

**ANTENATAL CARE SERVICE DELIVERY IN RAJASTHAN:
EVALUATING UTILIZATION AND COVERAGE USING PCTS
DATA (2024- 2025)**

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Dissertation Title:**Antenatal Care Service Delivery in Rajasthan: Evaluating Utilization and coverage using PCTS Data (2024-2025)****Introduction**

A population's total health is reflected in maternal health, which is a fundamental aspect of public health. For the sake of the mother's and the child's health, it is imperative that mothers' health be maintained throughout their pregnancies, deliveries, and recovery. Antenatal care, or ANC, is an essential part of maternal health services. It includes routine health screenings, check-ups, and education to monitor and improve the health of expectant mothers and their unborn. Maternal health is the state of women's health during pregnancy, childbirth, and the postpartum phase.

According to the WHO, ANC visits should be done at least four times before delivery in order to ensure the best possible health outcomes [1]. As per the World Health Organization (WHO), ANC should include four essential elements: risk assessment; prevention and treatment of diseases associated to or occurring during pregnancy; and health promotion and education.

The physiological condition of pregnancy is marked by the possibility of unfavorable incidents and difficulties that could have a negative effect on both the mother and the fetus [1]. With 94% of maternal and baby fatalities occurring in lower-middle-income countries (LMICs), the developing world has a significant burden of maternal and infant mortality [2–4].

Research Gap and Rationale

state-level data systems like PCTS (Pregnancy, Child Tracking & Health Services Management System) provide rich insights into maternal health indicators, few studies have zonally compared ANC utilization within Rajasthan using disaggregated district-level data. This study fills the gap by performing a zonal comparative analysis using five key ANC indicators to identify disparities, evaluate implementation gaps, and provide evidence for region-specific interventions.

Research Question

1. What is the current level of utilization of ANC services across different zones of Rajasthan?

2. How do selected ANC indicators vary among districts in different zones?
3. What are the key disparities and gaps in ANC service utilization across zones?

Objectives

1. To assess, using PCTS data for 2024–2025, the use of antenatal care (ANC) services by pregnant women in Rajasthan.
2. To evaluate how well important ANC indicators are covered
3. To determine any discrepancies or gaps in the ANC services provided throughout the Zones

Hypothesis

Null Hypothesis (H_0):

There is no significant difference in the utilization of antenatal care services among different zones of Rajasthan.

Alternative Hypothesis (H_1):

There is a significant difference in the utilization of antenatal care services among different zones of Rajasthan.

Materials and Methods

Study design :

The research design used in this study is a descriptive retrospective study with secondary data collected across seven zones.

Study Area and Population

The study is conducted across various health zones of Rajasthan, namely:

Ajmer zone(Ajmer, Bhilwara, Nagaur,Tonk)

Bharatpur zone(Bharatpur, karuli, Dholpur, Swai Madhopur)

Bikaner zone (Bikaner, Ganganagar, churu, hanumanghar)

Jaipur zone(Alwar, Jaipur1 ,Jaipur2, Jhunjhunu, Sikar)

Jodhpur zone (Barmer, jalore, Jaisalmer, Pali, Sirohi)

Kota zone (bundi, jhalawar , Baran,Kota)

Udaipur zone (Rajsamand, Chittorghar, Dungarpur, Pratapghar, Udaipur, Banswara)

The study population includes pregnant women who were registered and received antenatal care services during the reporting period (typically April 2024 – March 2025) as captured in the PCTS system.

Inclusion Criteria:

- Women who were registered in the PCTS system between April 2024 and March 2025 and who were pregnant were eligible to participate.
- Districts or zones where all five of the chosen ANC indicators' full data are available
- Pregnant women who underwent at least one ANC service during the study period

Exclusion Criteria:

- Records with partial or missing information on certain ANC markers are excluded.
- Women who were pregnant but not registered in the PCTS system during the research period
- Districts where crucial indicators are unavailable or have inconsistent data

Sampling Method

- Random sampling technique

- **Data Analysis**

- For graphical representations and descriptive statistics, Microsoft Excel was used to examine the cleaned data.

Duration: Three Months

8. Ethical Considerations:

- As the study used secondary data from publicly accessible databases (PCTS), no ethical clearance was required.
- Data was used for academic and research purposes only.

9. Implications of the Study

- The study provides evidence on regional disparities in ANC service utilization in Rajasthan.
- Findings can guide targeted policy interventions and resource allocation to improve maternal health outcomes.
- It supports strengthening data-driven planning at the zonal and district levels.

References (Vancouver Style)

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