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# Assessment of Healthcare Infrastructure - A Case Study on Debagarh District

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**Abstract:** *The assessment of healthcare infrastructure within a district is crucial as it plays a pivotal role in ensuring the effective delivery of medical services to the population residing in that area. By evaluating the infrastructure, healthcare providers can identify strengths and weaknesses, leading to improvements in service delivery. Assessing healthcare infrastructure is essential for improving overall public health outcomes. A well-functioning healthcare infrastructure can lead to better health outcomes for the community, including reduced mortality rates, improved disease management, and overall enhanced quality of life. The study evaluates the availability of healthcare facilities in the Debagarh district, Odisha including hospitals, clinics, and primary health centers. This assessment helps in understanding the distribution of healthcare services within the District.*

**Keywords:** *Healthcare Infrastructure, Accessibility, Quality of Care, Health Disparities, District Health Assessment.*

## I. INTRODUCTION

Health infrastructure refers to the physical and organizational structures that are essential for the functioning of healthcare services in a particular region. This includes a wide range of components such as hospitals, clinics, primary health centres, medical equipment, and the healthcare workforce. Evaluating health infrastructure is crucial as it provides insights into the capacity and effectiveness of healthcare delivery within a region. By assessing the existing infrastructure, policymakers and healthcare professionals can identify strengths, weaknesses, and areas for improvement in the healthcare system. The primary goal of evaluating health infrastructure is to identify gaps, inefficiencies, and areas that require enhancement. This assessment helps in understanding the current state of healthcare delivery, ensuring that resources are allocated effectively, and addressing disparities to provide equitable and quality healthcare services to all individuals in the population. Through a comprehensive evaluation of health infrastructure, policymakers can pinpoint disparities in healthcare access and quality among different populations. This information is vital for implementing targeted interventions and policies to bridge these gaps and ensure that all individuals have equal access to healthcare services. By identifying areas needing improvement through infrastructure evaluation, healthcare systems can implement strategic changes to enhance the overall quality and efficiency of healthcare delivery. Evaluating health infrastructure also helps in assessing the effectiveness of healthcare services in meeting the needs of the population. By understanding the strengths and weaknesses of the infrastructure, healthcare providers can tailor their services to better address the healthcare needs of the community and improve health outcomes.

India's healthcare system consists of a three-tier structure including Sub Health Centre, Primary Health Centre, and Community Health Centre for primary care, while District Hospital, Sub-District Hospital, and First Referral Unit offer secondary care, and Medical Colleges provide tertiary care services. The Ministry of Health and Family Welfare supports states/UTs to enhance public healthcare facilities through initiatives like the National Rural Health Mission (NRHM) under the National Health Mission (NHM). NHM provides financial and technical assistance to states/UTs to strengthen healthcare facilities based on their requirements outlined in Programme Implementation Plans (PIPs) to improve primary healthcare services in the country.

## II. NEED OF THE STUDY

This research endeavors to develop into the current healthcare infrastructure landscape in the Debagarh district, primarily focusing on public healthcare facilities. Our focus is to uncover any existing disparities and inequalities within this infrastructure. By conducting this analysis, we aim to identify key areas for improvement and recommend actionable steps to address these issues.

The main aim of this study is to understand the disparities present in the health infrastructure of Debagarh district and to uncover the factors that contribute to these inequalities. (1) To evaluate the current condition of healthcare infrastructure within Debagarh district. (2) To pinpoint variations and inequities in the provision of healthcare services.

(3)To examine the factors that contribute to variances in healthcare access and provision.(4)To formulate suggestions for enhancing healthcare infrastructure and diminishing disparities.

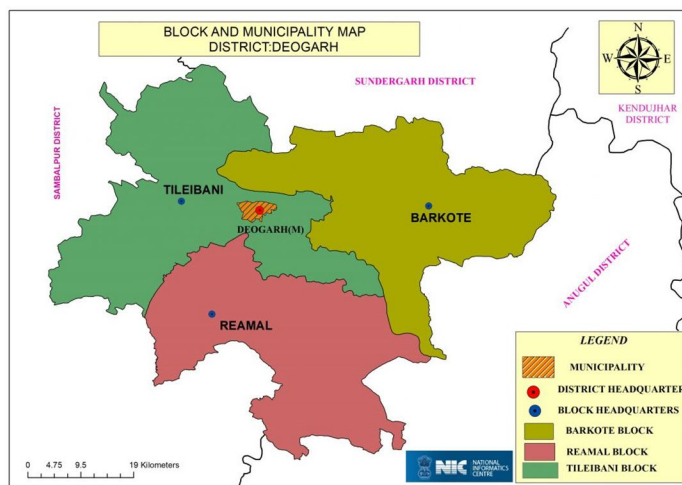
### III. RESEARCH METHODOLOGY

In this study mixed-methods applied to evaluate the healthcare infrastructure in Debagarh district, which suggests they will be collecting both numerical data (quantitative) and non-numerical insights (qualitative) to provide a holistic assessment. The primary purpose of data collection was to collect detailed information about the conditions of the healthcare facilities, the availability of essential medical supplies, and the quality of service delivery. This data helped assessing the overall functioning of the healthcare system at different levels. Semi-structured interviews was conducted with key stakeholders, including healthcare administrators, government officials, and community leaders, to gain insights into the factors affecting healthcare delivery. The secondary data collected from various websites. Issues identified are people are facing various problems to access health care centers. There are various no of gap in many facilities.

### IV. STUDY AREA

Deogarh district, known as Debagarh district was created on 01/01/1994 being bifurcated from Sambalpur district. The district is surrounded by Anugul district on its east and south, Sambalpur district on the west and Sundargarh district on the North. Debagarh is a district of Koshal region and situated in the Western region of the State. Only 7.16 percent of its population live in urban areas as against 16.69 percent of state's population living in urban areas. The district covers an area of 2781.66 km<sup>2</sup>. The district has a population of 312,520 (2011 Census).The district is divided into 3 Community Development Blocks with one Block Development Officer in charge of each Block. The district consisting of 878 villages in 61 Gram Panchayats. For maintenance of law and order, the district is divided into 4 Police Stations namely, Debagarh, Reamal, Barkot and Kundheigola.

There is one Statutory Town in the district i.e. Debagarh Municipality. The Deogarh lies on 197m above sea level Deogarh's climate is classified as tropical. This District is entirely of hilly tract. The Hill system of Deogarh has been categorized mainly under four ranges.



Map 1.1 Location map of study area

### V. DATA ANALYSIS

Debagarh DHH has 150 bed and community health centers has 120 bed. There is no private hospitals. There are total 25 no. of doctors and 42 no. of nurses. 4 no. of CHC are present in Barkote, Riamal, Tileibani, Bamparda. 8 no. of PHC Chhatrabar, Tileibani, Bamparda, Baghahar, Chhepilipali (Gurusang) Dimirikudav (Gaud Suguda), Purukunda, kundheigola.

DHH is the main catchment area of patients from various area of district. Critical patient referred to Burla (VIMSAR) which is 101.7km away & S.C.B medical college, hospital Cuttack which is 227 km away from DHH.

There are 56 sanctioned positions for doctors, of which 31 positions are vacant. Considering the WHO norm of 1 doctor per 1000 population, the district has a shortfall of 310 doctors. Every CHC required minimum 4 no. of specialist.

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Majority of the respondents were landless labor followed by people in government service or business owners with an annual income not more than 100,000. 30% of the patients surveyed had health insurance as a primary source of health related costs, which indicates increasing trend of awareness among people. 50% of patients are below poverty line group. 30% patients are middle income group. 50% of patients are middle income group & 5% patients are high income group. Mainly people depend on Biju Swasthya Kalyan Yojana (BSKY), Biju Krushak Kalyan Yojana or BKKY, Rastriya Swasthya Bima Yojana (RSBY) schemes.

## VI. CONCLUSION

Health facilities are an essential requirement to live a healthy life; it became prime importance in all the areas. At the time of study, significant gaps were observed in the facilities available at various peripheral healthcare services of Deogarh district. It is therefore recommended that identified gaps including infrastructure, human resources, equipments and drugs should be addressed on priority basis to achieve desired goals.

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