

## ABSTRACT

The study was conducted to identify an alternative delivery system for iron folic acid supplementation to pregnant women with the following major objectives :

- (1) To assess the perceptions of the women and functionaries regarding anaemia, health seeking behaviour and consumption of iron tablets.
- (2) To study the feasibility of linking iron folate delivery with child immunization in the community to pregnant women to assess its efficacy on coverage and compliance.
- (3) To study the impact of iron supplements on maternal and infant outcome parameters.

One hundred and eighty three women were enrolled on or before 20 weeks of gestation from 24 centres in Ahmedabad and Baroda. At enrolment, data on socio-economic characteristics, obstetric history, health services utilization, morbidity profile, anthropometry and haemoglobin levels of pregnant women were obtained.

Focus Group Discussions were conducted with pregnant women, lactating women, older women and anganwadi workers to assess their beliefs and perceptions regarding anaemia and attitude toward consumption of iron tablets.

The iron tablet distribution was linked with the expanded programme of immunization for children. All women were followed till delivery and data on receipt and consumption of iron tablets, morbidity profile, weight and Hb levels were obtained from all subjects each month. Birth weights were also

recorded after delivery.

Results indicated that at enrolment, the mean height of the women was 152.2 cm, the mean weight was 44.5 kg and Hb level was 9.0 g/dl. As many as 74% had height less than 145 cm, 64% had weight less than 45 kg and 88% had Hb levels less than 11 g/dl.

The women were largely unaware of anaemia. Symptoms like tiredness and breathlessness were considered to be due to the pregnancy situation per se and antenatal care was <sup>not</sup> given the priority that it deserved. Tonics, multi-vitamin or iron preparations were not considered "hot" like other allopathic medicines but women avoided taking more than one preparation together.

Iron tablets were received by the beneficiaries from three sources : the anganwadi centres of ICDS, the government trust hospitals and private physician.

The coverage and compliance for iron tablets through the system linked with child immunization (AW source) was better than that reported for the existing system. As many as 60% of women received the expected 90 tablets, of which 42% consumed the full course.

The receipt of iron dose from private physician was very low; the a mean being 24 tablets, most of which were consumed. Only 9% received 100% of the expected receipt (90 tablets) from private physicians, of which 5% consumed the full dose.

The receipt of tablets from Government/Trust hospitals source was similar to that of the private doctors. Only a mean

of 24 tablets was received, of which 19 were consumed. Only 8% of the subjects received full course (90 tablets) from this source, of which 5% consumed the full dose.

The feedback of the subjects brought out several factors that affected compliance. The factors related to the patients were : like and dislike of the tablets, the need felt by the patients for iron tablets and subject's beliefs. The disease characteristics like the type of illness, beliefs regarding the illness and its effect, past experience with the illness, beneficial and side-effects of the medication - also influenced compliance. Attitude of the experienced women, especially mothers-in-law determine<sup>d</sup> the consumption of tablets by women. Logistical factors like supply, storage and loss, factors related to functionaries, such as their knowledge regarding anaemia, attitude towards tablet consumption, counselling and follow-up influenced compliance. Factors related to physicians like faith in doctors, their counselling, monitoring and response to patient's complaints for side-effects also determined compliance for iron tablets by the women.

The impact of the programme was studied in terms of impact on Hb levels, prevalence of anaemia, weight gain and birth weight of infant. The prevalence of anaemia reduced from 88% to 74% at the time of delivery. A mean Hb gain by 0.72 g/dl was experienced. Mean gain in Hb increased with an increase in number of tablets consumed, though the differences were non-significant. Higher rise in Hb were observed in women

who were anaemic at enrolment, proportionate to the number of tablets consumed.

The mean weight gain was 5.1 kg from enrolment till delivery. Three percent experienced a weight loss during pregnancy, 46% showed a weight gain less than 5 kg and only 14% gained 9 kg or more weight. Higher percentage of women consuming less than 30 tablets lost weight during pregnancy compared to those consuming more than 30 tablets.

The mean gestational duration was 39 weeks and 28% had premature deliveries.

The mean birth weight was 2910 g. The birth weight of the infants born to the women consuming full dose of tablets was higher than those consuming partial course, though the differences were not significant.

Thus, iron tablets had positive impact on maternal nutritional health parameter.