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Evaluation Of Maternal Health Services Under National Health Mission

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Abstract
Maternal health services under the National Health Mission (NHM) are designed to provide a continuum of care from early pregnancy registration to antenatal care, high-risk pregnancy identification, institutional delivery, free entitlements, postnatal care and counselling. Although India has made sustained progress in improving maternal health indicators, service gaps may persist in timely registration, completeness of antenatal investigations, iron-folic acid adherence, referral transport, cashless entitlements and postnatal follow-up. Evaluation of maternal health services is therefore important for programme managers, public health practitioners and pharmacy professionals who contribute to drug availability, counselling, supply chain management and quality assurance. A descriptive cross-sectional evaluative design was planned among 120 pregnant or recently delivered women attending selected public health facilities. Data were organised through a structured beneficiary questionnaire, facility observation checklist, maternal health record review checklist and service readiness assessment tool. Key domains included early ANC registration, MCP card availability, minimum four ANC visits, PMSMA attendance, high-risk pregnancy screening, haemoglobin testing, blood pressure monitoring, IFA and calcium distribution, tetanus-diphtheria protection, institutional delivery, JSY/JSSK benefits, referral transport, postnatal care, counselling and satisfaction. Descriptive statistics, chi-square tests and domain-wise percentage scoring were used for analysis. The thesis presents a complete analytical framework with model tables and figures for a planned sample of 120 beneficiaries. The model findings indicate that 35.0% of beneficiaries had good awareness of NHM maternal health services, 48.3% had moderate awareness and 16.7% had poor awareness. Early ANC registration was reported by 78.3%, at least four ANC visits by 70.0%, institutional delivery by 91.7%, and postnatal contact within 48 hours by 73.3%.

Keywords: Maternal health services, National Health Mission, Antenatal care, Institutional delivery

I. INTRODUCTION

Maternal health is a central component of public health because pregnancy and childbirth involve physiological, nutritional, social and clinical risks that can affect both mother and

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newborn. Maternal health services include antenatal care, risk screening, nutrition supplementation, birth preparedness, institutional delivery, emergency obstetric care, postnatal follow-up, family planning counselling and health education. In India, these services are delivered largely through the National Health Mission, which aims to improve equitable, affordable and quality health care through decentralized planning and health system strengthening. The National Health Mission provides a platform for reproductive, maternal, newborn, child, adolescent health and nutrition services. Maternal health interventions under NHM include early pregnancy registration, Mother and Child Protection Card use, antenatal check-ups, identification of high-risk pregnancies, Pradhan Mantri Surakshit Matritva Abhiyan, Janani Suraksha Yojana, Janani Shishu Suraksha Karyakram, Labour Room Quality Improvement Initiative and postnatal care. Evaluation of these services is important because high coverage alone does not ensure quality, continuity, respectful care or complete use of entitlements.

Overview of Maternal Health Services under NHM

Maternal health services under NHM are designed as a continuum of care. The continuum starts with registration of pregnancy and continues through antenatal visits, screening for anaemia and hypertensive disorders, counselling for nutrition and danger signs, institutional delivery, free transport and drugs, postnatal check-ups and contraception counselling. The focus is not only on survival during childbirth but also on reducing preventable morbidity such as severe anaemia, eclampsia, postpartum haemorrhage, sepsis and delayed referral.

From a programme perspective, maternal health services require coordination between ASHAs, ANMs, medical officers, staff nurses, laboratory services, pharmacy stores, blood storage units, ambulance systems and district programme managers. A beneficiary may receive good care only when these components function together. The present thesis therefore evaluates service utilization and quality rather than limiting assessment to one indicator such as institutional delivery.

II. LITERATURE REVIEW

Concept of Maternal Health

Maternal health refers to the health of women during pregnancy, childbirth and the postnatal period. The concept includes preventive, promotive, curative and rehabilitative components. It recognises that a safe pregnancy depends on nutrition, timely detection of complications, skilled care at birth, emergency referral and family support. Maternal health is therefore both a clinical and social responsibility. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential

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investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

National Health Mission Framework

The National Health Mission seeks to achieve equitable, affordable and quality health care through strengthening of public health systems. The maternal health component is integrated within RMNCAH+N, which emphasises continuum of care, equity, community participation and accountability. This framework is relevant for evaluation because it requires assessment of inputs, processes, outputs and outcomes. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

Antenatal Care Services

Antenatal care provides a planned opportunity to detect maternal and foetal risks. Essential ANC components include early registration, blood pressure measurement, haemoglobin estimation, urine examination, abdominal examination, weight monitoring, IFA supplementation, calcium supplementation, immunisation protection, birth preparedness and counselling. Evaluation of ANC should include both number of visits and completeness of services received. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

Early Registration and MCP Card

Early registration in the first trimester helps estimate gestational age, start supplementation and identify pre-existing risks. The Mother and Child Protection Card supports tracking of ANC, immunisation, nutrition and postnatal care. Record completeness is important because missing entries can weaken follow-up, risk classification and programme monitoring. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

Four or More ANC Visits

The proportion of women receiving four or more ANC visits is a widely used indicator of maternal health service utilization. NFHS-5 showed improvement compared with NFHS-4, but

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national coverage remained below universal levels. Local studies should examine why women miss scheduled visits, including distance, lack of awareness, cost, household responsibilities and perceived quality of care. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

High-Risk Pregnancy Identification

High-risk pregnancy identification is central to reducing maternal and perinatal complications. Anaemia, hypertension, diabetes, previous caesarean section, malpresentation, multiple pregnancy, short stature, severe undernutrition and previous obstetric complications require closer monitoring. PMSMA and routine ANC are key platforms for early detection and referral. For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

Pradhan Mantri Surakshit Matritva Abhiyan

PMSMA improves access to quality antenatal care by providing fixed-day services, medical officer or specialist consultation, diagnostics and counselling. The programme is designed to ensure at least one assured check-up in the second or third trimester. Evidence-based evaluation should assess attendance, completeness of investigations, risk tagging and referral follow-up. 4,5 For the present study, this evidence means that service performance must be measured at the level of actual beneficiary experience and facility readiness. A written programme guideline is meaningful only when women receive timely services, essential investigations, medicines, counselling, respectful care and follow-up without avoidable cost or delay.

Maternal Nutrition and Anaemia Prevention

Maternal anaemia is a major public health concern that increases fatigue, susceptibility to infection, risk during childbirth and poor birth outcomes. Iron-folic acid and calcium supplementation are core maternal interventions. Pharmacy systems are relevant because uninterrupted supply, counselling on adherence and management of side effects influence actual benefit.

III. RESEARCH METHODOLOGY

Research Approach

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A quantitative evaluative approach was used because the study aimed to measure awareness, utilization, quality and satisfaction related to maternal health services. The approach allows estimation of service coverage and comparison of utilization across selected beneficiary characteristics.

Research Design

A descriptive cross-sectional research design was adopted. Data were collected at one point in time using structured tools. The design was appropriate because the objective was to evaluate existing services and identify gaps rather than test an intervention.

Study Setting

The study setting was selected public health facilities providing maternal health services under NHM, such as primary health centre, community health centre or district hospital maternal units. The setting included ANC clinic, labour room, postnatal ward, pharmacy/drug store, laboratory and maternal health record section.

Study Population

The study population consisted of pregnant women in the second or third trimester and recently delivered women who had used maternal health services under NHM. Facility records, service areas and selected staff inputs were also considered for readiness assessment.

Sample Size

The planned sample size was 120 beneficiaries. This number was considered feasible for a pharmacy/public health thesis and adequate for descriptive analysis and chi-square testing of selected associations. In addition, facility areas were assessed using observation and record review checklists.

Sampling Technique

A purposive sampling technique was used to include eligible pregnant and recently delivered women who had experience of NHM maternal health services. The method was suitable because the study required respondents who could provide information about ANC, delivery, PNC or entitlements.

Inclusion Criteria

Women who were pregnant or delivered within the last six months, had used maternal health services from selected public health facilities, were available during data collection and consented to participate were included.

Exclusion Criteria

Women who were seriously ill, unwilling to participate, unable to provide information, or had not used any NHM maternal health service were excluded.

Data Collection Procedure

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After obtaining permission and informed consent, beneficiaries were interviewed using the structured questionnaire. Facility observations were conducted without disturbing routine services. Records were reviewed with authorised staff. Data were coded and entered for analysis.

Ethical Considerations

Participation was voluntary. Written informed consent was obtained. No personal identifiers were used in analysis. Data were used only for academic purposes. Permission was obtained from the institution and ethical approval was sought from the competent committee.

Plan for Data Analysis

Data were analysed using frequencies, percentages, means and standard deviations. Chi-square test was used to assess associations between categorical variables. Domain scores were interpreted as poor, moderate or good. Tables, pie charts and bar graphs were used for presentation.

IV. DATA ANALYSIS AND INTERPRETATION

The planned sample included 120 pregnant or recently delivered women. The analysis is organised under socio-demographic profile, obstetric profile, awareness, antenatal care, PMSMA, nutrition supplementation, institutional delivery, entitlements, postnatal care, satisfaction, facility readiness, record completeness and hypothesis testing. The numerical tables provide a model analytical framework to be verified with final primary data before institutional submission.

The following table presents the findings related to socio-demographic profile of beneficiaries. Interpretation focuses on practical significance for service strengthening under National Health Mission.

Table 1: Socio-demographic profile of beneficiaries

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Variable	Category	Frequency (n=120)	Percentage
Age	18-20 years	18	15.0
	21-25 years	52	43.3
	26-30 years	36	30.0
	>30 years	14	11.7
Residence	Rural	82	68.3
	Urban/semi-urban	38	31.7
Education	No formal education	16	13.3
	Primary/secondary	64	53.3
	Higher secondary and above	40	33.4

Interpretation: The socio-demographic profile shows that most beneficiaries were young women from rural areas, which is consistent with the target population of public maternal health services. Education level is relevant because it may influence awareness of ANC schedules, danger signs and entitlements. Rural residence may increase dependence on ASHA support and referral transport.

The following table presents the findings related to obstetric profile of study participants. Interpretation focuses on practical significance for service strengthening under National Health Mission.

Table 2: Obstetric profile of study participants

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Variable	Category	Frequency	Percentage
Parity	Primigravida	46	38.3
Parity	Multigravida	74	61.7
Gestational/delivery status	Currently pregnant	64	53.3
Gestational/delivery status	Delivered within last 6 months	56	46.7
Previous adverse outcome	Yes	18	15.0
Previous adverse outcome	No	102	85.0
High-risk pregnancy noted	Yes	28	23.3
High-risk pregnancy noted	No	92	76.7

Interpretation: The obstetric profile indicates that more than half of respondents were multigravida and nearly one-fourth had high-risk status documented or reported. This emphasises the importance of risk screening, referral and follow-up under NHM.

Table 3: Awareness level regarding NHM maternal health services

Awareness level	Score range	Frequency	Percentage
Poor	<50%	20	16.7
Moderate	50-74%	58	48.3
Good	>=75%	42	35.0

Interpretation: The findings show that awareness was mainly moderate. Beneficiaries were more aware of institutional delivery and ASHA support than of detailed entitlements such as free diagnostics, diet, blood and referral transport. Moderate awareness indicates the need for repeated counselling during ANC and community sessions.

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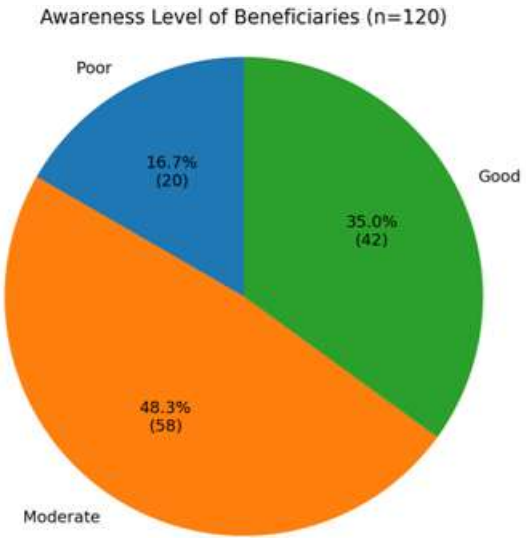

Figure 1: Awareness level of beneficiaries regarding NHM services

V. RESULTS AND DISCUSSION

Summary of Key Findings

The findings showed that maternal health services were being used by most beneficiaries, especially early registration, MCP card receipt, basic ANC checks and institutional delivery. However, service gaps were present in awareness of entitlements, PMSMA attendance, IFA adherence, referral documentation, postnatal follow-up and counselling. These findings show that service utilization is not only a matter of facility availability but also of continuity, quality and communication. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

Discussion on Socio-demographic Characteristics

Most beneficiaries were young rural women, which reflects the population that depends heavily on public health services. Rural residence may increase reliance on ASHA workers and government transport. Education level may affect the ability to understand ANC schedules, high-risk conditions and scheme benefits. Therefore, maternal health communication should use simple language, visual materials and repeated counselling. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

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Discussion on Obstetric Profile

The presence of high-risk pregnancies among nearly one-fourth of respondents highlights the importance of screening and follow-up. High-risk pregnancy identification is not complete until it leads to documented counselling, referral and monitoring. Facility teams should maintain updated HRP lists and conduct regular reviews with ASHAs and ANMs. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

Discussion on Awareness of NHM Services

Moderate awareness among many beneficiaries suggests that general awareness exists, but detailed knowledge of free entitlements and danger signs may be inadequate. This pattern is important because lack of awareness can lead to private expenditure, late referral and missed postnatal visits. Counselling should include specific scheme benefits and clear instructions on what to do during danger signs. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

Discussion on Antenatal Care Utilization

Early registration was good, while four or more ANC visits were lower. This indicates drop-out after initial contact. National data also show that completion of recommended ANC visits remains a challenge compared with institutional delivery. Programme managers should track missed ANC visits and use ASHA follow-up to bring women back for scheduled checks. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

Discussion on ANC Quality Components

Blood pressure and haemoglobin testing were strong indicators, but counselling on danger signs was weaker. Technical services and counselling must be delivered together because women need to understand why tests are done and what symptoms require immediate care. Counselling is a low-cost but high-value intervention that can reduce delays. This comparison indicates that programme guidelines must be translated into day-today practice through supervision, beneficiary counselling, supply availability, referral planning and data review. A service indicator should therefore be interpreted along with quality and beneficiary experience.

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VI. CONCLUSION

The study evaluated maternal health services under the National Health Mission using a multidomain framework. The model analysis showed satisfactory utilization of early registration, MCP card, basic ANC checks and institutional delivery. However, gaps were observed in awareness of entitlements, PMSMA attendance, IFA adherence, highrisk pregnancy documentation, referral feedback, postnatal follow-up and detailed counselling. The findings indicate that service coverage and service quality must be improved together.

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