

**GAP ANALYSIS AND ACTION PLAN FOR HEALTH AND WELLNESS
CENTRES IN CHANDIGARH: HWC DHANAS, HWC MALOYA, AND HWC
KAIMBWALA**

Dissertation Submitted to



The IIHMR University, Jaipur

for the partial fulfilment for the award of the degree of

Master of Business Administration (MBA)

in

Hospital and Health Management

By

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Under the Supervision and Guidance of

Dr Mamta Chauhan

2024

**STATE HEALTH SOCIETY
(National Health Mission)
U.T., CHANDIGARH**

No. NHM-UT/Estt./2024/ **3271**

Dated Chd the **28.06.2024**

TO WHOMSOEVER IT MAY CONCERN

This is to certify that Dr. Surbhi Jain D/o Vipin Kumar, student of MBA (Hospital and Health Management) 2022-24 at Indian Institute of Health Management Research, IIMR Jaipur has successfully completed her Internship Training from 18.03.2024 to 15.06.2024 in National Health Mission-U.T, Chandigarh. During this period, her performance was found to be Excellent.

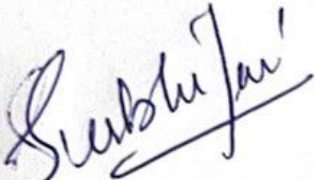
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DECLARATION BY STUDENT

I hereby declare that this dissertation titled **Gap Analysis and Action Plan for Ayushman Aarogya Mandir/s in Chandigarh: AAM Dhanas, AAM Maloya, and AAM Kaimbwala**

is the bonafide record of my original research work. I declare that it has not been submitted to any other university or institution for the award of any degree or diploma. Information derived from the published or unpublished work of others has been duly acknowledged in the text.


(Signature)

Surbhi Jain

Date- 2 July 2024

CERTIFICATE

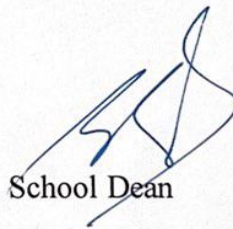
This is to certify that dissertation titled **Gap Analysis and Action Plan for Health and Wellness Centres in Chandigarh: HWC Dhanas, HWC Maloya, and HWC Kaimbwala** is record of the research work undertaken by **Dr. Surbhi Jain** in partial fulfilment of the requirements for the award of the degree of MBA (Hospital and Health Management) from the IIHMR University, Jaipur under my guidance and supervision and her approach to the research study has been sincere, scientific, and analytical.



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Abstract

The National Health Mission (NHM) is India's flagship program for strengthening primary and secondary healthcare, aiming for universal access to equitable, affordable, and high-quality health services. Emphasizing the importance of comprehensive primary healthcare (CPHC), NHM focuses on preventive, promotive, curative, rehabilitative, and palliative care. The National Health Policy 2017 introduced Health and Wellness Centres (HWCs) as the primary platform for delivering CPHC. HWCs aim to address a broad range of health needs, including non-communicable diseases, mental health, and emergency care, while providing free essential medications and diagnostics. Despite the predominance of private healthcare providers, the NHM seeks to strengthen public health systems, improve health outcomes, and reduce healthcare costs.

The Ayushman Bharat initiative, launched in 2018, aims to transform 150,000 sub-health centres and primary health centres into HWCs, complementing the Pradhan Mantri Jan Arogya Yojana (PMJAY) to provide financial protection for secondary and tertiary care. This dual approach aims to achieve universal health coverage in India by enhancing primary healthcare delivery and reducing the burden on higher-level care facilities. Although establishment of HWCs have made healthcare accessible to the communities there is still not a proportional improvement in health outcomes due to gaps in service delivery, resource allocation, and infrastructure. This study aims to identify these gaps and provide recommendations to enhance the effectiveness of HWCs in delivering comprehensive primary healthcare.

Objectives:

This study aims to understand the following-

1. To Identify Operational Gaps at AAMs.
2. To develop Actionable Recommendations based on the findings of the gap analysis.

Methodology:

This descriptive study examines operational gaps in AAM Dhanas, AAM Maloya, and AAM Kaimbwala to enhance healthcare service delivery. The goal is to provide a comprehensive understanding of the challenges faced by the selected AAMs and offer practical solutions to improve healthcare service delivery.

Primary data was collected through direct observations and staff interviews, guided by a departmental checklist. Secondary data was obtained from health records, hospital reports, and registers. The data collected was both qualitative and quantitative. Data analysis involved gap analysis to compare current practices against benchmarks, thematic analysis of qualitative data, and descriptive statistics for quantitative data.

Results:

Assessment of three AAMs was done: Dhanas, Maloya, and Kaimbwala. Despite infrastructure shortages, AAM Maloya has the highest OPD visits, followed by Dhanas with 2,500 OPD per month. AAM Kaimbwala has the lowest visits, i.e. 1,200 per month, due to inadequacy of even basic infrastructure. By allocating staff responsibilities well, AAM Kaimbwala has high NCD enrollment rates 60% compared to Dhanas and Maloya, where ANMs manage every task. All centres have limited availability of diagnostic tests. Also, none of the centres have 172 drugs as per the essential drug list guidelines. AAM Maloya has the highest number of pregnant women registered (69), but its ABHA ID seeding to RCH portal is the lowest (20), suggesting that there are gaps in the integration of digital health across all facilities. These results show that there is a huge room for improvement at these AAMs to come at par with the standards set by Ayushman Bharat guidelines.

Conclusion:

The present study highlights significant disparities in healthcare delivery among the AAMs in Kaimbwala, Dhanas, and Maloya. These differences are attributed to factors such as infrastructure, staff management, diagnostic capabilities, medicine availability, and digital health integration. Despite infrastructure limitations, AAM Maloya had the highest number of OPD visits, whereas AAM Kaimbwala lags due to critical shortcomings. Every facility fails to meet medical and diagnostic criteria, which lowers the quality of care. The fact that only AAM Dhanas satisfies infrastructure requirements shows how other centers must make improvements. To guarantee fair access to high-quality healthcare and improved patient outcomes across all AAMs, it is imperative to optimize personnel responsibilities, improve infrastructure, and enhance digital health integration.

Keywords: AAMs, PHCs, Health system, NHM, Districts

ACKNOWLEDGEMENT

I would like to express my sincere gratitude for the invaluable opportunity to work as an intern at the National Health Mission, Chandigarh, during the summer of 2024. This internship has been a truly enriching experience that has significantly contributed to my professional development in Hospital and Health Management.

I am particularly grateful to **Dr. Suman Singh, Director Health and Family Welfare cum Mission Director, UT Chandigarh**, for providing me with the opportunity to work as an intern at such a prestigious organization.

My deepest appreciation goes to **Dr. Charru Singla, Nodal Officer, NHM Chandigarh**, for her constant guidance, support, and encouragement throughout my internship. Her insights and expertise have been instrumental in my learning journey.

I would also like to thank **Dr. Anju, SPMU, NHM, UT Chandigarh**, for her valuable guidance.

I am thankful to my university mentor, Dr **Mamta Chauhan**, for her continued support and for facilitating this internship opportunity.

The knowledge and skills I gained during this internship will undoubtedly prove valuable in my future endeavors.

Sincerely,

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Abbreviations

NHM	National Health Mission
NUHM	National Urban Health Mission
NRHM	National Rural Health Mission
AAM	Ayushman Aarogya Mandir
UPHC	Urban Primary Health Centre
IPHS	Indian Public Health Standards
NHSRC	National Health System Resource Centre
NCDs	Non-Communicable Diseases
HMIS	Health Management Information System
AAM	Ayushman Arogya Mandir
IDSP	Integrated Disease Surveillance Program
NVBDCP	National Vector Borne Disease Control Program
NLEP	National Leprosy Eradication Program
NPCB	National Program for Control of Blindness
NPPCD	National Program for Prevention and Control of Deafness
NCDs	Non-Communicable Diseases
AYUSH	Ayurveda, Yoga & Naturopathy, Unani, Sidha and Homeopathy
MO	Medical Officer
LHV	Lady Health Visitor
ANM	Auxiliary Nurse Midwifery

Chapter 1: Introduction

The National Health Mission (NHM), the country's flagship health system strengthening programme, particularly for primary and secondary health care, aims to achieve "universal access to equitable, affordable, and high-quality health care that is accountable to people's needs." Health services are designed to meet the health needs of the community. There is global evidence that primary health care is critical to improving health outcomes. It has an important role in the primary and secondary prevention of several diseases, including non-communicable diseases. The provision of comprehensive primary health care reduces morbidity and mortality at much lower costs and significantly reduces the need for secondary and tertiary care. For primary health care to be comprehensive, it needs to span preventive, promotive, curative, rehabilitative, and palliative aspects of care. Primary health care goes beyond first contact care and is expected to mediate a two-way referral support to higher-level facilities (from primary to specialized care and back) and ensure follow up-support for individual and population health interventions ([1](#)).

The National Health Policy 2017 (MoHFW, 2017) recommended the establishment of health and wellness centres (HWC) as the primary platform for providing comprehensive primary health care (CPHC) in India.

The goal of HWC (now called Ayushman Arogya mandir) is to provide comprehensive primary and preventive health care (CPHC) that extends beyond the treatment of mothers and children. These services include care for non-communicable diseases, oral, eye, ENT, and mental health, as well as first-level care for emergencies and trauma. Additionally, free essential medications and diagnostic services are included (MoHFW, 2018).

To deliver CPHC through HWCs, the government envisioned a paradigm shift at all levels of the health system, as shown in Figure 1.1

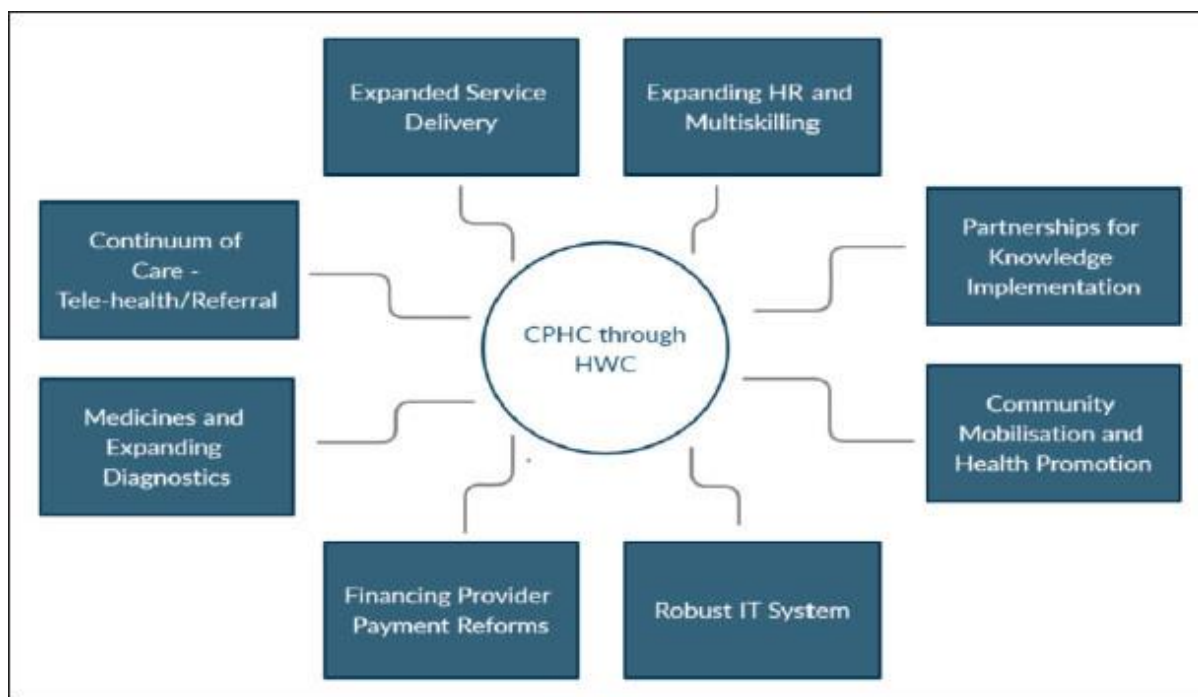


Figure 1.1- Ensuring CPHC through HWC.

Studies show that 11.5% households in rural areas and about 4% in urban areas reported seeking any form of OPD care - at or below the CHC level (except for childbirth), indicating low utilization of the public health systems for other common ailments.

1. According to National Sample Survey estimates, households facing catastrophic healthcare expenditures increased by 10% between 2004 and 2014. This could be attributed to the fact that the private sector continues to be the country's largest provider of health services, accounting for more than 75% and 62% of outpatient and inpatient care, respectively. India is also witnessing an epidemiological and demographic transition, where noncommunicable diseases such as cardiovascular, diabetes, cancer, respiratory, and other chronic diseases account for more than 60% of total mortality (3).

2. There is global evidence that Primary Health Care is essential for improving health outcomes. It plays an important role in the primary and secondary prevention of many diseases, including noncommunicable diseases. Comprehensive Primary Health Care reduces morbidity and mortality at a much lower cost, reducing the need for secondary and tertiary care. To be truly comprehensive, primary health care must include preventive, promotional, curative, rehabilitative, and palliative care. Primary health care extends beyond first contact care and is expected to mediate two-way referral support to higher-level facilities (from first

level care provider to specialist care and back) as well as provide follow-up support for individual and population health interventions.

In India, the need for and emphasis on strengthening primary health care was first articulated in the Bhore Committee Report 1946, followed by the First and Second National Health Policy Statements (1983 and 2002). India also signed the Alma Ata Declaration for Health for All in 1978. The Twelfth Five Year Plan identified Universal Health Coverage as a key goal and, based on the recommendations of the High-Level Expert Group Report on UHC, proposed a 70% budgetary allocation to Primary Health Care in pursuit of UHC for India. The National Health Policy of 2017 recommended strengthening the delivery of Primary Health Care through the establishment of "Health and Wellness Centres" as the platform to deliver Comprehensive Primary Health Care and called for a commitment of two thirds of the health budget to primary health care (4).

In February 2018, the Government of India announced that 1,50,000 Health & Wellness Centres would be created by transforming existing Sub Health Centres and Primary Health Centres to deliver Comprehensive Primary Health Care and declared this as one of the two components of Ayushman Bharat. This was the first step in the conversion of policy articulations to a budgetary commitment. The Report of the Primary Health Care Task Force, Ministry of Health and Family Welfare, Government of India while reiterating that primary health care is the only affordable and effective path for India to Universal Health Coverage, also provided valuable insights into structure and processes that are required in health systems to enable Comprehensive Primary Health Care (CPHC). The delivery of CPHC through AAMs is heavily reliant on the institutional mechanisms, governance structures, and systems established under the National Health Mission. NHM, as part of the country's health system reform, has helped states create several platforms for delivering community-based health systems, as well as expand Human Resources for Health and infrastructure to strengthen primary and secondary care. Despite being largely limited to a few conditions, NHM developed mechanisms for expanding coverage and reach, as well as systems for improving medicine delivery, diagnostics, and reporting. These components were first introduced in urban areas about five years ago.

Thus, although the delivery of universal Comprehensive Primary Health Care, through HWCs builds on existing systems, it will need change management and systems design at various levels, to realise its full potential. The other component of Ayushman Bharat, namely

the Pradhan Mantri Jan Arogya Yojana (PMJAY) aims to provide financial protection for secondary and tertiary care to about 40% of India's households. Its success and affordability rests substantially on the effectiveness of provision of Comprehensive Primary Health Care through AAMs. Together, the two components of Ayushman Bharat will enable the realization of the aspiration for Universal Health Coverage.

The expanded range of services at AAMs comprise a comprehensive and exhaustive list, which has been planned in an incremental manner. The services comprise the following:

- Care in pregnancy and childbirth.
- Neonatal and infant health care services
- Childhood and adolescent health care services.
- Family planning, contraceptive services and other reproductive health care services
- Management of communicable diseases: National health programmes
- Management of common communicable diseases and general out-patient care for acute simple illnesses and minor ailments
- Screening, prevention, control and management of non-communicable diseases and chronic communicable diseases like TB and leprosy
- Basic oral health care
- Care for common ophthalmic and ENT problems
- Elderly and palliative health care services
- Emergency medical services
- Screening and basic management of mental health ailments

In comparison with the IPHS guidelines of 2012, the revised IPHS 2022 guidelines classify the HWCs as:

1. Health and Wellness Centres -

Primary Health Centre: a) HWC-PHC in rural areas

b) HWC- UPHC in urban areas

2. Health and Wellness Centres –

Sub Health Centre: a) Health and Wellness Centre - Sub Health Centre in rural areas

b) Urban Health & Wellness Centre in urban areas

These Centres will provide healthcare services such as health promotion, early detection, treatment adherence, follow-up care, ensuring continuity of care through appropriate referrals, optimal home and community follow-up, disease surveillance, and health promotion and prevention for the expanded range of CPHC.



AB-HWCs Ayushman Bharat- Health & Wellness Centres; *CHO* Community health officers; *HIS* Health information system; *HR* Human resources; *MLHP* Mid-level healthcare provider; *IT* Information and technology

Figure 1.2 Key components and design aspects of AB-AAMs

Chapter 2- Review of literature

The following literature review aims to provide a comprehensive analysis of the current state by critically examining and synthesizing findings from a selection of nine relevant research papers. These papers were carefully chosen based on their significance, rigor, and relevance to the study objectives.

Table 2.1- Overview of reviewed papers.

Author	Study location	Sample size	Methodology	Salient features
Smita K Panda, Devasish Panda, Ritesh R Behera, corresponding author Sadhu C Panda, Aruna Munda, and Pranab R Sahu and 2016	Western Odisha	43 health and wellness centers (all rural PHCs and urban PHCs) in the Sambalpur and Deogarh districts of Western Odisha	cross-sectional study and convenience sampling technique	Found the key drawback in service delivery. During the survey, only 66% of human resources were functioning. Out of 12 service packages of health services, family planning, and other contraceptive services, management of communicable disease through the National Health Program, general outpatient care for simple illnesses, screening, prevention, control, and management of NCDs were most often available at all facilities.

Rathod H, Pithadia P, Patel D, Goswami M, Parmar D, Kotecha I (2020)	Western Gujarat	29 AAMs were selected randomly out of the 58 AAMs in Jamnagar district, and 25 analysed	a cross-sectional study	The study observed satisfactory performance of health and wellness centres except, barring a few indicators, community health workers and multipurpose workers are available in about the majority of centres. The study found prevalence of non- communicable diseases
Sood, Abhilash et al. (2021)	District of Himachal Pradesh.	10 AAMs fulfilling inclusion criteria were randomly selected for the assessment	cross-sectional study	Study tool used was a validated checklist prepared by the National Health Mission, Government of Himachal Pradesh. Their results showed that there was deficient human resource in Health and wellness centres (PHCs and SCs). Inadequate skill competencies observed especially in

				newly appointed health care workers. Equipment for telemedicine was available at each health centre, but none or very few teleconsultations are being done by health care workers.
Goswami P et al. (2021)	Community Development Block of Purba Bardhaman District, West Bengal	38 subcentre	Cross- sectional study	They concluded that no sub centre had a Community Health Officer and 23.7% of subcentre were without a second ANM. 28.9% of the ANMs had adequate knowledge about services to be delivered through AAMs. In case of the infrastructure, lack of staff residential facilities (76.3%), water supply (34.2%), and inadequate civil construction (34.2%) were the major barriers.

Prinja S, Purohit N, Kaur M, Kshirsagar S, A BM, Kotwal A and 2023	Punjab	8 AAMs followed by 16 in depth interviews	Mixed-method approach	The study identified important facilitators and barriers and offered a thorough evaluation of the work performance at AAMs. To ensure a comprehensive understanding, it incorporated viewpoints from a variety of stakeholders, such as administrators, beneficiaries, and healthcare professionals. The study's conclusions led to practical suggestions for improving AAM performance that tackled systemic as well as operational issues. Furthermore, the study offered context-specific insights unique to Punjab that can guide regionally tailored approaches to enhancing basic healthcare delivery.
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Erin Hannah, Neha Dumka, Devajit Bora, Ashoke K. Roy, Atul Kotwal and 2023	Districts of Manipur	8 AAMs from 3 districts	Cross-sectional study	NCD services are implemented, and effectiveness assessed as it evaluates infrastructure, personnel readiness, and service delivery to pinpoint areas of strength and development in the healthcare industry. The study emphasizes the necessity of ongoing surveillance and customized interventions to improve the quality and accessibility of NCD care, offering policymakers insightful information to fortify primary healthcare systems in the area.
Hetal Rathod, Pradeep Pithadia, Disha Patel, Mukesh Goswami, Dipesh Parmar, Ilesh Kotecha, 2020	Districts of Western Gujrat	25 AAMs	Cross-sectional Study	The study evaluates the effectiveness of these centers in providing comprehensive primary healthcare services, emphasizing preventive and promotive health. It

				looks at important performance metrics like patient happiness, service quality, accessibility, and general health outcomes. The study draws attention to issues that AAMs deal with, such as staff training requirements, resource constraints, and infrastructure shortcomings. The results highlight how crucial it is to have ongoing policy support and monitoring to expand the effectiveness and reach of AAMs and, eventually, improve community health outcomes.
Shrikant Madhukar Ambekar, S.Z. Quazi, Abhay Gaidhane, Prashant Uikey and 2021	District in Maharashtra	1 district	Implementation Research	The core components of this study are the integration of primary healthcare services, community participation, health promotion initiatives, and service delivery.

				The protocol describes methods for gathering both qualitative and quantitative data from healthcare practitioners and beneficiaries. These methods include surveys, interviews, and focus groups. It aims to measure the influence on community health outcomes, assess the quality of services rendered, and pinpoint obstacles and enablers to successful AAM implementation. The evaluation's conclusions should help guide policy choices and increase the efficacy and scalability of AAMs throughout India.
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Chapter 3: Methodology

Research Question:

The primary research question guiding this study is:

What are the key operational gaps in AAM Dhanas, AAM Maloya, and AAM Kaimbwala, and how can these gaps be effectively addressed to enhance healthcare service delivery?

This question encapsulates the core focus of the research, which is to identify areas for improvement within the selected health and wellness centers and develop actionable strategies to bridge these gaps.

Objectives:

This study aims to understand the following-

1. To Identify Operational Gaps at AAMs.
2. To develop Actionable Recommendations based on the findings of the gap analysis.

Study Design: Descriptive study

- Type of data -primary and secondary data
- Primary Data was collected by observations and interviews of the key personnel involved using departmental checklist for each AAM.
- Secondary data was collected by reviewing health records, hospital reports, registers provided by each AAM.

Duration of Study: Duration of study is three months from 18th March 2024 to 15th June 2024

Limitations of study-

1. Sample Size- The study's findings are based on a limited number (3) of AAMs in Chandigarh, depending on the available resources and time constraints.
2. Generalisabilities- Findings of the study are specific to the context of Chandigarh and directly not applicable to AAMs in other regions, socio-cultural and demographic characteristics of Chandigarh are limiting the generalizability of the study's results.



Figure 3.1- Glimpse of AAM Kaimbwala, Chandigarh



Figure 3.2- Glimpse of AAM Maloya, Chandigarh



Figure 3.3- Glimpse of AAM Dhanas, Chandigarh

Chapter 4 - Results

- **Comparative analysis of OPD Performance at AAMs**

Figure no 4.1 depicts that the number of OPD visits per month serves as a key indicator of each center's ability to attract and manage patient flow, reflecting both patient demand and the quality of services provided.

AAM Dhanas sees approximately 2500 OPD visits per month. This high patient flow can be attributed to its well-developed infrastructure, which includes a sufficient patient waiting area, a dedicated laboratory ample storage space, reliable electricity supply, a consistent drinking water supply, and a yoga space. These facilities ensure that patients receive comprehensive care, which enhances patient satisfaction and increases the number of visits.

AAM Maloya, despite certain infrastructural limitations, manages to attract around 2700 OPD visits per month, slightly higher than AAM Dhanas. While AAM Maloya lacks a lab room and a yoga space, it compensates with a sufficient patient waiting area, adequate storage space, and essential utilities such as electricity and drinking water. The center's ability to handle a high patient load despite these gaps suggests efficient use of available resources, possibly through higher staffing levels or effective community outreach, which boosts patient confidence and demand for services.

In contrast, AAM Kaimbwala experiences significantly less OPD visits, with approximately 1200 per month. The center faces substantial infrastructural challenges, including an insufficient patient waiting area, no space for yoga and lack of drinking water facility. These deficiencies likely impede the quality of care provided, leading to lower patient satisfaction and reduced visits.

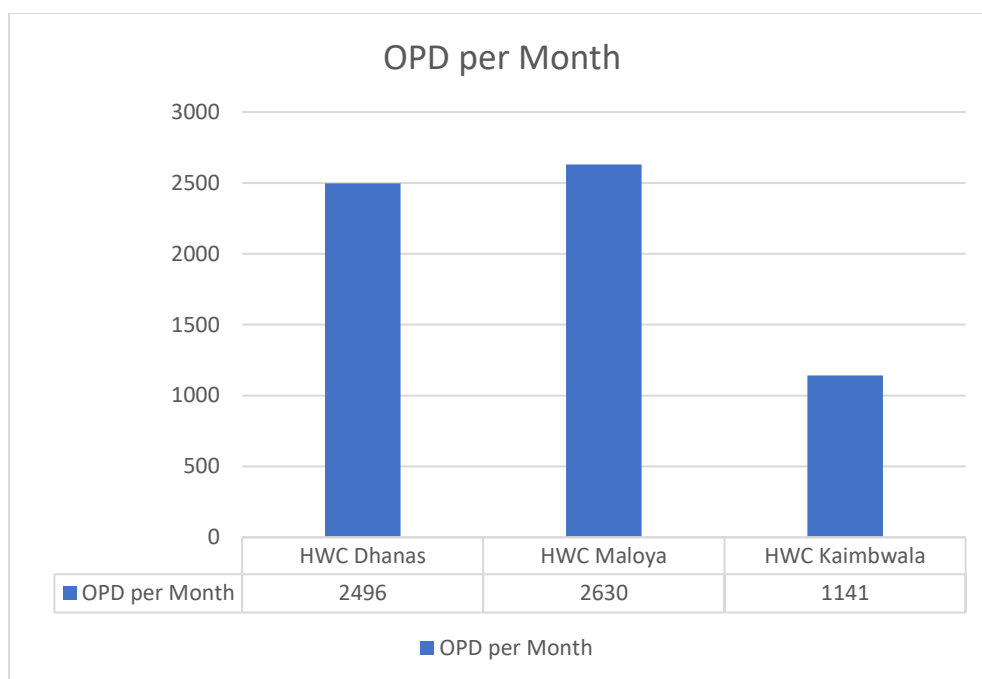


Figure 4.1- Analysis of OPD Performance at AAMs

- **Analysis of NCD Enrollment at AAMs**

The figure 4.2 displays the Non-Communicable Disease (NCD) enrollment percentages for three AAMs: Dhanas, Maloya, and Kaimbwala. The data indicates varying levels of success in enrolling patients into NCD programs, which can be influenced by several operational factors.

AAM Kaimbwala has the highest NCD enrollment, reaching approximately 60%. This impressive performance can be attributed to the efficient division of duties among the staff. Specifically, the responsibilities for NCD enrollment were distributed between Data Entry Operators (DEOs) and Multipurpose Health Workers (MPHWs). This strategic delegation of tasks reduced the workload on Auxiliary Nurse Midwives (ANMs), allowing for a more focused and efficient approach to NCD portal enrollment and patient screenings.

In contrast, AAM Dhanas and AAM Maloya exhibit lower NCD enrollment rates, around 20% each. In these centers, ANMs were solely responsible for managing the NCD portal enrollment and conducting screenings. This additional burden on ANMs likely contributed to lower enrollment rates, as the increased workload could lead to time constraints and potentially lower efficiency in enrolling patients into the NCD programs.

The data highlights the significant impact that staff role distribution and workload management can have on the success of health programs. AAM Kaimbwala's higher NCD enrollment demonstrates the benefits of optimizing staff duties to ensure more effective service delivery, while the lower enrollment rates at AAM Dhanas and AAM Maloya suggest a need for similar strategic adjustments to improve their NCD program participation.

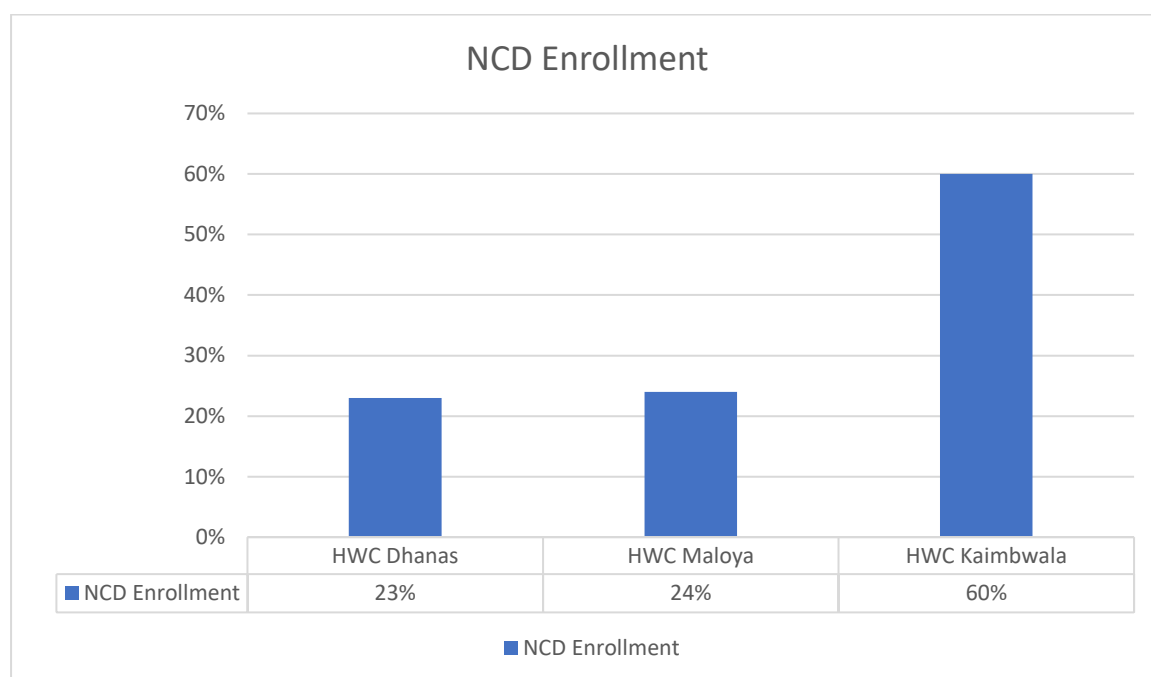


Figure 4.2 - Analysis of NCD Enrollment at AAMs

- ### Analysis of Diagnostic Test Availability at AAMs

The figure 4.3 shows the number of diagnostic tests available at three AAMs: Dhanas, Maloya, and Kaimbwala. According to Ayushman Bharat guidelines, each facility should offer a total of 63 diagnostic tests. However, the data reveals that none of these facilities meets this standard.

AAM Dhanas has approximately 35 diagnostic tests available. While this number is substantial, it still falls significantly short of the recommended 63 tests. This limitation likely impacts the center's ability to provide comprehensive diagnostic services, necessitating referrals to other facilities for certain tests, which can delay diagnosis and treatment.

Similarly, AAM Maloya also offers around 35 diagnostic tests. Despite its ability to attract a high number of OPD visits, the limited range of available diagnostic tests could hinder effective

patient care. Patients may need to visit other centers to complete their diagnostic procedures, which can be inconvenient and affect the continuity of care.

AAM Kaimbwala has the highest number of diagnostic tests available among the three centers, with approximately 40 tests.

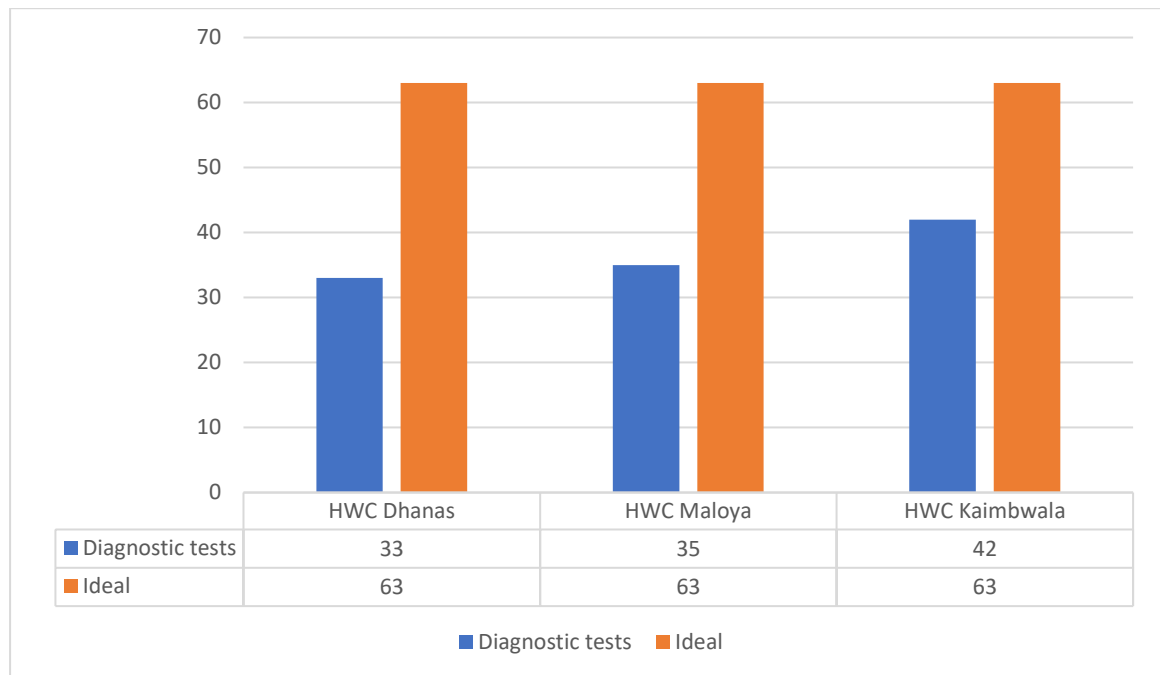


Figure 4.3- Analysis of Diagnostic Test Availability at AAMs

• Analysis of Medicine Availability at AAMs

The figure 4.4 illustrates the availability of medicines at three AAMs: Dhanas, Maloya, and Kaimbwala. According to Ayushman Bharat guidelines, each facility should have approximately 172 medicines available to ensure comprehensive patient care. However, the data reveals significant gaps in medicine availability across all three centers, likely due to issues with indent and procurement processes.

At AAM Dhanas, around 145 medicines are available. While this number is relatively high compared to the other two centers, it still falls short of the required 172 medicines. The shortfall in available medicines may affect the center's ability to provide comprehensive treatment, potentially necessitating referrals or causing interruptions in patient care due to the unavailability of essential drugs.

AAM Maloya has about 130 medicines available. Despite its capacity to manage a high number of OPD visits, the limited availability of medicines indicates that the center may face challenges in offering complete therapeutic options. This gap in medicine availability can impact the quality of care and patient outcomes, as certain necessary treatments might not be readily accessible.

AAM Kaimbwala shows the lowest availability of medicines, with approximately 90 medicines on hand. This significant shortfall compared to the guideline of 172 medicines underscores a critical issue in the center's ability to provide adequate medical care. The limited range of available medicines likely contributes to lower patient satisfaction and could be a factor in the center's lower OPD visits and overall service effectiveness.

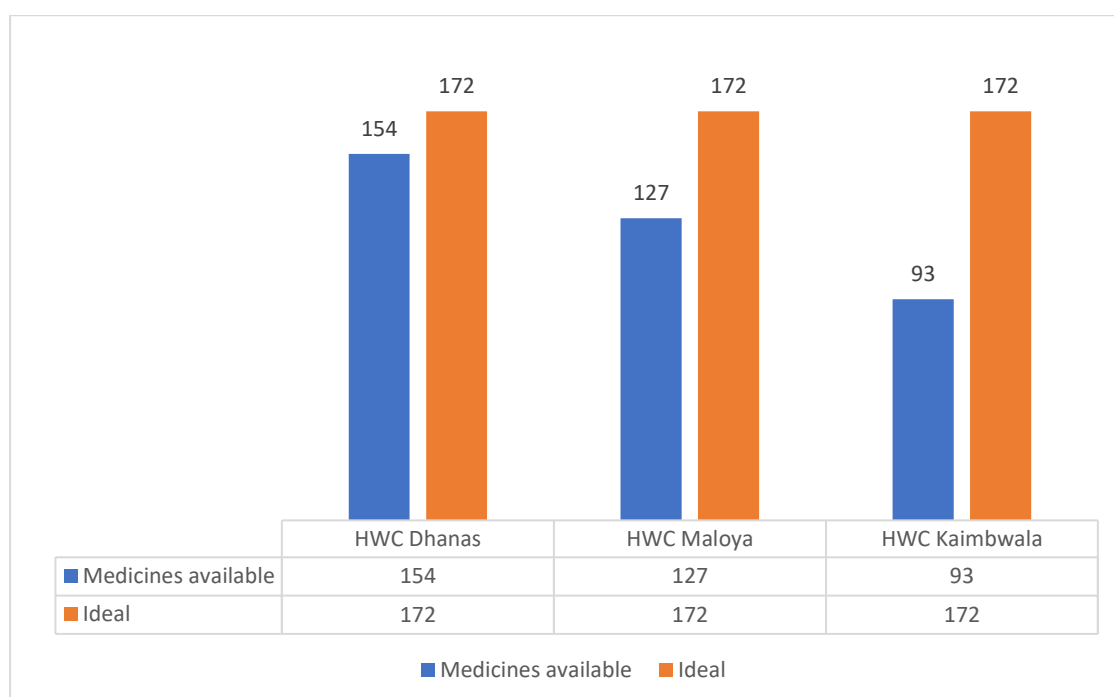


Figure 4.4 - Analysis of Medicine Availability at AAMs

- **Analysis of Infrastructure and Facilities at AAMs**

The availability of adequate space and separate toilets for male and female patients and staff is a critical aspect of healthcare infrastructure. This report examines the facilities at three AAMs: Dhanas, Maloya, and Kaimbwala.

Availability of Adequate Space and Separate Toilets

AAM Dhanas is the only facility among the three that meets the standards for adequate space and separate toilets for both male and female patients and staff. The center boasts a well-structured waiting area, ensuring patients have a comfortable space while waiting for their appointments. Additionally, the provision of separate toilets for males and females addresses privacy and sanitation needs, enhancing the overall patient and staff experience.

In contrast, AAM Maloya and AAM Kaimbwala both face significant challenges in this regard. Neither facility has sufficient space for a proper waiting area, which can lead to overcrowding and discomfort for patients. Moreover, the lack of separate toilets for male and female patients and staff at these centers highlights a critical gap in their infrastructure. This deficiency not only affects the comfort and privacy of individuals but also raises concerns about hygiene and sanitation standards.

- **Physical Infrastructure Assessment of Ayushman Arogya Mandir (AAMs)**

Table 4.1- Physical Infrastructure Assessment of AAMs

<i>Physical Infrastructure</i>	<i>AAM Dhanas</i>	<i>AAM Maloya</i>	<i>AAM Kaimbwala</i>
Patient waiting area	Yes	Insufficient	Insufficient
Sample collection Room	Yes	No	No
Storage Space	Yes	Yes	Yes
Electricity Supply	Yes	Yes	Yes
Drinking Water Supply	Yes	Yes	No
Yoga Space	Yes	No	No
Biomedical waste management being done or not	Yes	Yes	Yes

The assessment of the physical infrastructure at three AAMs – Dhanas, Maloya, and Kaimbwala – reveals both strengths and areas requiring improvement in various facilities and services.

AAM Dhanas

AAM Dhanas demonstrates a well-equipped and comprehensive infrastructure catering to patient needs effectively. The center boasts a sufficient patient waiting area, ensuring comfort and accessibility for all visitors. The presence of a dedicated lab room facilitates timely diagnostic services, contributing to efficient patient care. Storage space is adequately managed, supporting the smooth functioning of the center. Essential utilities such as a consistent electricity supply and a reliable drinking water supply further enhance the center's operational capacity. Additionally, AAM Dhanas offers a designated yoga space, promoting holistic

wellness practices among patients. The center adheres to biomedical waste management protocols, ensuring a hygienic and safe environment.

AAM Maloya

AAM Maloya, while functional, exhibits certain infrastructural limitations. The patient waiting area is insufficient, potentially impacting patient comfort and flow during peak hours. The absence of a lab room hinders the ability to conduct on-site diagnostics, necessitating referrals to external facilities for laboratory services. Despite these challenges, the center maintains adequate storage space and ensures a continuous electricity supply. The drinking water supply is reliable, providing basic amenities to patients and staff. However, the lack of a designated yoga space limits the promotion of wellness activities within the center. AAM Maloya effectively manages biomedical waste, adhering to health and safety standards.

AAM Kaimbwala

AAM Kaimbwala faces several infrastructural shortcomings that need addressing to enhance service delivery. The patient waiting area is insufficient, which may lead to overcrowding and discomfort for patients. The absence of a lab room restricts the center's capacity to offer immediate diagnostic services. Despite these limitations, the center benefits from adequate storage space and a stable electricity supply. However, the lack of a drinking water supply poses a significant challenge, affecting both patient and staff well-being. Similar to AAM Maloya, AAM Kaimbwala does not provide a yoga space, limiting its ability to support holistic health practices. Nonetheless, the center manages biomedical waste appropriately, maintaining a safe and clean environment.

Lack of Defined Referral Mechanisms at Health and Wellness Centers

The lack of clearly defined referral mechanisms poses significant challenges to the efficient functioning of Health and Wellness Centers (AAMs) in Dhanas, Maloya, and Kaimbwala. A robust referral system is essential for ensuring that patients receive timely and appropriate care, especially when their health needs exceed the capabilities of primary healthcare facilities.

General Impact

The overall impact of not having a defined referral mechanism at these AAMs is multifaceted. Patients often encounter barriers when seeking advanced care, including confusion about where to go, long wait times, and the risk of discontinuity in care. These issues can lead to adverse health outcomes, particularly for patients with chronic conditions or those requiring urgent medical attention. Furthermore, healthcare providers at these centers face increased workloads as they attempt to manage referrals on an ad-hoc basis, detracting from their ability to deliver high-quality primary care.

- **Analysis of Registered Pregnant Women and ABHA ID Seeding with RCH Portal at AAMs**

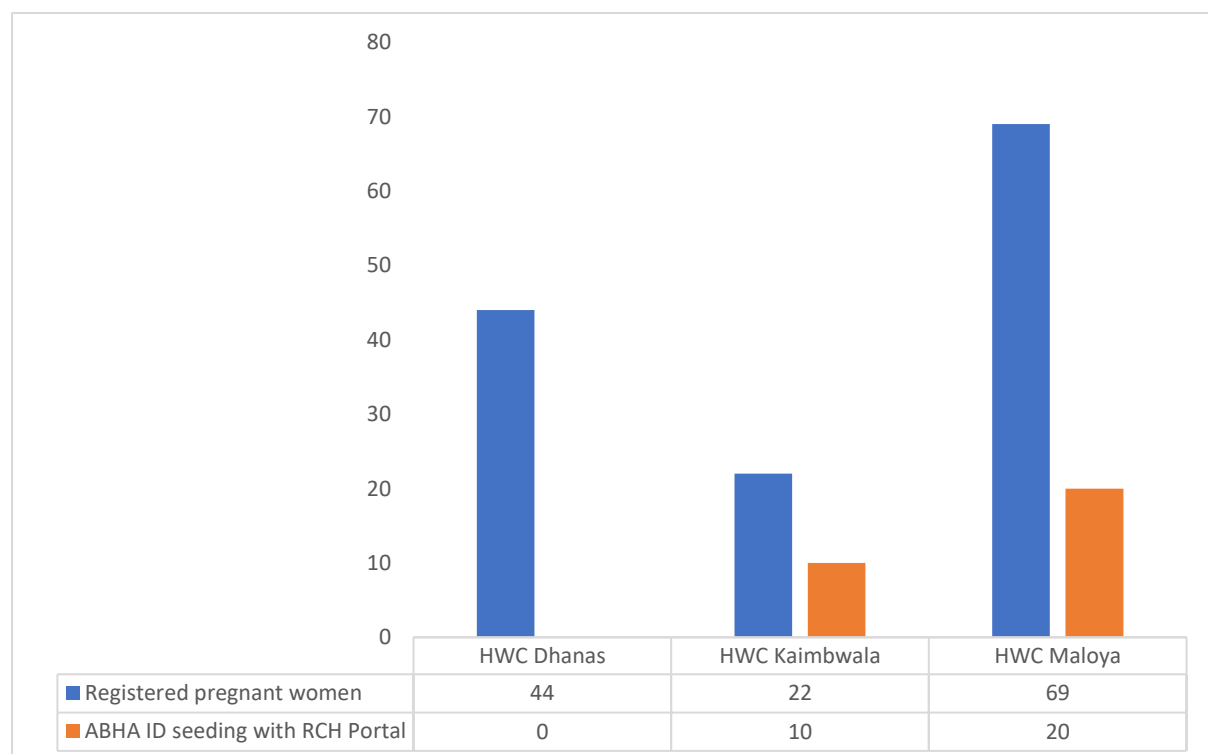


Figure 4.5- Analysis of Registered Pregnant Women and ABHA ID Seeding with RCH Portal at AAMs

The chart illustrates the number of registered pregnant women and the number of ABHA ID seedings with the RCH Portal across three Health and Wellness Centers (AAMs): Dhanas, Kaimbwala, and Maloya. The data highlights discrepancies in registration and ABHA ID seeding across these centers.

AAM Dhanas

- Registered Pregnant Women: 44
- ABHA ID Seeding with RCH Portal: 0

AAM Dhanas has registered 44 pregnant women, yet none of these registrations include ABHA ID seeding with the RCH Portal. This indicates a gap in integrating digital health initiatives with patient records, which could hinder the efficient tracking and management of maternal health services.

AAM Kaimbwala

- Registered Pregnant Women: 22
- ABHA ID Seeding with RCH Portal: 10

AAM Kaimbwala has registered 22 pregnant women, and 10 of these registrations include ABHA ID seeding with the RCH Portal. While this represents some integration of digital health records, there is still room for improvement to ensure all registered women are linked with ABHA IDs for better healthcare management.

AAM Maloya

- Registered Pregnant Women: 69
- ABHA ID Seeding with RCH Portal: 20

AAM Maloya has registered the highest number of pregnant women at 69, with 20 registrations including ABHA ID seeding with the RCH Portal. Despite having the highest number of total registrations, the proportion of ABHA ID seeding remains low, suggesting a need for better implementation of digital health integration.

Chapter-5 Discussion

- The objective of AAMs is to deliver high-quality preventive, promotive, curative, rehabilitative and palliative care services. The three AAMs' differences in OPD visits highlight how important infrastructure is to the provision of healthcare. AAM Kaimbwala's shortcomings draw attention to the urgent need for expansion and investment to raise its service standards, whereas AAM Dhanas and Maloya profit from their extensive facilities and effective resource usage. Filling in these gaps is crucial for boosting patient care as well as the general efficacy and standing of the offered healthcare services. Future initiatives should concentrate on community involvement, financial allocation, and infrastructure improvements to guarantee fair access to healthcare and better patient outcomes at all facilities.
- The examination of NCD enrolment rates at AAMs Maloya, Dhanas, and Kaimbwala reveals the critical impact of staff role distribution and workload management on program success. At 60%, AAM Kaimbwala had the greatest enrollment rate. This was made possible by the strategic assignment of NCD enrollment responsibilities to Multipurpose Health Workers (MPHWs) and Data Entry Operators (DEOs), which lessened the workload for Auxiliary Nurse Midwives (ANMs). More targeted and productive service delivery was made possible by this excellent task division. On the other hand, ANMs were given full responsibility for NCDs at AAM Dhanas and AAM Maloya, which had enrollment rates of about 20% each. This resulted in higher workloads and decreased efficiency. The results emphasize that in order to raise participation in health programs and enhance overall service quality, staff responsibilities must be optimized.
- The study looks at AAMs Dhanas, Maloya, and Kaimbwala's diagnostic test availability as well as its influence on the delivery of healthcare. AAM Dhanas and AAM Maloya each offer approximately 35 diagnostic tests, which is significantly below the recommended 63 tests. This constraint probably makes it more difficult for them to offer thorough diagnostic services, which could result in treatment and diagnosis delays as well as referrals to other facilities. With about 40 tests, AAM Kaimbwala has a little higher availability, but it is still below the recommended level. A higher number of NCD enrollments may be managed with the support of AAM Kaimbwala's larger number of diagnostic tests, highlighting the

significance of sufficient diagnostic skills for successful chronic illness management. All things considered, the limited selection of diagnostic tests offered by the three hospitals highlights the necessity of better diagnostic services in order to improve patient care and treatment results.

- The research assesses the availability of medicines at AAMs Dhanas, Maloya, and Kaimbwala, highlighting its impact on healthcare provision. AAM Dhanas offers around 145 medicines, which, while relatively high compared to the other centers, falls short of the required 172 medicines. This deficiency might force referrals and cause treatment to be interrupted. With over 130 medications, AAM Maloya faces difficulties in offering comprehensive treatment options even while handling a significant volume of outpatient visits. Patient outcomes and the quality of care might be impacted by the scarcity of medications. With about 90 medications, AAM Kaimbwala has the lowest availability, much less than the recommended amount. This shortcoming probably makes it more difficult to provide appropriate medical care, which lowers patient satisfaction and reduces OPD visits. The collective results emphasize the necessity of enhancing medication accessibility throughout all facilities to guarantee essential facilities to guarantee thorough and efficient medical care. With an emphasis on space and sanitary amenities, the study paper looks at the infrastructure standards at AAMs Dhanas, Maloya, and Kaimbwala. AAM Dhanas satisfies the requirements for sufficient room and gender-specific restrooms for both male and female patients and employees, offering a welcoming waiting area and improving the overall experience for all parties. On the other hand, AAM Maloya and AAM Kaimbwala confront major difficulties because they don't have enough room for adequate waiting spaces and private restrooms. Due to this shortfall, there is discomfort, overcrowding, and worries about sanitation and hygiene, which emphasizes the need for focused infrastructural upgrades.
- With an emphasis on space and sanitary amenities, the study paper looks at the infrastructure standards at AAMs Dhanas, Maloya, and Kaimbwala. AAM Dhanas satisfies the requirements for sufficient room and gender-specific restrooms for both male and female patients and employees, offering a welcoming waiting area and improving the overall experience for all parties. AAM Kaimbwala and Maloya, on the other hand, have a lot more difficulties because they lack at these facilities to improve staff productivity and patient care. The cumulative effects of these AAMs' lack of a clear referral process are numerous. When seeking advanced care, patients frequently run into obstacles including

not knowing where to go, having to wait a long time, and running the danger of their care being interrupted. These problems may have a negative impact on health, especially for individuals who need emergency care or have long-term medical illnesses. Furthermore, the analysis of pregnant women's registrations and ABHA ID seeding with the RCH Portal at AAMs Dhanas, Maloya, and Kaimbwala reveals significant disparities in the integration of digital health services. Healthcare providers at these centers are burdened with more work as they attempt to manage referrals on an as-needed basis, which interferes with their ability to provide high-quality primary care. health-related projects.44 pregnant women have been registered with AAM Dhanas; however, none of these registrations involve the seeding of the ABHA ID with the RCH Portal. This disparity suggests that patient records and digital health initiatives are not integrated, which could impede the effective monitoring and administration of maternal health services.22 pregnant women have been registered with AAM Kaimbwala; 10 of these registrations include the seeding of the ABHA ID with the RCH Portal. While this demonstrates a certain degree of integration with digital health records, much work remains to be done to guarantee comprehensive healthcare management for all women who are registered. With 69 registered pregnant women, AAM Maloya has the highest number; however, only 20 of these registrations involve the seeding of the ABHA ID with the RCH Portal. The percentage of ABHA registrations is the highest overall, however ID is still low, which emphasizes the necessity of improving digital health integration implementation.

Chapter -6 Conclusion and Recommendations

In conclusion, the comparative analysis of Health and Wellness Centers (AAMs) in Kaimbwala, Dhanas, and Maloya reveals critical insights into the factors influencing healthcare delivery. The disparities in outpatient department (OPD) visits underscore the pivotal role of infrastructure in healthcare provision. While AAM Dhanas and Maloya benefit from extensive facilities and efficient resource utilization, AAM Kaimbwala's shortcomings highlight an urgent need for expansion and investment to enhance service standards. Addressing these gaps is essential for improving patient care, overall service effectiveness, and the healthcare system's reputation. Future efforts should prioritize community engagement, financial allocation, and infrastructure improvements to ensure equitable access to healthcare and better patient outcomes across all facilities.

The examination of non-communicable disease (NCD) enrollment rates further emphasizes the importance of staff role distribution and workload management. AAM Kaimbwala's highest enrollment rate at 60% demonstrates the effectiveness of strategically assigning NCD enrollment tasks to Multipurpose Health Workers (MPHWs) and Data Entry Operators (DEOs), alleviating the workload for Auxiliary Nurse Midwives (ANMs). In contrast, the full responsibility placed on ANMs at AAM Dhanas and AAM Maloya, resulting in lower enrollment rates of approximately 20%, highlights the need for optimized staff roles to enhance participation in health programs and overall service quality.

The study also highlights significant gaps in diagnostic test availability, with all three AAMs falling short of the recommended 63 tests. This limitation hampers comprehensive diagnostic services, potentially leading to delays in diagnosis and treatment. AAM Kaimbwala, with slightly better test availability, showcases the positive impact of adequate diagnostic capabilities on managing NCD enrollments. Therefore, improving diagnostic services is crucial for better patient care and treatment outcomes.

Moreover, the assessment of medicine availability reveals deficiencies that could disrupt treatment and patient outcomes. AAM Dhanas, offering around 145 medicines, still falls short of the required 172, while AAM Maloya and AAM Kaimbwala face even more significant

challenges with 130 and 90 medicines, respectively. Ensuring adequate medication supply across all facilities is imperative for delivering comprehensive and effective medical care.

Infrastructure standards, particularly space and sanitary amenities, vary significantly among the AAMs. AAM Dhanas meets the requirements, providing a comfortable environment for patients and staff, whereas AAM Maloya and AAM Kaimbwala face substantial challenges due to inadequate facilities. These inadequacies lead to discomfort, overcrowding, and hygiene concerns, highlighting the need for targeted infrastructural improvements.

The integration of digital health services, as seen in the registration of pregnant women and ABHA ID seeding with the RCH Portal, reveals considerable disparities. While AAM Maloya has the highest number of registered pregnant women, the integration of digital health records remains low across all centers. Enhancing digital health integration is essential for comprehensive healthcare management and effective monitoring of maternal health services.

In summary, this study underscores the necessity of addressing infrastructure, staff management, diagnostic capabilities, medication availability, and digital health integration to improve healthcare delivery at AAMs. Future initiatives must focus on these areas to ensure equitable access to high-quality healthcare services, ultimately leading to better patient outcomes and a more robust healthcare system.

Recommendations-

OPD Performance

1. **Infrastructure Enhancement at AAM Kaimbwala:** Given the significantly lower OPD visits, it is imperative to improve the infrastructure at AAM Kaimbwala. This includes expanding the patient waiting area, establishing a dedicated lab room, and ensuring a consistent supply of drinking water. These improvements can enhance patient satisfaction and increase the number of visits.
2. **Resource Allocation at AAM Dhanas and Maloya:** Although AAM Maloya manages a high patient load despite certain infrastructural gaps, it would benefit from additional resources. Investing in a laboratory and a yoga space can further improve service quality and patient satisfaction. Similarly, maintaining the infrastructure at AAM

Dhanas and ensuring any minor gaps are addressed will sustain its high OPD performance.

NCD Enrollment

1. **Staff Role Optimization at AAM Dhanas and Maloya:** To increase NCD enrollment rates, the responsibilities for enrollment and screenings should be distributed among different staff members, similar to AAM Kaimbwala. Employing additional DEOs and MPHs to support ANMs can reduce their workload and improve efficiency in managing the NCD portal and conducting screenings.
2. **Training and Capacity Building:** Providing regular training and capacity building for all staff involved in NCD enrollment can improve their proficiency and effectiveness in engaging patients, thereby increasing enrollment rates.

Diagnostic Test Availability

Establishing effective referral linkages with higher facilities for diagnostic services to ensure patients receive the appropriate level of care when necessary. These linkages involve a coordinated system where primary care providers can refer patients to more specialized services for advanced diagnostic tests and treatments.

Infrastructure and Facilities

1. **Space Optimization at AAM Maloya and Kaimbwala:** Both centers need to optimize their available space to enhance patient comfort. This includes redesigning the layout to create more efficient use of space for waiting areas and installing separate toilets for male and female patients and staff.
2. **Ensure Basic Amenities:** Addressing the lack of basic amenities such as drinking water supply at AAM Kaimbwala is critical. This can be achieved by installing water purification systems or coordinating with local authorities to ensure a reliable supply of clean drinking water.
3. **Holistic Health Practices:** Introducing designated yoga spaces at all AAMs can promote holistic health practices and improve overall patient well-being. This requires minimal investment in space and equipment but can significantly enhance patient satisfaction and engagement.

General Recommendations

1. **Community Engagement and Outreach:** All AAMs should strengthen their community engagement and outreach programs to build trust and encourage more people to utilize their services. This can include health education sessions, mobile health camps, and collaboration with local organizations.
2. **Continuous Quality Improvement:** Establishing a system for continuous quality improvement involving regular feedback from patients and staff can help identify areas for enhancement and implement timely interventions to improve service delivery at all AAMs.
3. **Government Support and Funding:** Advocacy for increased government support and funding can ensure that AAMs have the necessary resources to meet guidelines and provide high-quality healthcare services. This includes financial investment in infrastructure, medical equipment, and staffing.

Implementing these recommendations can significantly enhance the performance of Health and Wellness Centers, ensuring better patient care and improved health outcomes for the communities they serve.

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