternal death. For the sake of anonymity, let us call the unfortunate woman, **Mrs X**.
- ☞ **Mrs X** died during labor in a hospital. It was a case of antepartum haemorrhage due to placenta praevia.
- ☞ The doctor was satisfied with the diagnosis, entered the appropriate ICD10 Code; and closed the file of **Mrs X**.
- ☞ Later the file was re-opened and the causes analyzed.
- ☞ The analysis identified the 'avoidable factors' in facility and community.
- ☞ An action plan was made and acted upon to prevent similar deaths





# Let's See What Led to Mrs X's Death

- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility





# Watch the Video

[https://www.youtube.com/watch?v=gS7fCvCle1k&ebc=ANyPxKpbsEGR1Et8qf77\\_graO6GZKLEdbSufo4xbNtIPhLwFQW6HowxYeoDEGfjLyfDsygR9EogcAgr1hPut2wjAlAWd83bL2g](https://www.youtube.com/watch?v=gS7fCvCle1k&ebc=ANyPxKpbsEGR1Et8qf77_graO6GZKLEdbSufo4xbNtIPhLwFQW6HowxYeoDEGfjLyfDsygR9EogcAgr1hPut2wjAlAWd83bL2g)

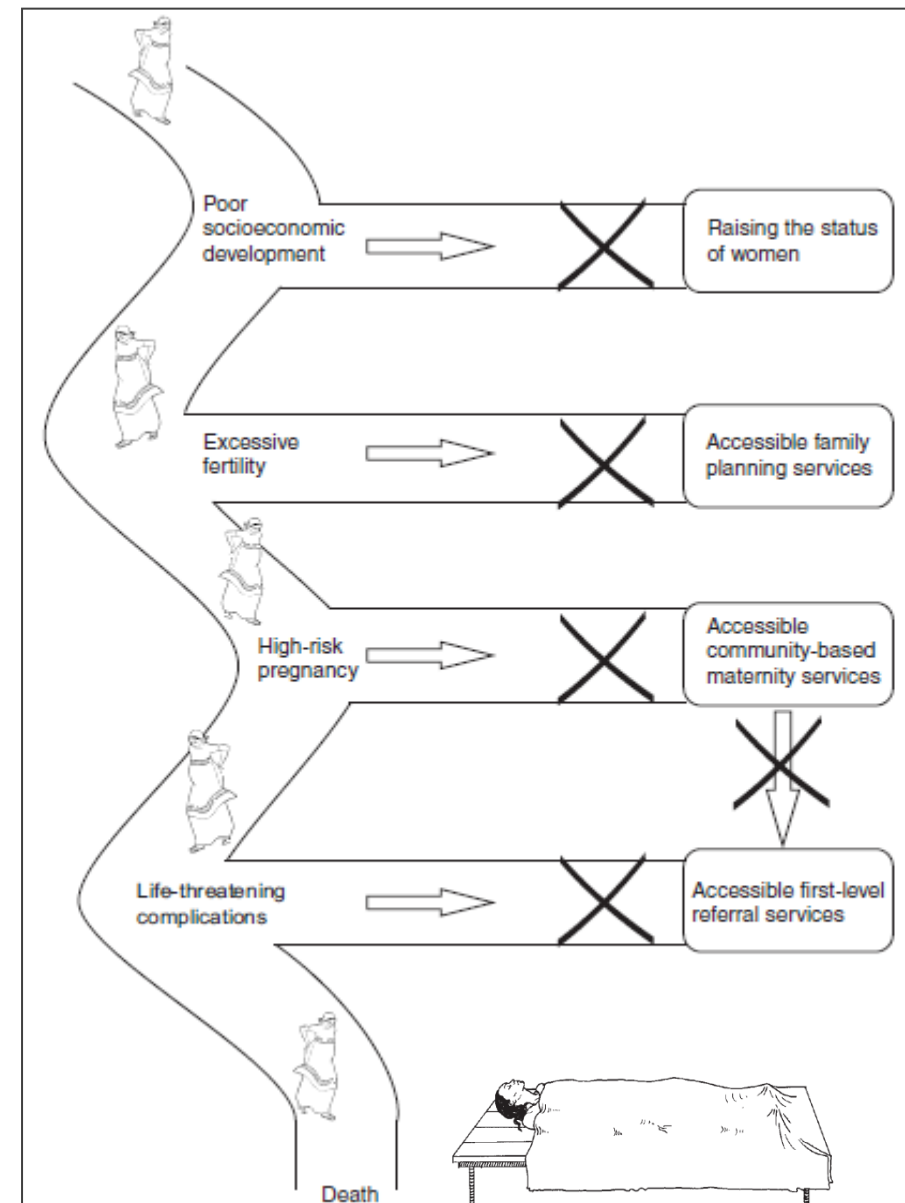
- [EXT\\_mrsXretoldOCT2012.wmv](#)

- And discuss ...



# What led to Mrs's X death?

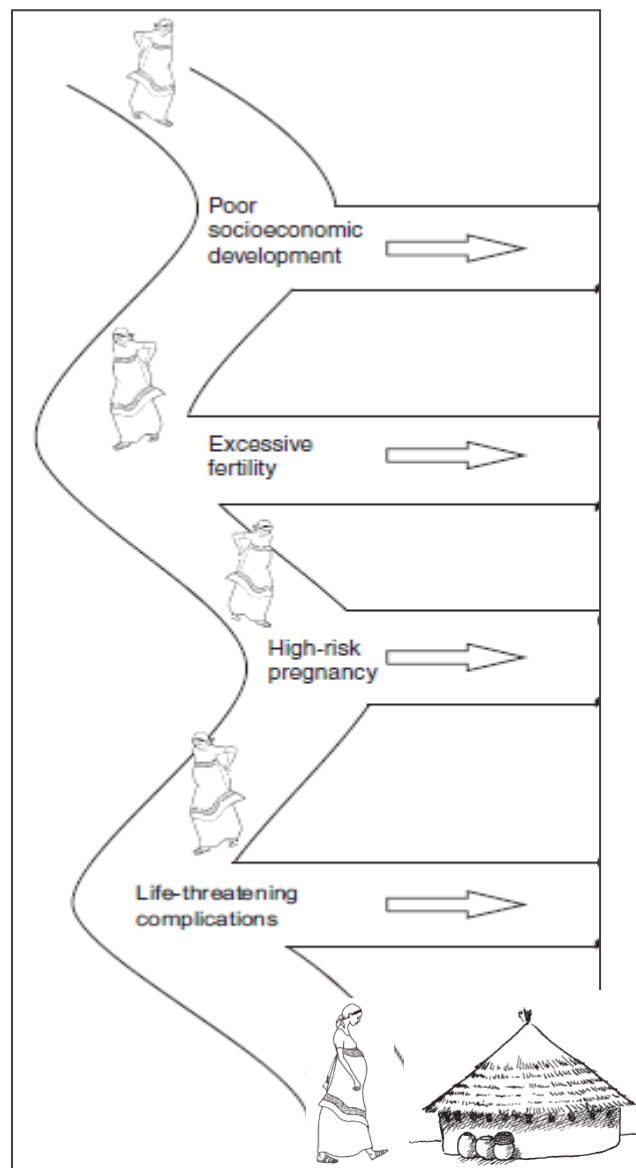
- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility





# How can we save Mrs. Y?

- Socio – economic status
- Family status
- Community health services
- Access to health facility / services
- Quality of health services in the facility





Any feedback?





नेपाल सरकार  
स्वास्थ्य मन्त्रालय  
स्वास्थ्य सेवा विभाग  
परिवार स्वास्थ्य महाशाखा

