

Short Report

Are we really making motherhood safe? A study of provision of iron supplements and emergency obstetric care in rural Maharashtra

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ABSTRACT

Background. The Government of India launched the National Rural Health Mission (NRHM) in 2005 to improve healthcare delivery and strengthen the public health system. Prevention and management of anaemia during pregnancy and access to quality emergency obstetric care services are important factors in reducing maternal mortality, which is a priority goal in the NRHM. We studied the ground realities specific to the availability of maternity services in the public health system of Maharashtra.

Methods. The study was done in the rural areas of Ahmednagar district in Maharashtra in 2006. Data regarding the number and place of deliveries, and details regarding iron supplements received and used were collected from 14 primary health centres selected by a stratified random method. Data regarding the number of caesarean section operations conducted in 3 selected rural hospitals and the availability of iron supplements at the district headquarters were also obtained. Three questionnaires were used in the format prescribed under the Right to Information Act of the Government of India, 2005.

Results. No iron supplement was available during the entire year in 21% of primary health centres. Iron supplements were available for 1–4 months, 5–8 months and 9–11 months, in 4, 3 and 4 primary health centres, respectively. The district headquarters did not receive supplies of iron supplements during the year from higher authorities. No caesarean sections were done in any of the selected rural hospitals during 2006. The proportion of deliveries that took place in primary health centres and subcentres, at home, and at private healthcare facilities was 1:1.5:5.

Conclusion. Essential supplies such as iron supplements are in short supply and emergency obstetric care services are non-existent in the public health system in our study area. The NRHM needs to address the ground realities to make motherhood safe.

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INTRODUCTION

The links between care during pregnancy and maternal mortality are well recognized. Over the past decade, national plans and programmes in India have stressed the need for universal screening for high risk pregnancies and for operationalizing essential and emergency obstetric care. Goals set in the Tenth Five-Year Plan have advocated an ambitious agenda to make motherhood safe. This includes skilled attendance at birth for 80% of all deliveries by 2007, institutional deliveries for 65% of all births, at least 3 antenatal care (ANC) check-ups for 90% of pregnant women, and universal coverage of complete immunization during pregnancy. The launch of the National Rural Health Mission (NRHM) in 2005 and the accompanying influx of funds raised hopes for better pregnancy-related care, and a consequent reduction in maternal mortality.

Maternal and adolescent malnutrition and anaemia are important precursors of complications during pregnancy and childbirth, and are also contributors to perinatal and neonatal morbidity and mortality. In India, findings suggest that almost half of all women are anaemic (48%) and about 17% suffer from moderate-to-severe anaemia.¹ Among adolescents who have or are about to experience pregnancy, 20% are moderately or severely anaemic.² Among other complications, maternal anaemia results in reduced placental weight, volume and surface area; abnormal uterine growth;³ prolonged labour and abnormal deliveries;⁴ low birth weight and associated foetal, perinatal and neonatal mortality. In addition, 15%–20% of maternal deaths are directly or indirectly due to anaemia.⁵

Supplementation with iron and folic acid during pregnancy is an effective method of preventing pregnancy-related mortality and is currently recommended in various government policies. We assessed the situation on the ground in rural Maharashtra with regard to healthcare delivery specific to maternity services. We focused on the availability of iron supplements and emergency obstetric services in the public health system.

METHODS

This study was conducted during the year 2006 in Ahmednagar district in the state of Maharashtra in western India. The district has 14 blocks (including one tribal block) and is covered by 96 primary health centres (PHCs). Using a stratified random method, one PHC in each block was selected for the study.

Three questionnaires were used to collect data. The questionnaires were designed in the format prescribed under the Right to Information Act (RTI), Government of India, 2005 in the local language. The first one for the PHCs was tested by sending it to 3 PHCs. It was then sent to the 14 selected PHCs. This questionnaire sought information regarding the number of deliveries occurring in different settings (home, PHC, private sector and others) in the PHC area, the opening balance of iron supplements available in stock in the PHC on 1 January 2006, and the monthly demand, supply and utilization of iron supplements at the PHC. The second questionnaire was sent to the district health officer (DHO), Ahmednagar. Information was sought regarding the opening balance of iron supplements, monthly demand to the State/Centre, and iron supply received and distributed to PHCs during the year 2006.

The third questionnaire was sent to 3 of the 14 rural hospitals selected randomly. This sought information regarding the number of caesarean sections done during 2006 to ascertain the availability of emergency obstetric services.

Information was received from all the PHCs, the 3 rural hospitals and the DHO in the month of March 2007. The data were then collated and analysed.

RESULTS

Three of the 14 PHCs (21%) had no iron supplements available during the entire year, whereas 4, 3 and 4 PHCs had iron supplements available for 1–4 months, 5–8 months and 9–11 months, respectively. None of the PHCs had iron supplements available during the entire year.

The opening balance of iron supplements available in each PHC equals its total utilization during the year 2006. No PHC received any supply of iron supplements from the DHO in 2006 in spite of repeated demands. The reply received from the DHO admitted to a shortfall of iron supplements in the district during this period.

Information regarding monthly demand, supply and distribution of iron supplies was not provided by the DHO. Instead, the DHO explained that ‘there was a shortage of iron supplements in the district and efforts have been taken to follow the issue at higher levels, however with no gains so far’.

There were no caesarean sections done in any of the selected rural hospitals (Jamkhed, Takli Dhokeshwar and Rahata) during 2006. The proportion of deliveries that occurred in PHCs and subcentres, at home and at private facilities was 1:1.5:5. The average number of deliveries that occurred in other places (i.e. hospitals of non-governmental organizations, trusts, teaching institutes, or rural/civil hospitals) was <1%.

The majority of deliveries occurred in the private sector in all PHC areas, with the exception of Ladagon, in the tribal block. Six areas (Belapure, Chichondi, Chapadgaon, Baragaon, Chanda and Kolhar) had exceptionally low numbers of deliveries occurring in PHCs.

DISCUSSION

Our study shows the lack of availability of iron supplements and emergency obstetric care services in the public health system in Ahmednagar district during 2006, a situation which, following further investigation, we know persisted till June 2007. This situation is unacceptable because the prevention of undesirable complications of anaemia in pregnancy is relatively straightforward.

The government’s promise to provide at least 3 ANC check-ups to 90% of pregnant women by 2007 is justified. The aim of 3 ANC check-ups is to screen high risk pregnancies (which include anaemia), allowing early detection and prevention of complications during pregnancy. The government has assigned the task of registration and conduct of ANC to auxiliary nurse midwives (ANMs) at each PHC and its subcentres. This includes the provision of 100 tablets of ferrous sulphate and folic acid (60 mg of elemental iron and 500 µg folate) to each non-anaemic pregnant woman as prophylaxis and a higher number of tablets to those who are anaemic. However, there was no supply of iron supplements to the DHO and hence the PHCs had to manage with the past year’s balance stock during 2006.

While complete ANC coverage remains a far goal, it is debatable whether its achievement will make any dent in the prevention/management of anaemia during pregnancy, the second largest

cause of maternal deaths in India. It is unrealistic to expect any results from the ANM when supplies are non-existent at the district headquarters itself.

In view of the ample scientific evidence and concurrent policies for iron supplementation during pregnancy together with adequate funding for the programme, this situation points to a management failure of the public sector to provide ANC. It is particularly deplorable because several initiatives such as the White Ribbon Alliance have been taken to make motherhood safe.

In addition, people’s perceptions regarding ANC need to be addressed. ANC tends to be perceived as unnecessary unless there are specific problems during pregnancy. For example, 35% of recently delivered women, who did not receive ANC, considered ANC as ‘unnecessary or not customary’.⁶ The high number of institutional deliveries in this study cannot be correlated to ANC coverage as most women in rural areas present to a facility at the onset of labour and because the proportion of deliveries in the private sector is higher. This makes the outreach ANC services provided by the government even more crucial, irrespective of the ability to afford ANC from the private sector.

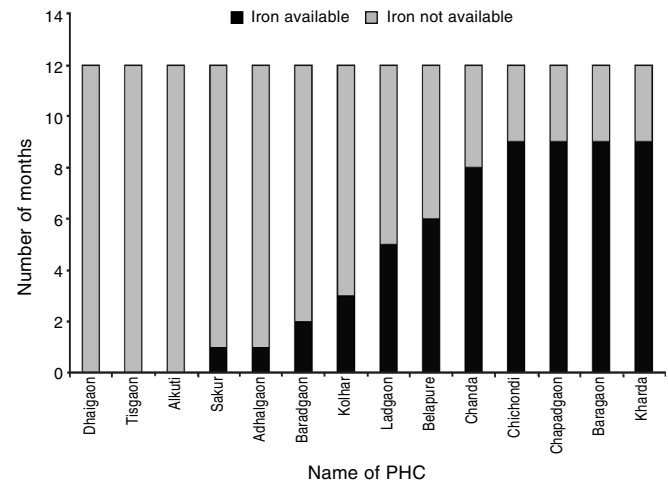


Fig 1. Availability of iron supplements at primary health centres (PHC) in Ahmednagar district from January to December 2006

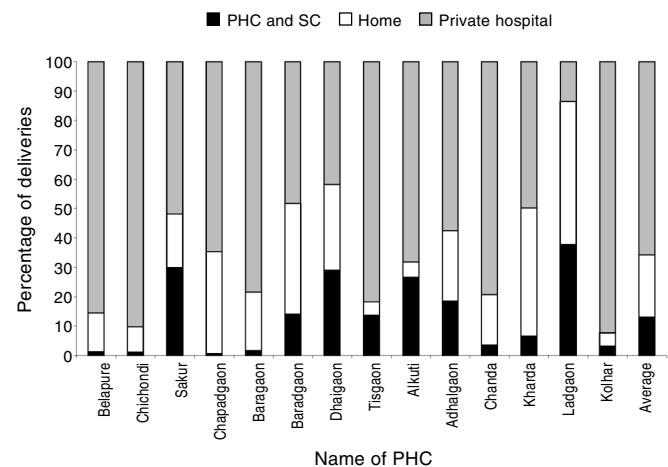


Fig 2. Proportion of deliveries at various sites in different primary health centres (PHC) and subcentres (SC) from January to December 2006

Although our results show that the government target of 65% institutional deliveries is achieved, the relative proportion of deliveries occurring in the private sector is 5 times that in the public sector. This is due to the failure of the public sector, which is not equipped to provide emergency obstetric care services. Indeed, no public health outlet included in our study provided emergency obstetric care. The only public sector option for emergency obstetric care is the district hospital which, due to the distance and time required for transportation, does not serve the purpose in an emergency. Hence, patients are forced to use the private sector. The government started the *Janani Suraksha Yojana* over 2 years ago; this provides financial support to women below the poverty line (BPL) who are referred to private practitioners from PHCs for emergency obstetric care. This scheme contributes a meagre sum of Rs 1500 per woman, whereas a caesarean section costs about Rs 8000, and much more if complications occur. This results in high out-of-pocket expenditure leading to indebtedness and impoverishment.

Even in the private sector, which shows a high number of institutional deliveries in our study, there is an absence of any regulatory mechanism to control cost as well as the quality of care.

Many studies have suggested that interventions to reduce malnutrition and anaemia must begin long before girls reach the reproductive age. A paradigm shift from maternal and child health to reproductive and child health has been widely advocated. This includes the care of adolescents. In the face of problems such as early marriage, the unmet need for contraception, and the high prevalence of anaemia in adolescents, the *Kishori Shakti Yojana* on adolescent health appears to be a hopeful development. This includes provision of iron supplementation to anaemic adolescents by *anganwadi* workers. However, the inadequate supply of iron supplements for pregnant women suggests that there remains little hope for an adequate supply for adolescents.

The failure of the public sector in providing essential healthcare also implies that the poor who can ill afford private maternity care are less likely than others to avail of institutional delivery facilities. The underutilization of the public health system is due to the

dissatisfaction with it in the absence of essential and basic supplies such as iron and emergency obstetric care services. The promises made to provide continuous essential obstetric care at the PHC level and emergency obstetric care at the rural hospital level, together with reforms of the health system at the launch of the NRHM in Maharashtra in April 2006 demand a serious re-assessment in view of the situation in the field.

Conclusion

The ground realities in the area of reproductive health services show persisting shortage of essential supplies for a significant period. The utilization of PHCs for maternity care is negligible and points to dissatisfaction with the public health system in the community. The absence of emergency obstetric care services in the public sector in rural areas forces the use of unregulated private medical facilities. Unless these issues are addressed effectively, no concurrent programme can make a successful move towards safe motherhood.

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REFERENCES

- 1 Jejeebhoy SJ, Varkey LC. Maternal health and pregnancy-related care. In: Jejeebhoy SJ (ed). *Looking back looking forward: A profile of sexual and reproductive health in India*. Jaipur and New Delhi: Population Council and Rawat Publications; 2004:52.
- 2 Santhya KG, Jejeebhoy SJ. Sexual and reproductive health needs of married adolescent girls. *Eco Pol Wkly* 2003;**41**:4370-7.
- 3 Thangaleela T, Vijayalakshmi P. Prevalence of anaemia in pregnancy. *Indian J Nutr Diet* 1994;**31**:26-9.
- 4 Malhotra M, Sharma JB, Batra S, Sharma S, Murthy NS, Arora R. Maternal and perinatal outcome in varying degrees of anaemia. *Int J Gynaecol Obstet* 2002;**79**: 93-100.
- 5 Thangaleela T, Vijayalakshmi P. Impact of anaemia in pregnancy. *Indian J Nutr Diet* 1994;**31**:251-6.
- 6 International Institute for Population Sciences and ORC Macro. *National Family Health Survey (NFHS-2), 1998-99*. Mumbai: International Institute for Population Sciences; 2000:281-5.

Obituaries

Many doctors in India practise medicine in difficult areas under trying circumstances and resist the attraction of better prospects in western countries and in the Middle East. They die without their contributions to our country being acknowledged.

The National Medical Journal of India wishes to recognize the efforts of these doctors. We invite short accounts of the life and work of a recently deceased colleague by a friend, student or relative. The account in about 500 to 1000 words should describe his or her education and training and highlight the achievements as well as disappointments. A photograph should accompany the obituary.

—Editor