

## Original Research Article

# A comparative study of antenatal health care at Anganwadis in five rural areas at Rushikonda, Visakhapatnam

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## ABSTRACT

**Background:** Maternal morbidity and mortality are directly linked to the quality of the antenatal care provided at the grassroot level in rural India.

**Methods:** A total of 76 pregnant women attending 5 Anganwadi centres at Yendada 1 and 2, Gollalapalem, Vadapalem and Rushikonda were followed up through their confinement. The data collected were with respect to their height, weight, blood pressure, number of visits, antenatal complications and treatment, post-natal course including breast feeding and difficulties faced by clients during the course of their pregnancy.

**Results:** The five Anganwadi centres were observed to be doing a commendable job in promptly registering pregnant women and ensuring proper antenatal care looking after their nutritional supplements and immunization throughout the course of their client's pregnancies. There was not a single complication from among the study population due to timely referrals to higher centres.

**Conclusions:** The Anganwadi workers have a good insight into the health problems in their community and were able to communicate effectively in the local dialect. They are doing a commendable job in promptly registering pregnant women, and ensuring that they regularly attend for antenatal visits. They are the backbone of the community and are responsible for positive pregnancy outcomes.

**Keywords:** Anganwadi worker, Antenatal care, Grass root level, Positive pregnancy outcome

## INTRODUCTION

Provision of good Antenatal care services at the grassroots level of our population is a key component in achieving the millennial developmental goals. Anganwadi is a government-sponsored child-care and mother-care development programmes in India at the village level started by the Indian government in 1975 as part of the integrated child development services (ICDS) program.<sup>1,2</sup>

Maternal mortality and morbidity are the outcome of a complex web of causal factors that include social, economic, educational, political and cultural

considerations. Added factors are gender inequity, available infrastructure, terrain and weather conditions.

It is possible to significantly reduce maternal morbidity and mortality by addressing health factors alone and ensuring that safe delivery services are available to all women without any exceptions. Antenatal care (ANC) is one of the most important pillars for safe motherhood. At the community level there are a varied number of centres that provide ANC.

### Aims and objectives

To study the health-seeking patterns among women with respect to antenatal care (ANC) and the extent of

utilization of the Anganwadi infrastructure by rural women and the services provided by the Anganwadi workers (AWW) in the target area.

Based on the above inferences, suggestions to improve patient compliance and specific suggestions with respect to the provision of antenatal and post-natal care was proposed for implementation.

## METHODS

The study was a descriptive public health study conducted for a period of 8 months from February 2015 to September 2015. Five Anganwadis in the rural areas of Yendada 1 and 2, Gollalapalem, Vadapalem were covered by the study. A total of 76 pregnant women attending 5 Anganwadi centres between February 2015 and September 2015 were included in the study. Tables were used as statistical tools for presentation of data.

### First phase targets

The health seeking behaviour during pregnancy of the target population and their perceptions regarding the services provided will be obtained. Also details of their nutritional status and diet patterns of the pregnant women will be analyzed. The frequency of antenatal care provided at these various centres, the health care provider and details of difficulties faced by the clients will be documented. AWWs and auxiliary nurse midwives (ANMs) at these centres were instructed in the use of the gestational calendar and use of tape measure to measure uterine fundal height between 18 and 30 weeks of

gestation. They were also instructed on the need to emphasize iron and nutritional supplements during ANC. Each pregnant woman was issued 3 kg rice, 1 kg atta and 450 ml cooking oil and also one egg a day 4 days of the week. The AWWs measured the pulse, blood pressure and weight of the clients and administered tetanus toxoid booster dose when indicated.

### Second phase targets

Details of post-natal care provided and problems with breast feeding will be noted in detail. The AWWs were instructed to monitor the following additional parameters: a) change in diet patterns after delivery, b) number of post-natal checkups attended, c) post-natal issues reported by their clients, d) breast feeding counseling.

## RESULTS

### Demographic details

#### Socioeconomic status and caste profile

A total of 76 pregnant women seeking antenatal care were included in this study. The caste distribution in the five Anganwadis were as shown in Table 1.

A majority of the clients seeking the facilities provided at their respective Anganwadis were from backward class and low socio economic status and backward classes.

The order of pregnancy details of the study population is shown in Table 2.

**Table 1: Caste wise distribution of antenatal cases.**

| Caste | Yendada1 | Yendada2 | Gollalapalem | Vadapalem | Rushikonda |
|-------|----------|----------|--------------|-----------|------------|
| OC    | 6        | 5        | 1            | 2         | 1          |
| BC    | 10       | 12       | 12           | 7         | 13         |
| SC    | 0        | 1        | 0            | 1         | 1          |
| ST    | 0        | 2        | 0            | 0         | 2          |

**Table 2: Order of pregnancy.**

| Gravida | Yendada1 | Yendada2 | Gollalapalem | Vadapalem | Rushikonda |
|---------|----------|----------|--------------|-----------|------------|
| G1      | 12       | 12       | 7            | 5         | 7          |
| G2      | 2        | 8        | 6            | 5         | 9          |
| G3      | 1        | 0        | 0            | 0         | 1          |
| G4      | 1        | 0        | 0            | 0         | 0          |

**Table 3: Details of antenatal visits.**

|                     | Yendada1      | Yendada2      | Gollalapalem  | Vadapalem     | Rushikonda    |
|---------------------|---------------|---------------|---------------|---------------|---------------|
| ANC visits          | 1 to 4        | 1 to 3        | 1 to 4        | 2 to 4        | 1 to 5        |
| SNP given           | 4 to 6 months | 2 to 5 months | 3 to 4 months | 1 to 6 months | 1 to 5 months |
| High risk pregnancy | Nil           | Nil           | Nil           | Nil           | Nil           |
| Birth plan advice   | Yes- 14       | Yes- 5        | Yes- 6        | Yes- 10       | Yes- 17       |

**Table 4: Risk stratification of pregnancy.**

| High risk category pregnancy            | Very high-risk pregnancy category     |
|-----------------------------------------|---------------------------------------|
| <b>History of instrumental delivery</b> | Previous pre term delivery            |
| <b>History of eclampsia</b>             | History of still birth/neonatal death |
| <b>3 or more abortions</b>              | History of cesarian section           |
| <b>Primigravida under 18 years age</b>  | History of premature labour           |
| <b>Primigravida above 35 years age</b>  | History of antepartum hemorrhage      |
| <b>Age above 40 years</b>               | History of abnormal presentation      |
| <b>Precious pregnancy</b>               | History of IUGR                       |
| <b>Fifth pregnancy or greater</b>       | History of Multiple pregnancy         |
| <b>Height less than 145 cm</b>          | History of PIH                        |
| <b>Systemic disease +</b>               | Severe anemia                         |
| <b>Threatened abortion</b>              | Heart disease/NIDDM                   |
| <b>Other complications</b>              | Gestation >42 weeks                   |

A majority of primigravidas who sought consultation at the Anganwadis were escorted by their mothers or mothers-in-law for registration and issue of antenatal cards. Grand multiparity was very seldom encountered.

#### ***Frequency of antenatal visits***

Those women who availed of the dietary supplements provided at the Anganwadis were more regular in their antenatal visits. They were also admitted, based on their expected date of delivery (EDD), for their delivery at the dependent hospital. High risk pregnancies were identified early by the AWWs and referred to the medical college outpatient for consultant care as all these five centres are within 1 kilometer distance away. Details are shown in Table 3.

#### ***Check list for special care***

A bilingual check list pamphlet (Table 4) was distributed to Anganwadi workers to enable them identify high and very high-risk category antenatal patients who required care and follow up at higher centers.

#### ***High risk antenatal care and follow up***

All high-risk pregnant women were referred to a higher center for specialist consultations. Funds for this transportation was to be debited from the Janani Shishu Suraksha Karyakram JSSK funds. A high-risk antenatal care follow up form was made available for detailed entries of these-category of pregnant women, and countersigned by a medical officer for validation.

The five Anganwadi centres were doing a commendable job in promptly registering pregnant women and looking after their nutritional supplements and ensuring that they keep their date for antenatal visits throughout their pregnancy. They were counseled about home or institutional delivery based on the risk factors. They were examined every month when their height, weight, blood pressure and hemoglobin are monitored.

The postnatal follow up visits were adhered to and monitored closely by the Anganwadi workers.

Immunization of mothers and their newborns were properly scheduled.

Nutrition and supplements of ante and post-natal women was monitored and ensured

## **DISCUSSION**

The Anganwadi system in our country is attempting to provide affordable and accessible medical care to the local rural population. 'Angan' means a courtyard shelter that is the heart of any household. This is manned by a single Anganwadi worker (AWW) selected from the local community itself and trained for four months in aspects of health assessment and screening, ante/post-natal health care, nutrition, contraception and immunization counselling and childcare. Today in India, about 2 million Anganwadi workers are reaching out to a population of 70 million women, children and sick people, helping them become and stay healthy. Each AAW covers a population of 1000 and has a helper to assist her in implementing the Integrated child development scheme mooted by the central government. The Government of Andhra Pradesh is providing one full meal under Anna Amrutha Hastham (AAH) for pregnant and lactating women in all Anganwadi centres (AWCs).

The aim of this programme was to reduce infant mortality rate (IMR), low birth weight, maternal mortality rate (MMR) and anemic condition among pregnant women.<sup>3-5</sup> Anganwadi workers are required to monitor attendance, quality of food, hygiene and also mobilize pregnant and lactating women to avail the one full meal programme and be responsible for the following: ensure that pregnant women consume 90+ IFA tablets; improve the enrolment of mothers at Anganwadi centers; decrease number anaemia and under nutrition among mothers; reduce the incidence of low birth weight babies and malnutrition among children; ensure that mothers receive health check-ups and immunization; reduce the incidence of infant

mortality and maternal mortality; enhance the quality and acceptability of meals by the mothers; ensure that food supplied is consumed by the mothers only rather than the whole family.

The 'take home ration (THR)' provided to pregnant and lactating women under ICDS was found to be too meagre but also gets shared by all members of the family. Since 2013, the Government of Telangana introduced Arogya Laxmi Programme which involves spot feeding of "one full meal" for pregnant and lactating women at the Anganwadi centre along with administration of iron and folic acid (IFA) tablet.

Being recruited from the local community, the AWW has a good insight into the health problems in her community and ease of interaction in the local dialect with its members. She has the trust of the locals to ensure their compliance in adopting suggested medical interventions. The Anganwadis stock basic medicines including vitamin A, oral rehydration salt packets, disposable delivery kits, contraceptives.

The Anganwadis are the first outpost of community health care services and have the largest outreach. Its workers are monitored by the village health and sanitation committee of the local panchayat.

The AAW and her helper are assigned to implement the integrated child development services (ICDS) scheme. Launched on 2<sup>nd</sup> October, 1975, is one of the flagship programmes of the Government of India and represents one of the world's largest and unique programmes for early childhood care and development. The Ministry of Women and Child Development has laid down guidelines and responsibilities of the Anganwadi workers. They are required to provide health and nutritional education to families, especially pregnant women. This includes counselling with respect to breast feeding, nutrition, child development, immunization and family planning.<sup>6</sup>

The AAW is held responsible for executing the supplementary nutrition program (SNP) and provide procurement, cooking and distribution of morning snacks and lunch for children aged 3 to 6 years and for pregnant and lactating women. She is obliged to register all pregnant women in her community. She has to ensure at least 4 antenatal checkups during the course of a pregnancy and counsel them on diet, monitor weight gain and refer them to higher centres in case of any visible or reported danger signs. She is also obliged to make home visits and encourage women to breastfeed for six months after delivery and discourage commercial breast milk substitutes.<sup>7</sup>

Accredited social health activists (ASHA) workers are linked to AWWs to build the base for health services. The vision was to provide universal access to equitable, affordable and quality maternal health care. They were obliged to accompany pregnant patients to the nearest

hospital, record birth weight of the newborn and ensure initiation of breast feeding within one hour of birth. The mothers were advised to stay in the hospital for 48 hours after delivery. Within 6 weeks after delivery, the Anganwadi or ASHA worker had to conduct 3 post-natal visits and provide guidance for birth spacing, they were also mandated to make 6 visits in the first 6 weeks of the newborn's life (7 times for home delivery) and record birth weight and ensure immunization. Standardized tool kits have been developed to assist Anganwadi workers to identify counselling needs of mothers on nutrition and to conduct purposeful counselling sessions.<sup>8</sup>

An IT based individual tracking system is in place to ensure timely delivery of all services to the target group and enable identification of beneficiaries who are at risk and provide services for reduction of vulnerabilities. This will ensure that pregnant women have undergone antenatal check-ups, administered TT injections and availed nutrition services. It will also ensure a close follow up of every high-risk pregnant women and ensure that lactating mothers have undergone postnatal counselling and availed nutrition services.

There were some limitations to the study. Time period could have been longer as 8 months is too short to assess any programme of facility. More number of Anganwadis could have been covered, to obtain a greater area coverage.

## CONCLUSION

All the 76 antenatal women participated in the study used the Anganwadi infrastructure. They were supplied with the nutritional supplements and antenatal care was provided.

The Anganwadi workers can adopt a simple method to monitor progress of pregnancy. Between 18 and 30 weeks of pregnancy the height of the uterine fundus corresponds to the week of gestation. A simple tape measure can be used to measure distance from pubis to fundus when each centimetre corresponds to weeks of gestation, e.g. 22 cm = 22 weeks pregnancy. Any deviation can be a prompt to improve nutrition and schedule a doctor's consultation for added safety. The gestational calendar can be provided to calculate weeks of pregnancy from last menstrual period. Iron supplements are being administered empirically. The Anganwadi workers must ensure daily iron tablet for pregnant women until 3 months post delivery.

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