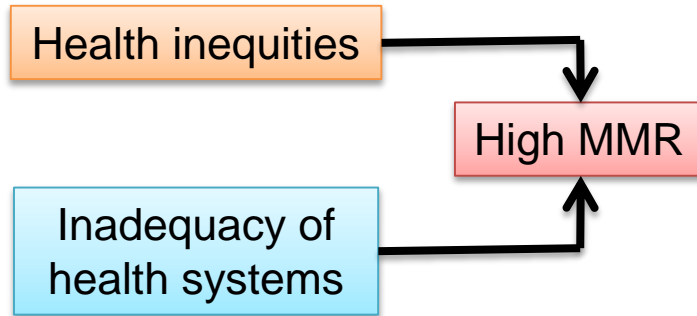


Factors Contributing to Maternal Deaths in a Referral Hospital in a
Philippine Province:
A Modified Three-Delay Model

Introduction



MDG Declaration

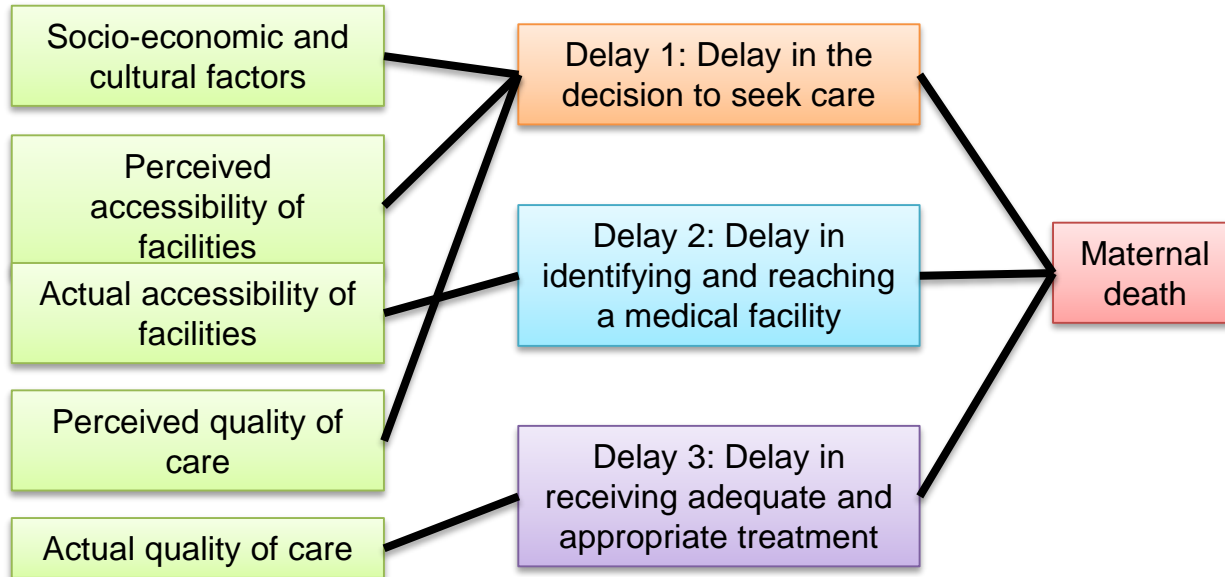
- *Reduction in MMR to 52 per 100,000 live births by 2015*

Philippines

- *MMR (1990) = 152 / 100,000 LB*
- *MMR (2015) = 114 / 100,000 LB**

*UN Maternal Mortality Interagency Estimation Group

Three-Delay Model (*Thaddeus and Maine*)



Methodology

Study design: Qualitative using retrospective data

Study population: All maternal deaths in the referral hospital in 2013

PRT was reconstituted



PRT trained on MDSR



Maternal death review conducted using the protocol of the NSMP

Ethical considerations

Ethics clearance granted by the ERB of the regional referral hospital

Data collection

Data abstraction

Medical records abstraction form

Key informant interview

Community interview schedule

Data analysis

- Data forms exported to NVivo for qualitative analysis
- A priori nodes were derived from the three-delay model
- In-vivo nodes were derived from research data

Who are the decedents?

21 maternal deaths in the hospital in 2013

Decedents came from 8 municipalities in the province

Travel time from home to hospital ranged from 15 minutes to 2 hours (median = 2 hours)



1st ANC during 2nd trimester

Deliveries attended by SBAs via NSD

Causes of deaths

- *Hemorrhage (11)*
- *Hypertension (6)*
- *Sepsis (2)*
- *Indirect (2)*

Delay 0 (Non-health system delays)

Poverty

- Inadequate finances
- Low priority for mother's health
- Misconceptions regarding cost of healthcare

Social stigma

Low social status of women

- Circumstances surrounding the pregnancy precludes seeking care
- External locus of control to the detriment of the mother

Negative influence of family members

Poor road conditions and communication facilities

- Disincentive for the mother to initiate and complete ANC
- Contribute to prolonged travel time
- Aggravate mother's condition while in transit

Delay 1 (Delay in decision to seek care)

Target population unaware of health services

- Inadequate information
- Inaccessibility of health facilities
- Strong influence of TBAs

Unplanned and unwanted pregnancy

- “Denial” of pregnancy precludes seeking timely care

Non-adherence with medical advice

- Preference for the opinion of others
- Poor ANC practices

Misconceptions related to health

- Of the mother herself
- Of family members (i.e. husband, mother in law) with strong influence on the mother

High regard for TBAs

- Potentially catastrophic when the TBA discourages the mother from seeking care

Delay 2 (Delay in arrival at a health facility)

Lack of appropriate transportation facilities

Long travel time to a health facility

- No transportation facility at all
“Pinalipas po muna naming ang gabi dahil wala na pong biyahe papuntang ospital.”

- Vehicle used is inappropriate given the mother’s critical condition

- Inadequate transportation facilities
- Poor road conditions
- Actual distance from home to facility

Delay 3 (Delay in receiving appropriate care)

Inadequate management of cases at the hospital

Inadequate management of cases at the RHU

Lack of equipment and medical supplies

Hospital understaffing

- Failure to confirm pregnancy despite clinical findings on the contrary
- Delay in the institution of emergency care (e.g. assisted
- Delayed recognition of obstetric complications

- Equipment & supplies for diagnosis (e.g. UTZ, CBC)
- Emergency drugs

- Obstetrician not available when a patient with emergent needs arrived
- Long duty hours for physicians

Delay 3 (Delay in receiving appropriate care)

Unavailability of blood

- Blood products were not given despite being ordered / prescribed

Long waiting time

- Obstetrician not available to perform the procedure immediately despite the emergent need for it

Gaps in the continuity of care

- No birth plan or any kind of “endorsement” (or referral) from primary providers

Conclusion

Factors contributing to maternal deaths

Delay 0: Societal and environmental structures

Delay 1: Delay in the decision to seek care

Delay 2: Delay in identifying and reaching a medical facility

Delay 3: Delay in receiving adequate and appropriate treatment

- Poverty
- Social stigma
- Low status of women

- Misconceptions
- Poor health seeking behavior
- Strong influence of TBAs

- Poor road conditions
- Lack of transportation

- Inadequate management
- Gaps in the continuity of care
- Inadequate equipment, drugs, and supplies
- Inadequate blood supply

Discussion and Conclusion

Methodological limitations

- MDR only included deaths that occurred in the referral hospital
 - Factors contributing to non-facility deaths may not be captured
- Community interviews were not successfully carried out for two (2) decedents
- Limitations in data accuracy
 - Differential ascertainment of information during interviews
 - Incomplete medical records