



ORIGINAL RESEARCH PAPER

Gynaecology

Changing Trends in Maternal Mortality and its Causes in a Tertiary Care Hospital of Tamil Nadu over a Decade

KEY WORDS:

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ABSTRACT

Background: Maternal health is a quality health indicator in a community. Maternal death is "death of a woman while pregnant or within 42 days of termination of pregnancy irrespective of the duration and site of the pregnancy, from any cause related to or aggravated by the pregnancy or its management but not from accidental or incidental causes.

OBJECTIVES: To review the maternal death case sheets to find the causes and change in maternal indicators after NRHM 108 EMRI, BEmONC and CEmONC.

MATERIALS AND METHODS: A retrospective study conducted in IOG Egmore and all maternal deaths occurred at IOG between 2003-04 and 2013-14 were analysed for factors leading to MMR and utilisation of NRHM facilities. Nominal registers, Labour ward registers, ICU and OT registers were used for data collection.

RESULTS : Out of 114 deaths that took place in Institute of Obstetrics and Gynaecology (IOG), Egmore, Chennai 67 was in 2003-04 and 47 were in 2013-14 period. In demographic profile, Teenage pregnancy reduced from 19% to 11%. Deaths occurred more in Primigravida. AN Booking was 100% in 2013-14 against 82% in 2003-04. Anaemia - the single most leading high risk factor found among maternal deaths(90% in 2003-04 ;79% in 2013-14). Next ranks Pre-eclampsia. Patients getting admitted directly to IOG has decreased to 26% from 37% which may be due to peripheral strengthening of health care facilities. We observed more referrals from private hospitals this year when compared to 2003-04. Utilisation of Government ambulance /108 was 66% during 2013-14 as against 28% in 2003-04 period. All patients getting admitted directly have availed 108 ambulance services in 2013-14 whereas everyone used private vehicles in 2003-04.(STATISTICALLY SIGNIFICANT p value <0.05%). Distance travelled increased up to 500 km in 2013-14 whereas it was <200 km in 2003-04 (STATISTICALLY SIGNIFICANT portion value <0.05 %). Direct cause of death accounted for majority of maternal deaths in both the study period(63% in 2003-04 and 68% in 2013-14)Pre-eclampsia-eclampsia was the leading cause of death in both the time periods. PPH decreased from 10% in 2003-04 to 4% in 2013-14 due to early identification and referral, effective 108 transport, adequate blood products and availability of specialists 24*7. Sepsis occurred in 12% of cases where NO cases were reported in 2013-14 which is STATISTICALLY SIGNIFICANT. MMR at IOG is 190 in 2003-04 and 181 in 2013-14.

Maternal death is a key indicator of the quality of obstetric services available in a community and it directly reflects the utilization of the health care services. WHO stated that two- third of the maternal deaths have occurred in 11 countries with India topping that list. MMR in India tend to be the highest in North central and North eastern states compared to lowest in North western and Southern states.

WHO defines essential obstetric care as the ability to provide maternal care continuously around the clock, certain obstetric interventions and is subdivided into basic (bEOC) and comprehensive (cEOC) essential obstetric care.

The National Rural Health Mission (NRHM) which was launched in 2005 seeks to provide accessible, affordable and quality health care to rural populations, especially vulnerable and underserved population groups in the Country. NHM aims to achieve infant mortality rate (IMR) of 30 per 1000 live births, maternal mortality 100 per 100 thousand live births and total fertility rate of 2.1 by the year 20123. After the launch of NHM, cash assistance schemes, EMRI 108 emergency free ambulance service and various training programs for health personnel there is tremendous change in the overall health indicators and particularly maternal health indicators.

Materials and Methods

This retrospective study was conducted in institute of obstetrics and gynaecology, Egmore, Chennai. All maternal deaths that occurred during January 2003 to December 2004 & January 2013 to December 2014 were studied. The data were collected in the proforma specifically designed for the study.

The data included,

1. Demographic data: Patient's name, age, sex, address
2. Obstetric data: LMP, EDD, Parity, Previous H/O abortion, LSCS, presence of high risk factors, AN booking and immunization

status, time of delivery, place of delivery, mode of delivery, time of death and cause of death were obtained.

3. Referral and transportation data: Referral status, referring institution, distance from IOG, mode of transport and referral admission interval was collected.

Results

114 maternal deaths that took place during the study period in the Institute of Obstetrics & Gynecology, Egmore were analyzed. Out of 114 maternal deaths, 67 deaths were from January 2003 to December 2004 period and 47 deaths were from January 2013 to December 2014 period.

Teenage pregnancy reduced from 19% to 11%. Deaths occurred more in Primigravida. AN Booking was 100% in 2013-14 against 82% in 2003-04. Anemia - the single most leading high risk factor found among maternal deaths(90% in 2003-04 ;79% in 2013-14). Next ranks Pre eclampsia. Patients getting admitted directly to IOG has decreased to 26% from 37% which may be due to peripheral strengthening of health care facilities.

Referral Characteristics

Out of the 67 cases in 2003-2004, 42 (63%) cases were referred and the remaining 25 (37%) cases came directly. In 2013-2014, 35 (74%) were referral and 12 (26%) were direct cases.

