

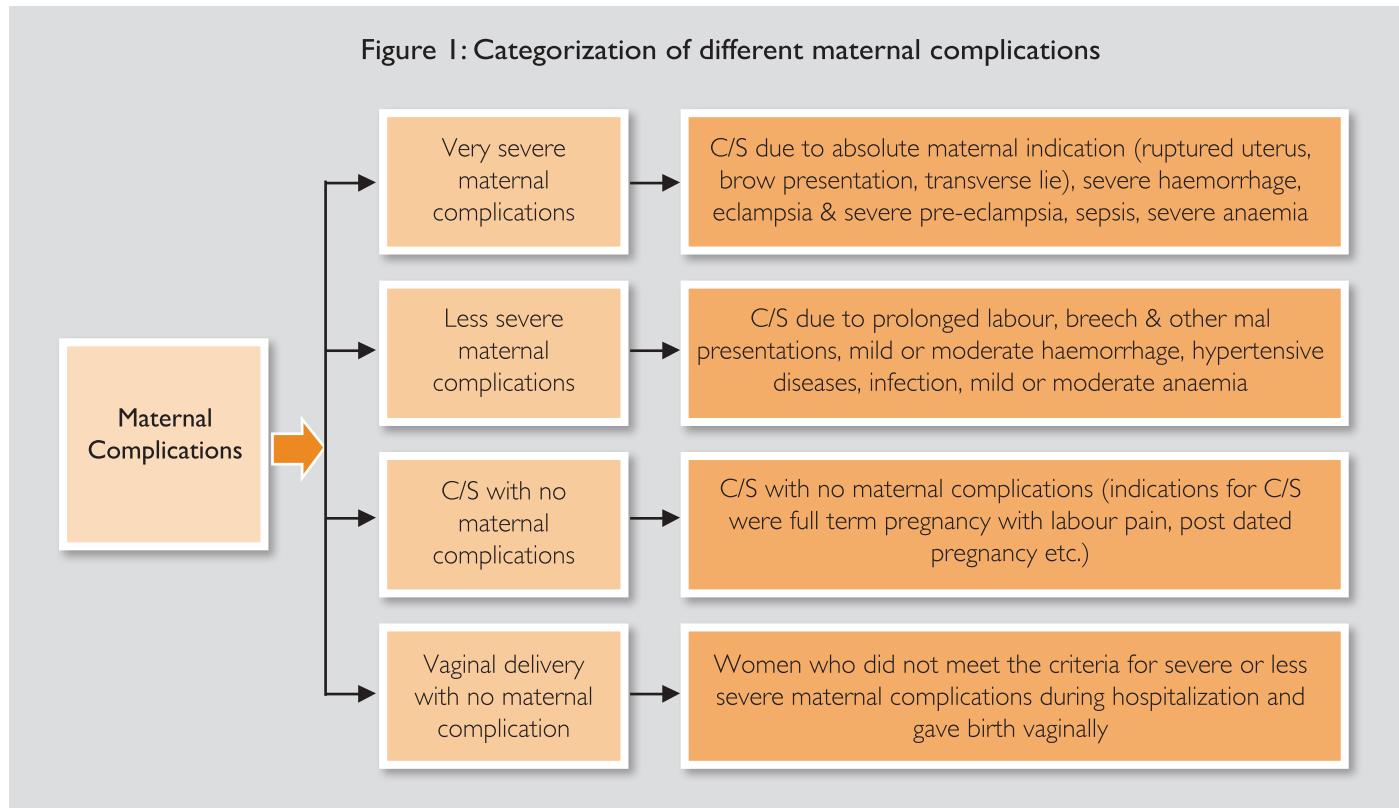
# Complications during labour and delivery in health facilities in rural Bangladesh

Globally, each year, an estimated 358,000 women die because of complications during pregnancy and childbirth<sup>1,2</sup>. The absolute figure of maternal mortality is only the tip of the iceberg; behind each death lies a huge burden of life-threatening and chronic morbidities<sup>3-5</sup>. Globally, 7 to 8% of pregnant women suffer acute maternal complications resulting in about 9 million morbid events each year<sup>2,6</sup>. In Bangladesh an estimated 6,000 women die from pregnancy-related complications every year<sup>7</sup> while another 194,000 women reportedly suffer injuries or disabilities caused by complications during pregnancy and childbirth<sup>8</sup>.

Despite several national estimates on maternal mortality, there is a dearth of reliable data on levels and types of maternal morbidities. Available studies document self-

deliver in a health facility<sup>11</sup>. Facility records of all women admitted during labour or up to 42 days postpartum to any public or private hospital in Matlab Upazilla and the district town Chandpur were reviewed by a physician to identify acute maternal complications. Maternal complications were categorized into four groups based on the severity of the complication type (very severe maternal complication, less severe maternal complication, caesarean section (C/S) with no maternal complication, and vaginal delivery with no maternal complication). The definition of the complication categories are shown in Figure 1. Of the total 4,817 pregnant women during the 24-month study period, 44% delivered in one of the 30 local hospitals and their hospital records were reviewed for classification into one of the 4 categories.

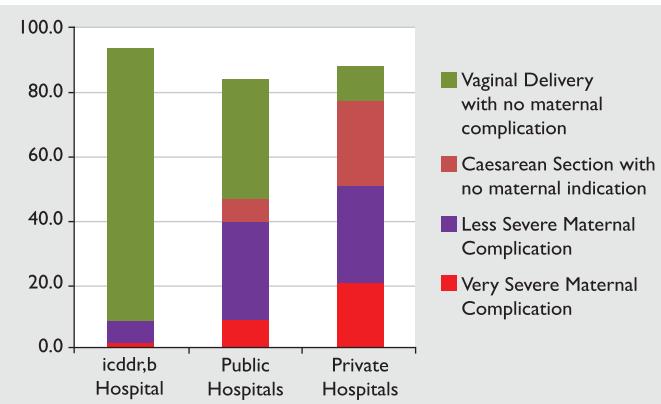
**Figure 1: Categorization of different maternal complications**



reported pregnancy-related complications which is not medically valid<sup>9, 10</sup>. To address this knowledge gap, between January 2007 and December 2008, a prospective study was conducted to determine the levels and types of acute maternal morbidities in the Matlab icddr,b service area, a rural area of Bangladesh where 81% of women

## Research Findings:

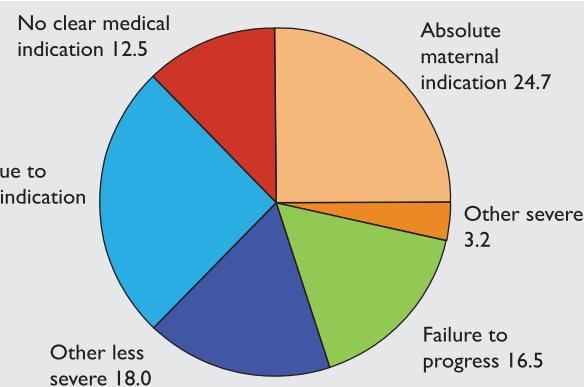
- Among the women who delivered in local hospitals, 6.7% were identified with very severe and 14.7% with less severe maternal complications. 7.1% had a caesarean section with no maternal complication and 63.2% had a vaginal delivery without any reported



**Figure 2: Maternal complications by severity and place of seeking care in Matlab and Chandpur (2007-2008)**

maternal complication. 8.3% of the hospital records were not found.

- Among women with very severe or less severe maternal complications, the majority (68.8%) had C/S followed by hypertensive disorders of pregnancy (12.6%), haemorrhage (8.4%), anaemia (6.4%) and infection (3.8%).
- The majority (75.2%) of the women with very severe maternal complications and C/S with no maternal



**Figure 3: Indications for C/S (n=401) in public and private hospitals in Matlab and Chandpur (2007-2008)**

indications were treated in private hospitals in Chandpur and women who had a vaginal delivery without any maternal complication were mostly managed in the Matlab icddr,b hospital (Figure 2).

- A total of 401 caesarean sections (19%) was recorded. The private hospitals performed nine times as many cesarean sections compared to public hospitals of Matlab and Chandpur. Indications for cesarean sections are shown in Figure 3.

### Conclusions:

- If the incidence of severe obstetric complications of 6.7% found in this study holds true for all women of Bangladesh, then an estimated 124,264 severe obstetric complications occur in facilities annually nationwide.
- Only one-quarter of all C/S deliveries currently conducted are actually needed for saving lives of mothers and another one-quarter is needed for saving babies.
- Most women with pregnancy complications seek care from private facilities and the public facilities remain underutilized.
- A large proportion of unnecessary C/S deliveries are conducted in private facilities. For every one in eight C/S deliveries, no indication is recorded by the provider.

### Recommendations:

- The reasons behind the failure of public sector to serve the women with pregnancy complications needs to be investigated
- There is a need to setup a system to monitor the indications of caesarean sections in private facilities to avoid unnecessary surgical interference as well as to improve recording indications.

Addressing these recommendations will help to improve not only the safe motherhood program in Matlab but also overall maternal health services in hospitals in Bangladesh.

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