SH Transforming Primary Healthcare Through Innovations



































STRENGTHENING VILLAGE HEALTH COUNCILS IN MEGHALAYA

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Acknowledgement

The baseline study en titled "Strengthening Village Health Councils in Meghalaya" was an initiative to under the MoU signed between the National Health Mission, Government of Meghalaya and LEHS WISH to strengthen Village h ealth Councils in Meghalaya. The objective of the study to lay the groundwork for the development of effective program interventions. This involved conducting a comprehensive examination of the healthcare system in Meghalaya, exploring the factors influencing health-seeking behavior, and analyzing the operational dynamics of Village Health Committees (VHCs). Through this thorough investigation, the study aimed to identify key areas for intervention and inform strategies to improve healthcare access and delivery in Meghalaya.

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This report presents a thorough analysis of the healthcare challenges and opportunities within Meghalaya, a state in northeastern India, with an emphasis on understanding the socioeconomic and demographic factors affecting healthcare access and the role of Village Health Councils (VHCs) in enhancing healthcare delivery. The study synthesizes extensive research, survey data, and field observations to propose targeted interventions aimed at bridging healthcare gaps and advancing towards universal health coverage.

Background and Objectives

Grounded in the principles of the Sustainable Development Goals (SDGs), particularly emphasizing SDG 3, the report underscores the critical necessity of achieving universal health coverage. This involves ensuring that all individuals have access to high-quality healthcare services without encountering financial barriers. Recognizing the pressing healthcare challenges prevalent in Meghalaya, the report sheds light on various issues, including inadequate healthcare infrastructure, a shortage of healthcare professionals, and significant disparities between urban and rural areas. These challenges are situated within the broader context of India's healthcare landscape. The primary objective of this study is to create a foundation for the development of effective program interventions. This involved conducting a comprehensive examination of the healthcare system in Meghalaya, exploring the factors influencing healthseeking behavior, and analyzing the operational dynamics of Village Health Committees (VHCs). Through this thorough investigation, the study aimed to identify key areas for intervention and inform strategies to improve healthcare access and delivery in Meghalaya.



Key Findings

Socio-Economic and Demographic Insights: A healthcare¹ report in Meghalaya revealed how diverse demographics and socioeconomic factors influence healthcare access across Garo, Khasi, and Jaintia communities. While the average age of respondents is 35, the data might miss the elderly population. Literacy varies with Jaintia having the highest and Garo the lowest. Garo communities have more cultivators and rely on Sub-Centers (59%) for healthcare, while Khasi (more agricultural laborers) and Jaintia (more service workers) favor Primary Health Centers (54% and 69% respectively). Khasi also utilize Community Health Centers (24%). Despite these preferences, a significant portion (10-19%) across all zones visit other facilities.

The report further highlights discrepancies in healthcare utilization. Garo has the highest percentage of people who never visit a healthcare facility (30%), followed by Khasi (10%) and Jaintia (9%). Jaintia also exhibits the most frequent visits (41% within the last week), whereas over a third of Khasi residents haven't visited in over 3 months (compared to Garo (20%) and Jaintia (10%)). Reasons for not visiting the nearest facility vary. Some Garo residents feel healthy, while others are unhappy with resource or service limitations at their closest facility. Interestingly, some residents across all communities travel to larger cities for specialized care due to a perception of better-quality facilities. Finally, the report emphasizes that most people (74%) rely on private transportation to reach healthcare facilities. This underlines the importance of considering these diversities and access challenges when designing healthcare programs that cater to the unique needs of each community.

Health Seeking Behavior: The health-seeking behavior analysis conducted in the surveyed population reveals valuable insights into healthcare utilization patterns and dynamics within Meghalaya's tribal communities. Initial points of contact during health problems varied, with Primary Health Centers (PHCs) and Sub Centres emerging as significant points of contact, particularly in the Khasi and Jaintia zones. However, local doctors, pharmacies, and Accredited Social Health Activists (ASHAs) also played essential roles in healthcare access. For minor illnesses, respondents predominantly sought healthcare from PHCs/CHCs/DMs and local pharmacies. Conversely, for severe illnesses, a majority preferred consulting healthcare provider at PHCs/CHCs/DMs, indicating a reliance on formal healthcare facilities. Notably, the preference for home remedies and local pharmacies was higher in certain areas, reflecting diverse health-seeking behaviors across communities. In health emergencies, PHC/CHC/DM doctors were the preferred choice across all zones, highlighting the importance of immediate medical care. However, differences were observed between Gambegre and other areas of Garo, with Gambegre households showing a preference for local pharmacies. Reasons for not seeking healthcare included financial constraints, distance from healthcare centers, and cultural beliefs. These barriers varied across zones and regions, emphasizing the need for targeted interventions to address specific challenges faced by communities. Maternal and child health indicators revealed high rates of institutional deliveries and ANC/PNC visits, indicating positive healthcare-seeking behavior in these areas. However, disparities existed, with some communities citing cultural beliefs and distance as barriers to institutional deliveries. Child vaccination rates were high overall, with the majority of children vaccinated across all zones. However, disparities were observed within the Garo community, particularly in Gambegre, suggesting a need for targeted interventions to address vaccine hesitancy in specific regions. Overall, the analysis underscores the importance of understanding and addressing diverse health-seeking behaviors, barriers, and facilitators to improve access to and utilization of healthcare services, ultimately contributing to better health outcomes in Meghalaya's tribal communities.



Affordability and Accessibility of Healthcare services: The baseline survey highlights the critical role of healthcare accessibility and affordability in shaping utilization patterns. It reveals that 66.8% of respondents have health insurance, with the Garo community showing the highest coverage at 82.9%, mainly through the Meghalaya Health Insurance Scheme (MHIS). However, there are variations in coverage between ethnic groups and within zones. Affordability remains a concern for 45.7% of households, with out-of-pocket payments being the primary financing method. Delayed health-seeking behavior is common, especially for routine check-ups and preventive care. Government-sponsored insurance schemes aim to improve access and financial protection, but awareness levels vary, with healthcare providers and social media serving as key sources of information, particularly in the Jaintia zone. Despite most households not requiring specialized medical care, satisfaction with affordability and accessibility is neutral overall, with concerns about medication costs and treatment affordability prevalent across zones. High outof-pocket expenditure, inability to afford insurance premiums, and limited access to low-cost healthcare facilities pose significant financial barriers, leading to delayed healthcare seeking and increased reliance on alternative healthcare options. These findings underscore the need for ongoing efforts to enhance healthcare accessibility, affordability, and awareness across diverse communities in Meghalaya, emphasizing the importance of addressing financial obstacles and improving communication between providers and patients.

Healthcare Infrastructure: The assessment of 14 PHCs across three zones provided valuable insights into healthcare infrastructure and resources. In terms of physical and human resources, designated nodal persons for emergency communication were present in all zones. Facilities in the Garo and Jaintia zones had Information, Education, and Communication (IEC) materials and contact lists of key officials for emergency response, while the Khasi zone showed slightly lower percentages. Availability of healthcare authorities, field functionaries, and neighboring primary health centers varied between zones. Ambulance services were more prevalent in the Garo and Khasi zones compared to the Jaintia zone. Power supply and backup arrangements for oxygen were generally adequate across zones. Basic client amenities like 24-hour operation, water sources, and privacy provisions showed variations. Command center readiness differed, with the Garo zone demonstrating better preparedness. Security measures varied, with discrepancies in the provision of security guards and fire safety protocols. Infection control measures showed gaps, particularly in waste management and provisions for persons with special needs. Equipment availability was generally satisfactory, although some disparities existed in specific items. Most facilities were located in government-owned buildings, with varying conditions and cleanliness levels. Availability of medications, human resources, and contingency plans showed discrepancies between zones. Overall, while certain areas demonstrated robust infrastructure and resource availability, others revealed notable gaps, suggesting the need for targeted improvements in healthcare facilities across all zones.

Role of Village Health Councils (VHCs): Village Health Councils (VHCs) play a pivotal role in addressing local healthcare needs in Meghalaya, particularly within tribal communities. However, a baseline study has revealed significant gaps in both awareness of and participation in VHC activities. The study identified a concerning lack of awareness about VHCs among tribal communities, with only a small percentage of respondents familiar with them. To address this gap, concerted efforts are needed, including community outreach, educational campaigns, and collaboration with local leaders. Healthcare providers emerged as the primary source of information about VHCs, highlighting their crucial role in promoting awareness.



Additionally, family members, friends, and social media also played significant roles in disseminating information about VHCs. While a notable proportion of respondents from the Garo community reported being VHC members, participation was low in the Khasi and Jaintia communities. This indicates a need for targeted efforts to promote community engagement and increase participation in VHCs. Uneven participation was observed in training sessions for VHC members, indicating a need for improved outreach and inclusivity. Topics covered in these sessions varied, with a focus on VHC formation and roles/responsibilities. Community meetings aimed at introducing VHC Executive Committee candidates were found to be inconsistent, highlighting the need for improved outreach and transparency in the selection process. Despite these challenges, VHCs have implemented various initiatives, including health awareness campaigns, collaboration with healthcare providers, and promoting healthy lifestyles. Collaboration with healthcare providers was identified as the most impactful strategy. To strengthen VHCs, recommendations include improving the accessibility and responsiveness of VHC members, enhancing their skills in problem-solving and health education, and fostering community engagement through transparent processes. Overall, these findings underscore the importance of community engagement, collaboration, and targeted interventions in enhancing the effectiveness of VHCs in promoting community health and well-being in Meghalaya.

Recommendations

To address the identified challenges and capitalize on the opportunities for improving healthcare delivery in Meghalaya, the report suggests the following strategic interventions:

- Strengthening Healthcare Infrastructure: Enhance the capacity and reach of healthcare facilities, especially in rural and underserved regions, by investing in infrastructure, technology, and human resources.
- Enhancing Health Literacy and Community Engagement: Implement comprehensive health education programs to improve health literacy, emphasizing the importance of preventive care and healthy lifestyles. Strengthen the role of VHCs in fostering community participation in health initiatives.
- Tailored Interventions for Vulnerable Populations: Develop and implement healthcare programs specifically designed to address the needs of vulnerable groups, taking into consideration socio-economic, demographic, and cultural factors.
- Monitoring and Evaluation Framework: Establish a robust monitoring and evaluation framework to assess the effectiveness of healthcare interventions, with a focus on outcomes that reflect improved access and quality of care.

Conclusion

Achieving universal health coverage in Meghalaya requires a multifaceted approach that addresses the systemic challenges of the healthcare system, leverages the potential of VHCs, and recognizes the unique needs of its diverse population. Through collaborative efforts, evidence-based policymaking, and targeted interventions, Meghalaya can make significant strides towards improving public health and ensuring that healthcare services are accessible, affordable, and of high quality for all its residents.







Chapter 1: Introduction

1.1 Background

The Sustainable Development Goals (SDGs) adopted by the United Nations in 2015 underscore the importance of ensuring healthy lives and promoting well-being for all ages. SDG 3, in particular, aims to achieve universal health coverage, including financial risk protection, access to quality essential healthcare services, and access to safe, effective, quality, and affordable essential medicines and vaccines for all.

The healthcare system in India, catering to a vast population of 1.4 billion, is confronted with a multitude of challenges. These range from inadequate infrastructure and a dearth of healthcare professionals to urban-rural disparities and limited health insurance coverage. Further compounding these issues are insufficient public healthcare funding and a fragmented landscape. Economic constraints hinder access to quality healthcare, while cultural beliefs foster reluctance towards seeking professional medical help. Limited awareness further exacerbates the situation, leading to a reliance on self-medication and perpetuating poor health-seeking behavior.

In the state of Meghalaya, the challenges are intensified by geographic inaccessibility, particularly in rural areas, and socioeconomic constraints that further impede access to healthcare. To address these pressing issues, there is a need for initiatives aimed at enhancing healthcare accessibility, boosting health literacy through community outreach, and integrating culturally sensitive approaches. Such measures can promote improved health-seeking behavior and contribute to the overall enhancement of public health in Meghalaya. This study aims to generate knowledge that will aid in designing a program intervention strategy and formulating success indicators to monitor the program intervention. The ultimate goal is to achieve Universal Health Coverage, ensuring access to comprehensive healthcare services without causing financial hardship. This is to be achieved in a manner acceptable to Meghalaya, utilizing government systems and channels as per its strategic plan. The insights gained from this study will be instrumental in shaping a healthcare system that is both effective and inclusive.

In essence, this baseline report will serve as a foundational document, providing a nuanced understanding of the healthcare landscape in Meghalaya and laying the groundwork for informed decision-making and targeted interventions aimed at bridging the gap in healthcare accessibility and quality. Through collaborative efforts and evidence-based approaches, we endeavor to pave the way towards a healthier and more equitable future for the people of Meghalaya. In doing so, this report contributes to the broader discourse on achieving SDG 3 in India, offering insights that could inform policy and practice not just in Meghalaya, but potentially in other similar contexts as well.

1.1.1 Meghalaya

Meghalaya, nestled in the northeastern part of India, boasts a diverse landscape spanning 22,429 square kilometers, earning it the 23rd position in India for geographical spread (RHS 2019). This picturesque state, divided into 11 districts, is home to a vibrant population exceeding 0.3 crores, constituting approximately 0.24% of the nation's populace. Projections suggest that the population would burgeon to around 0.32 crores by 2021 (Census Population Projection 2019).

At the heart of Meghalaya's demographic fabric lies its Scheduled Tribe (ST) population, accounting for a substantial 86.15% of the state's inhabitants, totaling 0.26 crores according to the Census of 2011. Within Meghalaya's socio-economic landscape, the majority—79.9%—reside in rural areas, while 20.1% comprise the urban populace. Demographic diversity manifests further in the age distribution, with 19.3% falling within the 10-19 age bracket, 57.8% aged between 20 to 59 years, and 8.8% comprising individuals aged 60 years and above, as indicated by data from the North-Eastern states.

Significant strides have been made in health indicators over the years, with the crude birth rate and crude death rate declining from 25.1 and 7.5 in 2005 to 23.2 and 5.6 in 2019, respectively. Furthermore, there has been a commendable rise in literacy rates, surging from 62.6% in 2001 to 74.4% in 2011, with male and female literacy rates standing at 76.0% and 72.9%, respectively. Education has also seen remarkable progress, as highlighted by the ESAG 2018 report, revealing Gross Enrollment Rates (GER) of 24.1% for higher education, 43.35% for senior secondary education, 87.27% for secondary education, 139.39% for elementary education, and 140.90% for primary education.

The intricate tapestry of demographics, education, and health indicators paints a multifaceted picture of Meghalaya, reflecting its unique challenges and opportunities. As we embark on the journey to enhance healthcare accessibility and quality within the state, a nuanced understanding of these dynamics becomes imperative, guiding our efforts towards holistic development and equitable growth for all segments of society.

1.1.2 Overall health status of Meghalaya and India

Healthcare systems worldwide exhibit significant diversity in structure and organization, ranging from predominantly public systems to those dominated by private healthcare providers. The efficacy of these systems hinges on their ability to deliver high-quality, accessible, and sustainable healthcare services to their populations. India, a country of immense complexity and diversity, grapples with a healthcare landscape marked by challenges and transformations.

1.1.3 India's Healthcare Landscape

India's healthcare infrastructure faces notable shortages, particularly in rural areas where a significant portion of the population resides. The dearth of essential infrastructure, medical equipment, and resources in primary health centers and sub-centers poses significant obstacles to the delivery of basic healthcare services. Insufficient access to advanced healthcare services further compounds these challenges, hindering efforts to improve health outcomes across the nation. Despite these challenges, India's healthcare system has witnessed remarkable progress in recent years. Government initiatives and policies aimed at expanding healthcare access and improving health outcomes have yielded positive results. These efforts reflect a concerted push towards addressing the myriad challenges faced by the Indian healthcare system, offering hope for the future of healthcare in the country.

²https://databank.nedfi.com/content/net-state-domestic-product-meghalaya

³https://documents1.worldbank.org/curated/en/181211613721714068/pdf/Project-Information-Document-Meghalaya-Health-Systems-Strengthening-Project-P173589.pdf



1.1.4 Meghalaya's Healthcare Landscape

Within the diverse tapestry of India's healthcare landscape, Meghalaya emerges as a unique entity, grappling with its own set of challenges and opportunities. Despite its picturesque landscapes, Meghalaya faces significant disparities in healthcare access and quality, particularly in rural areas. However, the state has made noteworthy strides in expanding its public healthcare infrastructure since 2005.

As of December 2021, Meghalaya boasts a network of healthcare facilities, including subcenters, primary health centers, community health centers, district hospitals, and a government medical college. Notably, the state has achieved 100% of the required Accredited Social Health Activists (ASHAs) under the National Rural Health Mission (NRHM) and 85% under the National Urban Health Mission (NUHM), highlighting its commitment to grassroots healthcare delivery.

Moreover, Meghalaya maintains a commendable doctor to staff nurse ratio of 1:2, with significant investments translating into high utilization rates of public health facilities. Data from the National Sample Survey Office (NSSO) underscores the pivotal role played by public health facilities in addressing healthcare needs, particularly in rural areas.

Meghalaya has made significant strides in expanding its public healthcare infrastructure since 2005. As of December 2021, there are 440 sub-centers (SCs), 143 primary health centers (PHCs), and 28 community health centers (CHCs). The state also has 11 district hospitals (DHs), with 73% functioning as operational First Referral Units (FRUs), and 1 government medical college. Meghalaya maintains a doctor to staff nurse ratio of 1:2, with 14 public health providers (doctors, specialists, staff nurses, and Auxiliary Nurse Midwives (ANMs)) per 100,000 population. Data reveals high utilization rates of public health facilities in Meghalaya, with 1358.02 outpatient services (OPD) events and 89.97 inpatient services (IPD) events per 1000 population.

Data from the National Sample Survey Office (NSSO) underscores the pivotal role played by public health facilities in addressing healthcare needs, particularly in rural areas. The State's Net State Domestic Product (NSDP) for FY 2018-19 is 29,544 crores . The State is positioned 27th out of 32 states in terms of per capita of ₹ 84,725. In Meghalaya, the average out-of-pocket expenditure (OOPE) incurred by patients varies significantly depending on the type of healthcare facility utilized. For treatment received at public hospitals, patients typically spent approximately ₹2,385 (equivalent to US\$35), whereas treatment at private hospitals incurred a substantially higher average OOPE of around ₹27,375 (approximately US\$408). Moreover, disparities exist between rural and urban areas, with rural regions witnessing an OOPE ranging from ₹3,190 to ₹3,353 in public health facilities, slightly higher than in urban areas. These figures underscore the considerable financial burden borne by individuals throughout their healthcare journeys. It is imperative to prioritize the improvement of healthcare systems to alleviate the economic strain on patients and facilitate equitable access to high-quality healthcare services.

While Indiagrapples with overarching challenges such as healthcare access disparities and disease burden, Meghalaya navigates its unique terrain characterized by geographical remoteness and socioeconomic constraints. However, amidst these challenges, Meghalaya have demonstrated resilience and progress in expanding healthcare access and improving health outcomes. The concerted efforts of governments, coupled with investments in healthcare infrastructure and initiatives, offer a glimpse of optimism for the future of healthcare delivery. The overall health status of Meghalaya reflects a complex interplay of challenges, transformations, and opportunities. While disparities persist, the trajectory of progress signals a promising future for healthcare delivery. Sustained efforts, investments, and innovation are essential to ensure that the benefits of healthcare initiatives reach all segments of society, leading to lasting



improvements in health outcomes and quality of life.

1.1.5 Geography of Meghalaya (About the three zones (Garo hills, Khasi hills and Jaintia hills))

Meghalaya is geographically divided into three distinct zones: the Khasi Hills, the Jaintia Hills, and the Garo Hills. Each zone boasts unique landscapes, cultural heritage, and traditions, making Meghalaya a tapestry woven with vibrant threads.



Meghalaya has seen substantial progress in providing essential healthcare services for mothers and children (RMNCHA+N) through the National Health Mission (NHM), with a strong emphasis on primary and secondary care. This focus has led to positive outcomes in key areas like antenatal care (ANC) check-ups, institutional deliveries, and postnatal care since 2005 (data from NFHS 4 & 5). However, the improvements haven't been uniformed across all regions. Districts like Ri-Bhoi, South West Khasi Hills, and West Khasi Hills show significantly higher rates of ANC check-ups compared to East Garo Hills, North Garo Hills, and South West Garo Hills. Similarly, while institutional deliveries and C-sections are within the recommended range, a higher proportion of these procedures occur in private facilities. There's also been a decrease in anemia prevalence among women, but it remains considerably higher compared to men in the same age group.

While Meghalaya has seen progress in providing essential maternal and child healthcare (RMNCHA+N) services through the National Health Mission (NHM), achieving equitable access across its three distinct zones – the Khasi Hills, the Jaintia Hills, and the Garo Hills – remains a challenge.

Khasi Hills: This zone generally fares better with higher antenatal care (ANC) check-up rates, ranging between 61% and 64% as per NFHS 5, compared to the state average of 49%. Institutional delivery rates are also higher in the Khasi Hills, likely due in part to the presence of the state capital, Shillong, with its specialized healthcare facilities. However, unequal distribution of healthcare facilities across the zone and potential variations in the quality of care across different areas remain concerns.

Jaintia Hills: Due to limited disaggregated data specific to the Jaintia Hills, it's challenging to provide a comprehensive picture of healthcare access and outcomes. However, based on the state's overall trends, the Jaintia Hills might also face similar disparities as observed in some Garo Hills districts, such as lower ANC coverage and institutional delivery rates. Further data analysis is crucial to understand the specific healthcare needs and challenges faced by this zone.

Garo Hills: This zone presents the most concerning picture with significantly lower ANC coverage, ranging between 24.3% and 28.5% as per NFHS 5, compared to the state average. Institutional delivery rates are also lower in the Garo Hills compared to the Khasi Hills. Limited access to healthcare facilities in some remote areas further compounds the challenges faced by this zone.

1.1.6 Overview of LEHS | WISH's Technical support to NHM, Meghalaya

In adherence to the State Health Policy 2021, Meghalaya has initiated a pioneering strategy aimed at addressing the demand side of healthcare through the establishment of Village Health Councils (VHCs) in 2022. These elected community health institutions are designed to enhance



community engagement and improve health outcomes by fostering active participation in ensuring good health for citizens, with a particular focus on enhancing health-seeking behavior. To date, the state has witnessed the formation of 6753 VHCs, with 6474 receiving orientation and training sessions.

Under the aegis of the Technical Support Unit (TSU) of LEHS|WISH, various interventions have been devised to strengthen VHCs and bolster their role in advancing healthcare delivery. Notably, two model block initiatives have been launched in the Gambegre Block of West Garo Hills District, each focusing on distinct pilot activities.

• Piloting Innovative Model for VHC Strengthening through IEC Activities: With the overarching goal of improving the demand for primary healthcare services, particularly maternal and child health services in rural Meghalaya, this initiative emphasizes Information, Education, and Communication (IEC) activities in collaboration with VHCs. Key objectives include strengthening the knowledge and capacity of VHC members, rolling out innovative community interventions, and fostering accountability among stakeholders.

Proposed Interventions/Activities: These include baseline assessments, the design and implementation of VHC-specific tools and activities, IEC engagement of VHCs through flip charts, community meetings, and street plays, as well as training and capacity building sessions for VHC members.

• **Piloting Innovative Model for Improving Routine Immunization Performance:** Given the significant disparities in routine immunization coverage across Meghalaya, this initiative aims to harness the potential of VHCs to enhance the uptake of immunization services among children aged 0-1 years. Through a Learning Lab approach, selected areas/villages in one district of the state will serve as testbeds for innovative strategies aimed at increasing immunization coverage.

The concerted efforts to strengthen Village Health Councils in Meghalaya reflect a paradigm shift towards community-led healthcare delivery. By empowering local institutions and fostering community participation, these initiatives hold the promise of not only improving health outcomes but also nurturing a culture of health and well-being at the grassroots level. As these pilot initiatives unfold, they are poised to serve as blueprints for scalable and sustainable interventions, paving the way for transformative changes in healthcare delivery across the state.

1.2 Rationale for Baseline Assessment

Village Health Committees (VHCs) play a crucial role in improving health and nutritional outcomes in Meghalaya. These roles of VHCs help generate demand for healthcare services, create a sense of ownership by the community, lead awareness campaigns, facilitate local problem-solving, and implementation of health infrastructure projects⁴. They serve as a critical link between the state health systems and community members⁵. While VHCs play a crucial role in bridging the healthcare gap, their full potential hinges on two key factors: understanding health seeking behavior and implementing a strategic plan to strengthen VHCs.

Understanding how individuals navigate the healthcare system, or their "health seeking behavior," is vital. This knowledge unveils critical information about barriers faced by individuals, such as cultural beliefs, financial limitations, or lack of awareness. By addressing these barriers through targeted interventions, we can encourage timely healthcare utilization and ultimately improve individual and community health outcomes. Analyzing health seeking behavior also reveals disease patterns and trends, allowing for efficient resource allocation, prioritization of

⁴https://meghalaya.gov.in/sites/default/files/press_release/Innovative_Approach_by_Meghalaya_Govt_to_Implement_PM_ABHIM.pdf ⁵https://www.medicalbuyer.co.in/village-health-councils-to-build-maintain-operate-subcenters-in-meghalaya/



public health initiatives, and development of culturally appropriate and accessible programs. Additionally, understanding these behaviors fosters patient-centered care by considering individual motivations and anxieties.

Therefore, a comprehensive plan to strengthen VHCs is crucial. This plan will unlock their full potential by addressing their current limitations in knowledge, resources, and support systems. This will involve providing ongoing training and mentorship programs, equipping them with essential supplies and equipment, and fostering collaboration and knowledge sharing among VHCs. Secondly, the plan will address bottlenecks by identifying and tackling specific challenges faced by VHCs. This may include providing sustainable funding sources, offering incentives to attract and retain qualified individuals, and ensuring seamless integration with the broader healthcare system for efficient referrals and patient care continuity.

The Village Health Councils (VHCs) is a unique initiative recently initiated to comprehensively address the demand side of healthcare, holding the potential to change the entire landscape of healthcare delivery in the state. The baseline study aimed to understand the underlying causes of poor health-seeking behavior and intended to address them with the help of locally acceptable measures. Since VHCs are also in their infantile stage, the study will help in identifying the key challenges for policymakers to develop strategies and plans to strengthen the VHCs. Lastly, this baseline assessment will also help in identifying the focus required for assessing the sustainability, scalability, and adoptability of the intervention.

1.2.1 Overview of the purpose and specific objectives of the study

The overall aim of conducting this study is to assess the socio economic and demographic factors of communities which influence the utilization of health care services, current health seeking behaviour of the communities, existing status of VHCs and identify challenges to form a comprehensive plan for strengthening.

Specific Objectives of the Study:

Community Level

- To explore the socioeconomic and demographic factors which influence the utilization of healthcare services in the state
- To understand the demand dimension, the study will assess the health seeking behavior of the communities which includes affordability which includes affordability and accessibility of healthcare services



Facility Level

• To comprehend the supply dimension, the study will examine the healthcare infrastructure (physical and human resources) of the state vis-à-vis the availability and quality health care provision.



System Strengthening

• To assess the formation, composition and functioning of VHCs and identify challenges to form a comprehensive plan for strengthening.



Chapter 2: Literature Review



2.1 Overview of the Village Health Councils

2.1.1 Historical Context and evolution

The Indian healthcare system, catering to a vast population of 1.4 billion, operates through a complex interplay of public and private sectors. Despite undergoing significant transformations, it continues to grapple with a myriad of challenges. These encompass insufficient infrastructure, a dearth of healthcare professionals, urban-rural divides, limited health insurance coverage, inadequate public healthcare funding, and a fragmented structure. Additionally, the mounting burden of non-communicable diseases poses a formidable challenge to the system's capacity and resources.

To address these challenges, the Indian government has launched several initiatives aimed at strengthening the healthcare landscape (Kumar, 2023). The National Health Mission, for instance, strives to bolster the availability of medical equipment and supplies, alongside promoting community engagement in healthcare decision-making and service delivery. Furthermore, the Ayushman Bharat scheme represents a notable intervention, offering health insurance coverage of up to INR 5 lakhs per family annually for secondary and tertiary care hospitalization. These initiatives underscore the government's dedication to confronting the multifaceted issues in the healthcare sector and enhancing accessibility and affordability of healthcare services for all citizens.

The Meghalaya government has adopted a distinctive approach in implementation of the Pradhan Mantri-Ayushman Bharat Health Infrastructure Mission (PM-ABHIM). The PM-ABHIM is aimed at strengthening public health infrastructure at all levels. It is a centrally sponsored



scheme falling under the National Health Mission, designed to enhance the capacities of health systems and institutions, ensuring they are well-equipped to effectively address both current and future pandemics.

Central to this approach is the empowerment of Village Health Councils (VHCs) by the state government. These councils have been entrusted with the allocation of subcenter construction projects, granting them autonomy to oversee their own health infrastructure initiatives under the PM-ABHIM scheme. By devolving decision-making power to the grassroots level, the government aims to foster community ownership and participation in healthcare development efforts.

The establishment of VHCs is part of a broader vision to create community institutions dedicated to mobilizing action on health and nutrition issues. Acting as vital intermediaries between state health systems and local communities, VHCs play a crucial role in generating demand for healthcare services, conducting awareness campaigns, facilitating community-driven problem-solving, and implementing health infrastructure projects. This bottom-up approach not only ensures the effective utilization of resources but also fosters a sense of empowerment and responsibility among community members for their own health and well-being.

2.1.2 Role of Healthcare Delivery

As per the notification of Health & Family Welfare Department, Govt. of Meghalaya, dated 11th February'22, Village Health Councils (VHCs) are envisioned as pivotal community institutions tasked with mobilizing action on health and nutrition concerns while bridging the gap between state health systems and local communities. VHCs will be established in every village and urban locality (Dong level). The concept of VHCs has evolved from Meghalaya's endeavors to mobilize community action during COVID management and Rescue Mission. Currently, the state is implementing various programs aimed at human development, making it an opportune time to establish a local institution that coordinates different initiatives at the community level.

Functions of the VHCs:

- Acting as a platform for community participation, the Village Health Councils strive to enhance the health-seeking behavior of village residents, thereby aiming for an overall improvement in their well-being.
- Proactively addressing demand-side healthcare issues, the councils focus on managing pandemics, reducing Infant Mortality Rate (IMR) and Maternal Mortality Ratio (MMR), combating anemia, and implementing other positive healthcare interventions. The ultimate goal is to extend the productive lifespan in the State to a minimum of 70+ years, surpassing the current average of 62.8 years.
- Through regular meetings, the Village Health Councils identify and discuss various health challenges encountered by the village community, such as vaccine hesitancy, resistance to Routine Immunization, maternal and infant mortality, child malnutrition, alcoholism, and substance abuse. Strategies and plans are formulated to address these issues effectively.
- Collaborating closely with community health workers and village administrators, the councils implement devised plans. Issues beyond the village level are escalated to higher authorities as deemed necessary by the Council.
- Playing a pivotal role in promoting positive health practices, the Village Health Councils engage in raising awareness and educating villagers on reproductive rights, birth spacing, the significance of the first 1000 days of a child's life, Kangaroo Mother Care, adverse effects of substance abuse, and the importance of dietary diversity. Mobilization exercises



involve participation from Self-Help Groups (SHGs), Village Organizations (VOs), women's groups, youth groups, etc.

- Serving as monitoring bodies, the Village Health Councils ensure the effective implementation of health programs within the village.
- Additionally, the council's function as local bodies for implementing health infrastructure projects funded by Finance Commission grants and other health systems strengthening initiatives in villages where Health Sub-Centers/Facilities are situated. Collaboration among multiple VHCs enables scalable problem-solving approaches.

2.1.3 Existing Literature on Challenges and Successes

The rural health care infrastructure of North-Eastern Region (NER) of India is still weaker than the states of the country. But after implementation of NRHM (National Rural Health Mission), in 2005 there is a significant improvement seen in the region for its healthcare infrastructure (Saikia, 2014). However, there has been inadequate development of the health infrastructure or its unavailability of adequate manpower in the health sector. The health centers in many states are not well equipped with essential facilities and equipment such as labor rooms, operation theatres, stabilization units and care corners for newborn babies, electricity supply, water supply, X-ray machine, telephone connectivity, etc. (Saikia & Das, Access to Public Health-Care in the Rural Northeast, 2014). The paper also states that the rural health-care sector in the NER suffers from shortages of well-trained health workers; be it specialist doctors, nurses or other health workers. Further, Poor conditions of health infrastructure of the country means, there is a problem of non-availability of free medicines for rural poor, non-availability of good doctors and lack of sufficient number of government hospitals in rural areas of the country. (Das, 2012)

2.2 Health Seeking Behavior

In most developed countries, citizens are covered by state-financed universal healthcare. However, in less-developed countries like India, universal healthcare remains a distant goal (Azhar, Amir, Khalique, & Khan, 2011). Despite huge investments in healthcare and efforts by the governments, easy access remains a problem. The choice of seeking healthcare, whether formal or non-formal, depends on socio-demographic, economic and environmental factors, disease patterns, awareness of facilities and perceived quality of the healthcare systems (Musoke, Boynton, Butler, & Musoke , 2014). In addition, individual incomes, physical infrastructure, free public health services and social resources are also perceived as important to overcoming some of the existing barriers to accessing formal healthcare (Bakeera , et al., 2009).

2.2.1 Review of Literature on Health Seeking Behavior

Even while ill, some of the individuals do not seek treatment because they perceive their illness to be less severe or suffer from financial constraints (Patel, Trivedi, Nayak, & Patel, 2010). Behavior of human beings relating to treatment and health is a complex phenomenon. Each individual community practices their particular way of life and perceives healthcare services differently from others (Chin & Noor, 2014).

Primary healthcare facilities mostly serve people living in the rural areas, while people in the urban areas have access to public hospitals and private facilities. However, for inpatient care, utilization of public hospitals was the highest in both rural and urban areas. Overall, people of Northeast India mainly depend on either primary healthcare services or public hospitals. Low quality of care and non-availability of certain services are the causes for people not opting for



public healthcare services in Northeast India (Ngangbam & Roy, 2019)

2.2.2 Factors Influencing Utilization of Healthcare Services

Mere existence of healthcare services does not automatically lead to their utilization (Patel, Trivedi, Nayak, & Patel , 2010). The preference for a particular source or system of treatment depends upon the severity of illness, availability, accessibility, affordability and acceptability of healthcare services (Narzary, 2018). Among the determinants of healthcare utilization in Northeast India, people who are higher educated, females, ailing for longer days, having communicable diseases, children, separated or widow and living in districts with any kind of medical institutions have higher probability to seek formal healthcare services in Northeast India. With an increase in income, duration of hospital stays, non-communicable diseases, living in districts with access by tarred road and urban areas, probability was higher to use private and public hospitals than primary healthcare services. There is also the tendency of substituting with other types of healthcare alternatives when the cost of a particular healthcare alternative increases and vice versa (Ngangbam & Roy, 2019).

2.2.3 Relevance to Meghalaya Context

Health-seeking behavior is influenced by a multitude of factors. Various socio-economic elements exert influence at the individual level, while geographical settings play a crucial role at the broader level. The terrain of a particular area can impede the establishment of healthcare facilities, transportation, and communication networks, thereby impacting household health-seeking behavior. In northeast India, factors such as state or region of residence, socioeconomic status, gender, and age of the household head significantly influence the preference for government healthcare centers as the primary source of treatment. Commonly cited reasons for not seeking treatment at government healthcare centers include the absence of nearby facilities, substandard quality of care, and lengthy waiting times (Narzary, Usual Source of Treatment in Northeast India, 2015). The shortage of healthcare infrastructure in the region is also underscored in the Human Development Report of Northeast States (Government of India, 2011).

2.3 Previous Intervention and Studies in Meghalaya

AYUSH:

The national policy on medical pluralism in India advocates for the integration of AYUSH (Ayurveda, Yoga, Unani, Siddha, and Homeopathy) systems and the preservation of local health traditions (LHT). In Meghalaya, a northeastern state with a predominantly indigenous population, the primary LHT is its indigenous tribal traditional medicine.

A study by Sandra Albert and John Porter, titled "Is 'mainstreaming AYUSH' the right policy for Meghalaya, northeast India?" examines the perceptions of tribal medicine and AYUSH systems among various stakeholders and situates Meghalaya's tribal medicine within the broader policy framework of medical pluralism in the state.

Methods:

A stakeholder mapping exercise was conducted to identify relevant policy actors, followed by 46 in-depth interviews with policymakers, healthcare professionals, academics, members of healer associations, and community elders. Additionally, 44 interviews were carried out with 24 Khasi and 20 Garo traditional healers. Data from interviews were supplemented with document analysis and observations. Qualitative data were analyzed using thematic content analysis incorporating elements of grounded theory.



Results:

In Meghalaya, there is widespread awareness of and reliance on tribal medicine, yet there are minimal efforts by the public sector to support or collaborate with traditional healers. Conversely, AYUSH systems have limited local acceptance, although their promotion has resulted in a significant rise in AYUSH practitioners, particularly homeopaths, in rural areas. Stakeholders outside the health department recognize the importance of tribal medicine due to its popularity, perceived effectiveness, and cultural significance. There is a recognized need to engage with traditional healers to improve referral mechanisms, training, documentation, and research related to tribal medicine.

Conclusions:

The widespread acceptance of tribal medicine underscores the necessity of supporting it. This study raises concerns about the implementation of the 'mainstreaming AYUSH' policy in Meghalaya and emphasizes the importance of aligning health policies with local cultural contexts. Furthermore, it highlights the potential role of Health Policy and Systems Research (HPSR) at sub-national levels.

Summary of Previous healthcare interventions

Universal Health Coverage

An article of The World Economic Forum, titled "How Meghalaya state's integrated approach is leading the way to universal health coverage in India" stated that Meghalaya state in northeastern India is pioneering an integrated approach towards achieving universal health coverage (UHC) in the country. It emphasizes the need for localized solutions tailored to the diverse needs of India's population, particularly in a state like Meghalaya, which faces unique geographical and socio-economic challenges.

Meghalaya's State Health Enhancement Project (SCEP) serves as a cornerstone of this approach. SCEP focuses on addressing health challenges through a three-pronged strategy: preventive healthcare, curative measures, and enabling components.

Under the preventive healthcare component, Meghalaya is prioritizing comprehensive primary healthcare (CPHC) and leveraging digital technology and AI to identify health trends and design interventions. This includes initiatives like the Smart Village Movement Project, aimed at annual screening for common ailments and health needs.

In terms of curative measures, Meghalaya has introduced the Megha Health Insurance Scheme, providing coverage to all residents regardless of socio-economic status. Additionally, the Chief Minister's Safe Motherhood Scheme addresses critical gender and poverty issues related to maternal healthcare, ensuring safe labor and delivery.

The enabling component focuses on community participation and accountability. Meghalaya has established Village Health Councils (VHCs) to involve local communities in healthcare decision-making, with a strong emphasis on gender equality and social audits. This approach aims to bridge gaps in healthcare delivery and ensure the needs of the population are met effectively.

Meghalaya's UHC has positive efforts, including significant reductions in infant and maternal mortality rates. By emphasizing the importance of primary healthcare and community involvement, Meghalaya is setting a precedent for other regions in India to follow in their pursuit of UHC.



The Village Health, Sanitation, and Nutrition Committee (VHSNC)

The Village Health, Sanitation, and Nutrition Committee (VHSNC) is a cornerstone of the National Rural Health Mission (NRHM), focusing on grassroots action to address health and its social determinants. These committees, comprised of key stakeholders from the village, including members of the Village Council, serve as vital forums for planning and monitoring health initiatives at the grassroots level. They ensure equitable access to healthcare services for all community members, particularly during crucial events like immunization days and Village Health and Nutrition Days (VHNDs), promptly alerting authorities in case of any unforeseen cancellations.

Primarily, they are tasked with promoting community engagement and decentralized health planning, these committees serve as catalysts for raising awareness about nutritional issues and advocating for improved access to healthcare services, particularly for women and children. Through surveys and community consultations, VHSNCs identify local food sources and culturally appropriate practices, integrating nutritional needs into village health plans to combat malnutrition effectively. In addition to ensuring access to healthcare services, VHSCs prioritize the provision of essential transport arrangements, especially for pregnant women and sick newborns requiring urgent medical attention. They facilitate cashless emergency transport services, with reimbursements handled later, to guarantee timely access to referral facilities. Furthermore, these committees oversee the distribution of nutrition supplements and food security programs, specifically targeting pregnant and lactating women, to address critical nutritional needs within the community.

With a commitment to community empowerment, VHSNCs oversee the implementation of Village Health and Nutrition Days, ensuring active participation and monitoring to detect and address malnutrition early. By coordinating with healthcare stakeholders and facilitating referrals to Nutritional Rehabilitation Centers (NRCs), these committees play a vital role in improving health outcomes and ensuring sustained progress. Moreover, VHSNCs supervise Anganwadi Centers (AWCs) and act as grievance redressal forums, enhancing transparency and accountability in addressing health and nutrition-related concerns within rural communities.

As per the National Health Mission, Government of Meghalaya website, VHSC in the state have been constituted in most of the villages. In 2010-2011, 6250 VHSCs have been approved by GOI, based on the 2001 Census.





The Gramin Polyclinic

The Gramin Polyclinic, a joint effort between Gramin Healthcare and the Government of Meghalaya under the State's Smart Village Movement initiative, has become a lifeline for rural communities. The clinic is equipped with telemedicine facilities, diagnostic services, and affordable medications. It addresses the longstanding healthcare challenges faced by remote populations.

The clinic highlights the Chief Minister's vision for last-mile healthcare delivery, emphasizing the collaborative efforts involving private enterprises, NGOs, and government entities. The successful pilot of the Gramin Healthcare clinic in Sohrarim has paved the way for its expansion to 20 additional locations across the state, demonstrating the initiative's scalability and potential to reach more underserved populations.

The introduction of private healthcare clinics like Gramin Healthcare Clinics serves as a complementary channel to existing public healthcare facilities, aiming to alleviate the burden on tertiary healthcare services. The clinic is a technology-driven solution which enables telemedicine which overcomes geographical barriers and ensures the continuity of care, particularly in remote areas where healthcare access is limited.

Lessons Learned and Gaps Identified

The study on the accessibility of maternal health-care institutions in Meghalaya, India, was conducted by Momin and Dutta and published in the International Journal of Health & Allied Sciences in July-September 2021. Meghalaya had only two public District Hospitals for maternal health-care services. The study focused on Ganesh Das Government Maternal and Child Health Hospital (GDGMCHH) in Shillong and District Maternity and Child Health Hospital (DMCHH) in Tura, as these hospitals are crucial for providing maternal health-care services to the Khasi and Garo people of Meghalaya.

The methodology employed in the study was a hospital-based mixed method approach, utilizing a semi-structured questionnaire to collect data on demographic characteristics of respondents and conducting extensive interviews to gather information on access to maternal health-care services. The study included 80 patients admitted for maternal care in October 2019, with interviews conducted with health providers from both hospitals.

The study identified geographical isolation and bad road conditions as major factors contributing to increased travel time for pregnant women seeking maternal health-care services. Additionally, challenges faced by pregnant women during rainy season due to bad road conditions and limited transportation options were highlighted in the findings.

Overall, the study aimed to bridge the gap between supply-side and demand-side factors in the healthcare sector, emphasizing the need for infrastructure development to enhance the availability of maternal health-care facilities in remote areas of Meghalaya. The findings of this study contribute to the understanding of maternal health accessibility issues in Meghalaya and provide insights for potential improvements in healthcare services for pregnant women in the region.





Chapter3: Conceptual Framework

3.1 Theoretical Foundation

The conceptual framework for the baseline assessment of the "Strengthening Village Health Councils (VHC)" project in Meghalaya comprises three main objectives.

Objective 1 aims to explore the socio-economic and demographic factors influencing healthcare utilization within the state. It encompasses sub-themes such as demographic and socio-economic characteristics of households, availability, accessibility, affordability, and quality of healthcare services, as well as the influence of socio-economic and demographic factors on healthcare utilization. This objective delves into correlations between income levels and healthcare utilization, the impact of education on health-seeking behavior, geographical challenges, cultural influences, and the role of health insurance.

Objective 1.1 focuses on understanding the demand dimension by assessing health-seeking behavior, affordability, and accessibility of healthcare services. It includes sub-themes like affordability of healthcare, accessibility challenges, perceptions of healthcare quality, health literacy, cultural and social factors, healthcare service utilization patterns, and barriers to seeking care. This objective aims to uncover the reasons behind community engagement with healthcare services, aiding in the development of interventions to enhance access and utilization.



Objective 2 seeks to comprehend the supply dimension by examining the healthcare infrastructure, including physical and human resources, and the provision of quality healthcare. This objective evaluates the availability and adequacy of healthcare facilities, equipment, healthcare personnel, skills and training, service delivery standards, patient outcomes, resource allocation and utilization, challenges in resource management, and the integration of technology in healthcare services.

Objective 3 aims to assess the formation, composition, and functioning of Village Health Councils (VHCs) and identify challenges to develop a comprehensive plan for strengthening them. This objective involves evaluating the initiation process, leadership and structure of VHCs, their activities and engagement, effectiveness in health advocacy, challenges faced, resource allocation and support received, collaborations and partnerships with formal health systems, community engagement strategies, sustainability, improvement plans, and capacity building needs.

Together, these objectives and sub-themes provide a structured approach to understanding the factors influencing healthcare utilization, assessing the demand and supply dimensions of healthcare provision, and evaluating the role of VHCs in community health advocacy and empowerment.

3.2 Survey Methodology

The geography of the study encompassed the entire state of Meghalaya. According to the 2011 census, the state comprised 11 districts (health districts), 39 blocks, and approximately 7,000 villages.

The Government of Meghalaya launched various initiatives aimed at improving the state's health, nutrition, and overall development indicators, including the Village Health Council (VHC) and Sector Team. Against this backdrop, it becomes crucial to comprehend the VHC's role, encompassing its formation, composition, and functioning, and to identify challenges, socio-economic, and demographic factors influencing healthcare services utilization in the state. This entails understanding the demand dimension, health-seeking behavior of communities, existing local awareness mechanisms, and healthcare infrastructure (both physical and human resources) vis-à-vis the provision of accessible, affordable, and quality healthcare at the facility level.

Health-seeking behavior significantly impacts health outcomes and overall well-being, influenced by various factors such as individual characteristics (knowledge, beliefs, attitudes, and perceptions), socio-economic & demographic factors (education, income, age, sex, place of residence, caste, and tribe), cultural factors (beliefs, values, and norms), and healthcare system factors (availability, accessibility, affordability, and quality of care), alongside structural barriers. To identify knowledge gaps, needs, problems, and barriers in promoting positive health-seeking behavior, the baseline study will employ a Knowledge, Attitude, and Practice (KAP) survey using both quantitative and qualitative methods.

The quantitative survey conducted at the household level, employing a structured questionnaire. Focus Group Discussions (FGDs) with semi-structured questionnaires conducted at the community level and with other relevant stakeholders. Additionally, a quantitative survey conducted at the health facility level to assess physical infrastructure availability and the capacity of human resources, with frontline workers (FLWs) and other health officials as respondents. Lastly, a mix of quantitative and qualitative surveys, incorporating both closed



and open-ended questions, conducted with VHC leaders to gain insights into formation, composition, functioning, knowledge gaps, and challenges.

SL. No.	AREA OF INTEREST / DOMAIN	DESCRIPTION
1.	Utilization of health care services in the state	To explore the socio-economic and demographic factors which influence the utilization of health care services in the state.
		To understand the demand dimension, the study will assess health seeking behavior of the communities to develop a locally contextualized awareness generation mechanism.
2.	Health seeking behavior of the communities	To comprehend the supply dimension, the study will examine the health care infrastructure (physical & human resources) of the state vis-à-vis the availability, accessibility, affordability and quality health care provision.
3.	The health care infrastructure (physical & human resources) of the state vis-à-vis the availability, accessibility, affordability and quality health care provision.	To explore the information on formation, composition and functioning of VHCs and identify challenges to form a comprehensive plan for strengthening.
4.	Health System Strengthening	Explore the formation, composition and functioning of VHCs and identify challenges to form a comprehensive plan for strengthening.

A sequential mixed-method design was employed, comprising quantitative assessment, data analysis, and qualitative components. The primary focus of the study was quantitative, with a qualitative study conducted to address critical factors that are non-quantifiable due to a lack of information. Secondary data sources such as government and agency report also integrated into the assessment.

Facility assessment conducted on a sample of health facilities, with secondary facility data sources linked for advanced analysis to evaluate gaps across key areas such as human resources and training status, infrastructure, availability of medical equipment, drugs, and supplies, as well as service delivery. Sample surveys targeted specific groups to understand the areas of interest mentioned above.





- At the household level: Following are the target groups at the household level.
 - » Household members above 18 years of age to understand the status of the utilization of health care services, demand dimension, health seeking behavior of the communities, awareness etc.
- At the Hospital: Facility assessment to assess the gaps in Infrastructure, HR and training, Drugs and supplies, equipment, and data management systems
 - » Explore the capacity of health staff on maintaining core functions and serving the ongoing and health care needs of their communities.
- At the Community-level: This was assessed through a qualitative study among various stakeholders, including community members, providers, and community leaders, to understand, assess, and analyze the KAP/behaviors of communities regarding healthcare seeking, as well as awareness of affirmative action relevant to health across households, considering vulnerabilities. The effort also aimed to capture opportunities, aspirations, and outcomes of the health ecosystem, understanding both enablers and barriers, thereby providing insights for informed decision-making regarding the formation, composition, and functioning of VHCs and identifying challenges to formulate a comprehensive plan for strengthening.

Secondary Research, desk review of:

- National and State Health Policies
- Reports and statistics on healthcare utilization (Ministry of Health and Family Welfare, National Health Mission, Directorate of heath services, Meghalaya, etc.)
- State specific schemes and programs supporting VHCs in Meghalaya
- Research publications

Primary Research:

- **Community-level survey:** Using multi-stage stratified random sampling, conducting household surveys with individuals above 18 years old to assess healthcare utilization, demand, and awareness of VHCs.
- **Facility-level assessment:** Selecting a sample of health facilities and collect data on infrastructure, human resources, drugs, equipment, and data management systems.
- **In-depth interviews (IDIs)** with healthcare providers, beneficiaries, community leaders, and key stakeholders to understand their perspectives, experiences, and challenges related to VHCs.
- Focus group discussions (FGDs) with community members to explore their knowledge, attitudes, and practices regarding healthcare utilization and VHC engagement.

Sampling Design for Baseline Evaluation

At Household Level: Quantitative Sample Size Estimation

A multi-stage stratified random sampling approach adopted encompassing three zones: Garo Hills, Khasi Hills, and Jaintia Hills. The state is divided into three zonal clusters based on language and community.

Following the project specifications, the study's sample size is determined using a one-sample formula. We employed this formula to estimate health-seeking behavior, assuming a proportion of 50%, and calculated it within a 95% confidence interval. A sample of 1500 households has been estimated from the three zones. However, considering the future Programme implementation,



when accounting for 40% oversampling done at Garo hills, the **estimated sample becomes 1730 households.** The detailed sample distribution across zones are as follows:

Zonal Cluster	Total Population	% of total population	Sample estimation	Total estimated HH sample size	Total Sample Size Achieved
Garo Hills	2,06,207	38%	570	800	800
Khasi Hills	2,75,824	50%	750	750	750
Jaintia Hills	66,028	12%	180	180	180
Total	5,48,059	100%	1500	1730	1730

A total of 1730 households surveyed using the quantitative structured tool. From the selected household, one household member above the age of 18 years selected for the quantitative interviews to understand their health seeking behavior, knowledge, attitude, and practices in availability, accessibility and utilization of healthcare services. A total of 88 Primary sampling units (PSUs) were selected using in-proportionate sampling such that the number of sampled households are proportionate to the number of estimated households across the 39 blocks.

Qualitative participants estimation

While structured interviews aided in the organized collection of quantitative data, focus group discussions (FGDs) and in-depth interviews (IDIs) were useful for gathering qualitative data, as they offered a wide scope for subjective views and comments from each respondent. The qualitative component of the study aimed to explore the aspects of the study that address the reasons for prevailing knowledge, attitudes, and practices among community members through focus group discussions. Considering the objective of the qualitative data collection, the proposed stakeholders among which IDIs administered in community members and healthcare providers. The final total sample for each of the respondents as well as the data collection tool to be used for them has been presented below:

Respondents	Tool Administered	Sample per catchment area	Total sample*
Community members, Community Groups/ CBOs	Focus Group Discussion	2 per zone	6
VHC Members	In-depth Interviews	1 per district	6
Health care providers	Key-informant Interviews	2 per zone	6
Total			18



Overall Work Plan

The processes detailed below were followed during the proposed study. It is important to note that a rigorous data quality and management protocol and equivalent standards were maintained during this outcome study.

Phase 1: Preparatory Phase

The processes involved in the preparatory stage are detailed in the given sections:

The observations of Health facility to map the services, identify gaps and challenges with service delivery including equipment and medicines, data monitoring systems, digital literacy, usability, and human resources and existing IEC facilities were mapped through Observation Checklist. Total 14 health facilities observed.



DESK REVIEW

Review of document such as existing literature on health system strengthening, healthcare utilization, and secondary reports including progress reports, and other project related documents, and government schemes and plans to identify trends and priorities

DEVELOPMENT OF TOOLS



- Preparation Quantitative and Qualitative to be used in data collection
- Finalization of Tools Finalization based on relevant information area in consultation with LEHS-WISH

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- SURVEY PROGRAMMING AND TOOL TRANSLATION
- Post finalization translating the tools to regional languages as per the zones
- Data ollection will be on KOBO dashboard
- Developing detailed field manual/guide

RECRUITMENT & TRAINING OF FIELD TEAM



- Hiring of field tea- supervisors, monitors and field executives/ enumerators team
- Training- will include rigorous classroom training and mock interviews, followed by de-briefing
- Debriefing organize debreif sessions with LEHS-WISH team during and after data collection

Figure 2: Preparatory Stage

Training

Training was organized under the guidance of the LEHS|WISH team, Project Coordinator, and Research Analyst from DI. Training for the main survey exercise for the investigators and supervisors was scheduled for 2 days, which was envisaged to start prior to the start date of the data collection. The training was conducted by the in-house research team.





Phase 2: Data collection Phase

Data Collection

Data collection and fieldwork are considered the backbone of any assessment carried. A robust data quality monitoring system was employed to ensure the highest quality data and handled with zero tolerance for errors. Strict protocols were maintained from the stage of field team recruitment to data submission.

The Computer Assisted Personal Interviewing (CAPI) method, utilizing the KOBO Toolbox platform, was used for data collection by the team.

The data collection process was managed by the field coordinator with assistance from the Team Lead, Project Coordinator, and Research Analyst. A central data processing team, consisting of a data manager, provided regular feedback to the core team, who in turn assisted the data collection team in maintaining quality.

Phase 3: Data Analysis and Reporting

Quantitative Data Analysis

The research team used SPSS 25.0 /STATA 15.0 software for analyzing the quantitative data. An in-house analytical division provided continuous support to the research team during data collection and reporting. Some of the planned analyses were as follows:

Descriptive and distribution analysis	Basic descriptive analysis was done to check the distribution of data. graphs and frequency runs were conducted to understand trends in the data and check for any potential anomalies. This helped categorize data and analyze various patterns existing, such as barriers like the prevalence of financial constraints, geographical limitations in accessing healthcare services among households, and types of services available to vulnerable populations.
Disaggregated and comparative analysis	Disaggregation and comparison across respondents from various target groups and across districts/ states allowed sharper insights into the field realities. Some of the analysis revealed if certain income groups or regions faced more significant challenges in accessing healthcare, as well as healthcare provision for different vulnerable groups (e.g., children, elderly, differently-abled).
Advanced analysis	On the basis of the available data, also proposed performing binary and multivariate analysis, such as linear and logistic regressions. Examples of some of the planned analyses included regression analysis to predict if income or geographical location was a barrier in accessing healthcare facilities.



Qualitative Data Analysis

The qualitative data collected was transcribed and translated into English. Additionally, DI also had detailed field notes to supplement the transcription and translation. After transcription, a detailed coding framework was developed, serving as a reference while analyzing the qualitative data, including aspects such as health-seeking behavior, barriers and enablers for the utilization of healthcare services, and the efficiency and effectiveness of the digital health ecosystem.

To conduct qualitative analysis on the primary data, DI proposed the use of Computer Assisted Primary Data Analysis (CAPDAS)/Atlas ti. This process helped in producing various outputs, including developing quotations, coding as per areas of inquiry, and creating network views.

Data Quality Assurance Mechanism and Data Management Strategy

Data Quality Assurance Mechanisms

Ensuring data quality and accurate data collection is essential to maintain the integrity of any survey. The primary rationale for preserving data integrity is to support the detection of errors in the data collection process, whether they are made intentionally (deliberate falsifications) or not (systematic or random errors). Craddick, Crawford, Redican, Rhodes, Rukenbrod, and Laws (2003) described 'quality assurance' and 'quality control' as two approaches that can preserve data integrity and ensure the scientific validity of study results. Each approach is implemented at different points in the research timeline:

- **Quality Assurance:** This approach focuses on preventing errors before they occur. It involved implementing standardized procedures, training protocols, and thorough planning to ensure that data collection methods are rigorous and consistent. Quality assurance measures were typically applied during the planning and implementation phases of the research.
- Quality Control: In contrast, quality control involves detecting and correcting errors that have occurred during data collection and processing. This approach conducted on systematic checks, validation procedures, and data verification techniques to identify discrepancies and inconsistencies in the data. Quality control measures were typically applied during and after data collection to ensure the accuracy and reliability of the data.

Both quality assurance and quality control are essential components of data management practices, working together to uphold data integrity and ensured the validity of study findings. By implementing these approaches, researchers tried to minimize the risk of errors and enhance the credibility of their research outcomes.

Data storage, as explained in the sections above, involved collecting data by the investigators using the KOBO Toolbox platform. This data was then uploaded to the Kobo dashboard, which provided both English and native language options. The data received from field supervisors was saved on the PC of the Data Manager, which was password protected. The raw data was handed over to LEHS|WISH without identifiers.

Confidentiality measures were implemented to protect the privacy of the respondents. Data collected from facilities was stripped of all identifiers before being made available. Thorough training of supervisors was conducted to ensure ethical protocols were followed, including how to handle breaches of confidentiality by members of the data collection and research teams. Additionally, every respondent was assigned a unique ID to maintain confidentiality, and only the study team had access to identify individual.





Post data collection, data validation, data cleaning, and submission of data were completed.

Data Management Strategy

Following the data collection, the other essential steps were those of data management, data validation, and cleaning. The data entry team, headed by the Data Manager, was responsible for these aspects. The collected data underwent a rigorous validation and cleaning process conducted by a trained team in a sustained manner.

Validity Check

- No quantity field is left blank where a number is required
- Specified units of measure have been properly used

• The reporting time is within the specified limits

Range Check

- This for data field containing information about a continous variable
- If any value falls outside the normal range, it is required to be cross-checked

Consistency Check

• Eliminate all the errors introduced during the data collection, coding and data input phase



Ethical considerations

Throughout this study, utmost care was taken to adhere to ethical guidelines and ensure participant welfare.

- Introduction to respondents: Prior to engaging with participants, thorough explanations were provided about the study's background and objectives. Any queries or concerns raised by respondents were addressed promptly and clarified in detail.
- **Informed consent:** Following the introduction to the study's purpose and goals, explicit oral consent was sought from each participant to ensure their willingness to take part. Participants who chose not to participate were fully respected and not coerced.
- **Confidentiality assurance:** Participants were assured that all information they shared would remain strictly confidential, only accessible to individuals directly involved in the study.
- **Cultural sensitivity:** The study team familiarized themselves with the specific cultural beliefs, customs, and practices in the geographical area under study. They showed utmost respect for local customs concerning attire, interpersonal conduct, religious beliefs, and practices during field interactions.
- **Respect for silence:** Participants were given the autonomy to refrain from responding to any questions posed by the team, respecting their right to silence.
- Avoidance of false promises: The team refrained from making any false assurances or promises regarding benefits to participants in exchange for their study participation.
- **Respect for perspectives:** Throughout interactions, the team consistently upheld respect for participants' perspectives and avoided engaging in any arguments or conflicts with them.
- The Sigma-Institutional Review Board (IRB) granted approval for the study protocol under Approval Document No. **10095/IRB/23-24** following the review of the IRB Review Application dated March 11, 2024, and the Presentation held on February 17, 2024.

Study Limitations

There were 14 health facilities selected in the entire study which led to completion of 14 checklists for Health Facility Assessment on a sample basis. Findings of facility assessment cannot be generalized at district, state, or national level. The findings may be helpful to corelate available services in the catchment as per the facility assessment checklist and service utilization trend as reported by the households or beneficiaries. However, the Independent Ethics Committee denied the use of facility level inference in analysis or in report to protect the confidentiality of health facility staff. Similarly, approx. 1730 head of the households were interviewed at community level on sample basis. This sample size is meagre and shall not present the true picture on household/beneficiaries' perception around service accessibility, availability, and quality at the study sites.





Perceived risks and mitigation strategies

Occasion/ Activity	Probable Risks	Mitigation Strategies adopted
		Multiple contact details for each respondent were procured to maximize response rates over rounds.
Low Response Rate	Low response rate due to lack of rapport building and trust built easily in an in-person interview; leading to bias due to potential non-availability of certain respondents.	Investigators were directed to first set up an appointment time and then conduct the interview at the scheduled time to ensure a greater completion rate. This approach also ensured that certain sections of people who weren't available during particular daytime hours due to work commitments weren't missed out from the survey.
	Household members/ vulnerable population may choose not to participate for various reasons.	Community engagement was prioritized to enhance participation and address concerns. This involved organizing community meetings to explain the project's importance and address any misconceptions or fears.
Team Hiring	Dropout of team members during data collection; poor performance of candidates	Around 15% extra team members were trained to address the dropouts and replace the poor- performing candidates, with provisions made for training new batches to fill any gaps if required.
		Enumerators with experience in health care-based data collection and knowledge of local contexts were selected.
	bys in etion of work work due to local problems or natural calamities. There may be difficulties in collecting accurate and timely data due to logistical challenges, non-cooperation from participants, or unforeseen circumstances.	A buffer of 10 to 15% additional days has been incorporated into the work schedule to accommodate such delays.
Delays in completion of field work		A list of local festivals and public gatherings, which may disrupt field work, was compiled at the state level before commencing field work.
		Thorough training was implemented for enumerators, pilot tests were conducted in diverse locations, and contingency plans were prepared for unforeseen circumstances.
	Deviation from field protocols like: • Building Rapport Issues; • Sampling Issues; • Behavioral Issues; • Data recording Issues	Field team members underwent a comprehensive training program and received ample field exposure before deployment for data collection.
Data		Every team member was provided with a detailed training cum field manual for easy reference.
collection protocols and methods		Close monitoring and regular debriefing sessions were conducted to ensure adherence to all field protocols. In the event of unacceptable errors, the backend quality and processing unit provided instructions to the teams immediately (on the same day) after the data was uploaded to the server. This facilitated prompt action, including back checks or revisits, before moving on to the next village.



3.3 Data Analysis

Quantitative Analysis

Quantitative data analysis stands as a pivotal component within the research study, as it unveils significant relationships between perceived factors and the outcomes of interest. This analysis comprised three primary segments: data cleansing, descriptive statistics, and identifying statistically significant associations (if any). The quantitative data encompassed 1730 structured interviews conducted with households across three zones: Garo Hills, Khasi Hills, and Jaintia Hills. Additionally, 14 observations of health facilities were also analyzed.

Qualitative Analysis

After conducting extensive qualitative research consisting of 12 IDIs among the VHC Members and Healthcare providers and 6 FGDs among the zone members, the data provided critical insights about demand-side barriers in the study. To gain a holistic perspective on the health seeking behavior and healthcare utilization of the zone and understand supply-side barriers, the project team interviewed various health care personnel such as PHC doctors, ANMs, Nurses. The qualitative data collected was first transcribed and translated into English. The project team also studied detailed field notes to supplement the transcription and translation. After transcription, a detailed coding framework was developed according to various themes that emerged such as distribution of medicines, capacity building, logistics, etc. that served as a reference while analyzing the qualitative data. The interviews were transcribed using excel sheets and thematic analysis with color coding was performed to segregate opinions/ perspectives of different stakeholders.

Integration of quantitative and qualitative data

To understand healthcare challenges across Garo, Khasi, and Jaintia Hills, researchers used a combined approach analyzing both numbers and experiences. They conducted surveys with over 1700 households and assessed 14 healthcare facilities (quantitative data). Additionally, in-depth interviews with healthcare providers and villagers, along with focus group discussions (qualitative data), were conducted. By combining these methods, researchers gained a deeper understanding of the issues. The numbers revealed patterns in healthcare access and utilization, while the interviews provided context and reasons behind those patterns. This mix of data is crucial for developing effective solutions to improve healthcare delivery in all three zones.







Chapter 4: Socio-Economic and Demographic Profile

4.1 Community Profile

The baseline assessment report delves into the socio-economic and demographic factors influencing healthcare utilization and the functioning of Village Health Councils (VHCs) in Meghalaya. Chapter 4 of this report focuses on providing a detailed community profile, highlighting the significance of community profiling as a crucial bridge between raw data and effective action plans.

Community profiling serves as a conduit between data and actionable measures, offering valuable insights into the unique characteristics and needs of different communities. Specifically, it sheds light on the Garo, Khasi, and Jaintia hills, which are diverse regions with distinct socio-cultural backgrounds and healthcare challenges. Understanding the intricacies of these communities is essential for designing and implementing targeted interventions that address their specific requirements and aspirations.

The comprehensive community profile presented in this chapter aims to facilitate the development of more tailored and effective strategies for healthcare delivery and VHC


strengthening initiatives. By analyzing demographic trends, socio-economic indicators, and cultural nuances, this report sets the stage for informed decision-making and impactful interventions in the healthcare sector of Meghalaya.

Overview of the Socio-Economic and demographic characteristics of communities

4.1.1 Demographics: Age and Gender

Analyzing age and gender distribution within a community provides a foundational understanding of its population structure. This knowledge is crucial for effectively allocating resources, planning healthcare initiatives, and tailoring educational programs. Such analysis can reveal trends like population aging or youth bulges. These trends have significant implications for social welfare policies and healthcare strategies. For instance, a community with a high proportion of elderly residents might require an increased focus on eldercare services and accessible healthcare facilities.

The baseline study revealed an average age of 35 across all communities. However, caution is necessary when interpreting this data, as the study only included respondents aged 18 and above. This average suggests a predominantly working-age population, but it might not capture the presence of older individuals who may have been included in the sample.



Figure 4 Gender of the respondents

Similarly, gender distribution refers to the proportion of males and females within a community. It plays a pivotal role in understanding gender disparities, access to opportunities, and social dynamics. Analyzing gender distribution reveal disparities in education, employment, and healthcare, highlighting areas where targeted interventions may be necessary to promote gender equality and empower marginalized groups. Upon analyzing the gender distribution in these three zones, some interesting trends were seen. In the Garo zone, males constitute 60.0%, while females account for 40.0%. Conversely, in the Khasi zone, females are predominant,



comprising 68.3% of respondents, with males representing 31.7%. Within the Jaintia zone, there is a relatively balanced gender distribution, with males at 47.5% and females at 52.5%.



Figure 5 Gender of the respondents in Gambegre and others of Garo

Specifically, in the Garo zone, the Gambegre block (Intervention block), 59.3% of respondents are male, while 40.7% are female. In the "others of Garo" blocks, the proportion of males is slightly higher at 60.5%, with females comprising 39.5% of respondents. Across both groups, the total distribution shows that 60% of respondents are male, and 40% are female.

The diversity in gender distribution among different zones highlights the significance of considering local demographics and preferences during the development and execution of healthcare interventions.

4.1.2 Marital Status:

Marital status serves as a significant determinant of social support, lifestyle factors, and stressors, all of which can profoundly influence health-related behaviors and outcomes. However, it's essential to recognize that marital status alone does not encompass the entirety of an individual's health profile, and therefore, it should be examined in conjunction with other relevant variables. This holistic approach contributes to a more comprehensive understanding of the social determinants of health and facilitates the development of strategies to promote health equity and improve overall population health outcomes.

				Name of t	he Zones	5		
Marital Status	Garo		Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	Ν	%
Currently Married	702	87.80%	498	66.40%	134	74.40%	1334	77.10%
Married, But Gauna Not Performed	8	1.00%	8	1.10%	5	2.80%	21	1.20%
Widowed	17	2.10%	69	9.20%	4	2.20%	90	5.20%
Divorced	9	1.10%	19	2.50%	8	4.40%	36	2.10%
Separated	17	2.10%	36	4.80%	8	4.40%	61	3.50%



Deserted	5	0.60%	7	0.90%	3	1.70%	15	0.90%	
Never Married	40	5.00%	107	14.30%	12	6.70%	159	9.20%	
Don't Know	2	0.30%	6	0.80%	6	3.30%	14	0.80%	
Total	800	100%	750	100%	180	100%	1730	100%	

Table	1	Marital	Status
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The above table 1, presents the distribution of marital statuses across the Garo, Khasi, and Jaintia communities, along with the corresponding overall percentages. Predominantly, respondents in all communities are presently married, comprising 87.8% in the Garo zone, 66.4% in the Khasi zone, and 74.0% in the Jaintia zone. There are also smaller proportions of respondents categorized under 'Married, But Gauna Not Performed,' 'Widowed,' 'Divorced,' 'Separated,' 'Deserted,' 'Never Married,' and 'Don't Know.' Particularly noteworthy is the Khasi zone's higher percentage of individuals who have never married, standing at 14.3%, compared to 5.0% in the Garo zone and 6.8% in the Jaintia zone. This data provides valuable insights into the diverse marital dynamics across these communities, shedding light on variations in marital statuses that could influence social dynamics and zone-specific considerations.

While having a deeper analysis in the Garo zone, Marriage is the dominant marital status among respondents in both the Gambegre and other Garo groups. An overwhelming majority, at 87.8%, reported being currently married. This highlights the prevalence of marriage within these communities, potentially reflecting a cultural emphasis on family units and stability.

4.1.3 Literacy Level:

Education status holds immense importance in various aspects of individual lives and societal development. Education status is strongly associated with health outcomes. Individuals with higher levels of education tend to have better overall health, lower rates of chronic diseases, and higher life expectancies. Education promotes health literacy, enabling individuals to make informed decisions about their health, adopt healthier lifestyles, and navigate healthcare systems effectively.

				Name of	the Zone	2		
Education Status	G	iaro	K	nasi	Jai	intia	Т	otal
	Ν	%	Ν	%	Ν	%	Ν	%
Illiterate	176	22.00%	86	11.50%	17	9.40%	279	16.10%
Literate Without - Educational Level	50	6.30%	80	10.70%	15	8.30%	145	8.40%
Below – Primary	61	7.60%	129	17.20%	12	6.70%	202	11.70%
Primary	72	9.00%	152	20.30%	68	37.80%	292	16.90%
Middle	145	18.10%	134	17.90%	24	13.30%	303	17.50%
Matric/Secondary	196	24.50%	101	13.50%	36	20.00%	333	19.20%
Higher Secondary/ Intermediate -Pre- University/Senior Secondary	64	8.00%	41	5.50%	4	2.20%	109	6.30%

Graduate & Above	24	3.00%	27	3.60%	3	1.70%	54	3.10%
Others	12	1.50%	0	0.00%	1	0.60%	13	0.80%
Total	800	100%	750	100%	180	100%	1730	100%

Table 2 Education Status

The analysis of educational attainment and occupational distribution across the Garo, Khasi, and Jaintia regions highlights significant disparities and diverse employment patterns. Across all the zones, the respondents exhibit the matric/secondary education (19.2%). The Garo zone exhibits the highest illiteracy rate at 22%, while the Jaintia zone has the highest proportion of individuals below the primary level at 37.3%. Matric/Secondary education is most prevalent in the Garo zone at 24.5%, while higher secondary education is highest in the Khasi zone at 5.5%. Diverse employment patterns are observed, with cultivators forming the largest proportion in the Garo zone (37.9%) and agricultural laborers dominating in the Khasi zone (37.3%). Service workers are more represented in the Jaintia zone (27.7%). These findings underscore the need for tailored interventions to address educational disparities and promote equitable access to education and economic opportunities.

The highest percentage in educational attainment across Gambegre and other Garo areas is 25.8%, representing respondents who have completed matriculation or secondary education.

"Yes, of course as the place where I stay the education level is greater so health seeking behaviors have also changed" – Excerpt from IDI, VHC member

4.1.4 Employment and Income Status

Employment and income status are fundamental factors that profoundly influence individuals' health and well-being. These socio-economic indicators not only determine access to healthcare but also shape health behaviors, living conditions, and overall quality of life. Understanding the interplay between employment, income, and health is essential for developing effective interventions and policies aimed at promoting equitable health outcomes and fostering thriving communities.

				Name of t	he Zone	s		
Occupation of the	G	aro	Khasi		Jaintia		Total	
respondents	Ν	%	Ν	%	Ν	%	Ν	%
Cultivator	303	37.90%	117	15.60%	7	3.90%	427	24.70%
Agricultural Laborer	219	27.40%	280	37.30%	46	25.60%	545	31.50%
Professional, Technical, and Related Worker	20	2.50%	5	0.70%	0	0.00%	25	1.40%
Construction Workers	41	5.10%	32	4.30%	10	5.60%	83	4.80%
Service Worker	90	11.30%	71	9.50%	50	27.80%	211	12.20%
Agricultural and Animal Husbandry	23	2.90%	35	4.70%	2	1.10%	60	3.50%
Other Worker	104	13.00%	210	28.00%	65	36.10%	379	21.90%
Total	800	100%	750	100%	180	100%	1730	100%

Table 3 Occupation of the respondents



The above table 3, illustrates the occupational distribution among the Garo, Khasi, and Jaintia communities, as well as the total. In the Garo zone, cultivation emerges as the most prevalent occupation, with 37.9% of individuals engaged in it, followed by agricultural laborers at 27.4%. In contrast, the Khasi zone predominantly comprises agricultural laborers, with 37.3% involved in this occupation. Meanwhile, service workers represent a larger proportion of the Jaintia zone, accounting for 27.8% of the population. Notably, a considerable percentage of "other workers" is observed across all communities, with the highest percentage in the Jaintia zone at 35.6%. When the respondents were asked about their works it was reported they were Anganwadi workers, ANMs, etc. Overall, the data underscores variations in occupational preferences across different zones.

Regarding respondents reported total monthly income across the Garo, Khasi, and Jaintia communities, as well as the total values, notable differences are observed. The mean monthly income for the Garo zone stands at 8617 rupees, whereas for the Khasi zone, it is significantly lower at 3789 rupees. In contrast, the Jaintia zone reports a substantially higher mean monthly income of 14495 rupees. Overall, when considering all communities, the mean total monthly income reported by respondent's averages at 7123 rupees. The highest percentage of individuals in both Gambegre and other Garo areas are engaged in cultivation, constituting 37.9% of the occupational distribution. This suggests that agriculture is a predominant occupation in these regions. Additionally, the mean monthly income for households in Gambegre is 9340, which is higher compared to others of Garo, where mean monthly income is 8113. This difference in income could be attributed to various factors such as differences in agricultural productivity, access to resources, or economic opportunities available in each area.

4.1.5 Religion

Religion influences individuals' beliefs, behaviors, and social networks, all of which have significant implications for health outcomes. From shaping health behaviors to influencing healthcare decision-making and providing social support, religion plays a multifaceted role in individuals' health experiences. Recognizing and incorporating religion into health projects enables to develop more tailored and culturally sensitive interventions, ultimately contributing to improved health equity and outcomes across diverse populations.

The majority of respondents identify as Christian, comprising 94.5% in the Garo zone, 84.3% in the Khasi zone, and 87.6% in the Jaintia zone. Hindus account for 2.6% in the Garo zone, 4.7% in the Khasi zone, and 9.6% in the Jaintia zone. Muslims represent a small percentage across all communities, with the highest proportion at 1.4% in the total. Other religions and respondents who did not state their religion also contribute to the overall religious diversity, totaling 2.1%. These findings highlight the religious diversity within these communities and emphasize the predominant influence of Christianity in the region.

				Name of t	he Zor	nes		
Religion of the respondents	G	iaro	Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	Ν	%
Hindu	21	2.60%	35	4.70%	17	9.40%	73	4.20%
Muslim	21	2.60%	1	0.10%	2	1.10%	24	1.40%
Christian	756	94.50%	632	84.30%	158	87.80%	1546	89.40%
Religion not stated	1	0.10%	46	6.10%	2	1.10%	49	2.80%
Other religions and persuasions (incl. Unclassified Sect)	1	0%	36	5%	1	1%	38	2%
Total	800	100%	750	100%	180	100%	1730	100%

Table 4 Religion of the respondents

Upon deeper dive analysis of the Garo zone, it was evident that In Gambegre, Christianity is the predominant religion, with 100.0% of respondents identifying as Christians. Conversely, in other Garo areas, while Christianity remains the majority religion, it accounts for a slightly lower percentage of 90.7%, with 4.5% of respondents identifying as Hindus and another 4.5% as Muslims.

4.1.6 Type of the family

In health system studies, family type data serves as a crucial lens through which one can understand the intricate dynamics influencing individuals' health outcomes. Family structures, whether nuclear, extended, single-parent, or others, profoundly impact health behaviors, access to healthcare, and social support networks. By analyzing family type data, one can delve into the unique challenges and opportunities faced by individuals within different family contexts. This understanding informs targeted interventions, policy development, and healthcare planning efforts aimed at promoting equitable health outcomes across diverse family structures.

				Name of t	he Zone	S		
Type of Family	G	aro	Khasi		Ja	intia	Тс	otal
	Ν	%	Ν	%	Ν	%	Ν	%
Nuclear family	652	81.50%	600	80.00%	149	82.80%	1401	81.00%
Joint family	26	3.30%	48	6.40%	5	2.80%	79	4.60%
Extended Family	7	0.90%	3	0.40%	1	0.60%	11	0.60%
Single-Parent Family	87	10.90%	73	9.70%	17	9.40%	177	10.20%
Lone Individuals or Single-Person Households	17	2.10%	22	2.90%	8	4.40%	47	2.70%
Others	11	1.40%	4	0.50%	0	0.00%	15	0.90%
Other Worker	104	13.00%	210	28.00%	65	36.10%	379	21.90%
Total	800	100%	750	100%	180	100.00%	1730	100%

Table 5 Type of family

The type of family across the Garo, Khasi, and Jaintia communities show a shift towards smaller units. Nuclear families dominate, making up 81% of households, indicating a preference for immediate family units. Joint families, while less popular, are still present at 4.6%. Interestingly, a significant portion of the population lives in single-parent households (10.2%) or single-person households (2.7%), highlighting the diversity in family arrangements. This trend is further emphasized when looking within the Garo zone specifically. Both Gambegre and other Garo areas show a strong preference for nuclear families, with 80.5% and 82.2% of households following this structure, respectively. These findings suggest a complex and varied family landscape across these communities.

4.2 Socio-Economic Characteristics

4.2.1 Ration Card and PDS benefits:

Ration cards, typically associated with food distribution, hold importance in health studies as



they serve as indicators of socio-economic status and vulnerability. By analyzing possession of ration cards, one can discern individuals or households facing challenges such as food insecurity and limited access to healthcare. Understanding this relationship aids in developing targeted interventions to address health disparities and promote equitable healthcare access and outcomes.

This survey reveals an interesting interplay between ration card ownership and Below Poverty Line (BPL) cards across Garo, Khasi, and Jaintia communities. While the vast majority of respondents hold BPL cards (ranging from 95.6% in Jaintia to 99% in Garo Hills), ration card ownership varies significantly. In Garo Hills, a high proportion (91.4%) possess ration cards, while ownership is considerably lower in Khasi (62.4%) and Jaintia (51.1%) communities.



This suggests that BPL status might be a broader indicator of economic vulnerability, while ration card ownership might be influenced by other factors like program targeting or awareness. The receipt of Public Distribution System (PDS) benefits also shows a similar pattern. A substantial majority (88.1%) in Garo Hills report receiving PDS benefits regularly, compared to 42.3% in Khasi and 53.3% in Jaintia communities. This indicates that even among those with ration cards, access to PDS benefits might differ across regions.

In Garo zone, ration cards are nearly universal (over 90% ownership in both Gambegre and other areas). These cards, overwhelmingly for those below the poverty line (99%), reveal a dependence on PDS (91.8% in Gambegre and 88.4% in the other Garo areas) and a community in need of government assistance.

4.2.2 Ownership of House

The data from graph (Fig 7) shows the ownership status of households regarding their main and additional houses in the Garo, Khasi, and Jaintia communities. Most households in all communities own their main house, with ownership rates of 94.3% in Garo, 90.5% in Khasi, and 77.4% in Jaintia, totaling 90.9% overall. On the other hand, a smaller number of households, around 5.8% in Garo, 9.5% in Khasi, and 22.6% in Jaintia, do not own their main house.







Regarding ownership of additional houses, the majority of households in all communities do not own any extra house, with percentages of 85.0% in Garo, 95.6% in Khasi, and 97.2% in Jaintia, totaling 90.9% overall. Conversely, a smaller percentage of households, about 15.0% in Garo, 4.4% in Khasi, and 2.8% in Jaintia, own additional houses. The above findings indicate that while most households own their main houses, owning additional houses is less common across all communities. It shows that a large majority of households in all communities have not rented out their homes, with percentages of 94.0% in the Garo zone, 98.9% in the Khasi zone, and 97.7% in the Jaintia zone, totaling 96.5% overall. Conversely, a smaller proportion of households, comprising 6.0% in the Garo zone, 1.1% in the Khasi zone, and 2.3% in the Jaintia zone, have rented out their homes.





Homeownership is prevalent in Garo communities. In Gambegre, an impressive 97.3% of households own their primary residence, with a similar trend in other Garo areas (92.1% ownership). Renting is uncommon, affecting only a small portion of the population (2.7% in Gambegre and 7.9% in other areas). While owning a single house is the norm (over 90% in both regions don't own more), a small segment in other Garo areas (18.5%) does own additional property compared to Gambegre (10%). This data suggests a strong sense of property ownership but limited investment in acquiring multiple houses within these communities.

4.2.3 Basic amenities in the household

When asked about their kitchen status, respondents revealed significant differences across the Garo, Khasi, and Jaintia communities. In the Garo zone, the majority of households, 89%, reported having separate kitchens, while a smaller proportion, 11%, did not. Conversely, in the Khasi zone, only 45.5% of households had separate kitchens, with the remaining 54.5% lacking them. The situation differed markedly in the Jaintia zone, where a vast majority, 97.2%, did not have separate kitchens, while only 2.8% reported having them. Overall, 61.3% of households across all communities had separate kitchens, while 38.7% did not.



The data reveals that the majority (80.9%) of households across these regions utilize indoor cooking spaces. This preference for indoor cooking is particularly pronounced in the Khasi (95.4%) and Jaintia (95.5%) Hills. However, a significant portion of households in the Garo Hills (34.4%) primarily utilizes outdoor cooking areas. This disparity highlights a regional variation in cooking practices. Furthermore, a smaller segment of the population (6.4%) across all regions employs a combination of both indoor and outdoor cooking spaces. This practice is most prevalent in the Garo Hills (14.2%), with a lower incidence observed in the Khasi (2.0%) and Jaintia (4.0%) Hills. These findings demonstrate a degree of diversity in cooking arrangements across these geographically distinct regions.

The majority of households in both Gambegre and other Garo areas have separate kitchens, with proportions of 87.5% and 90%, respectively, indicating ownership of a distinct cooking space. Conversely, 12.5% of households in Gambegre and 10% in other Garo areas do not have separate kitchens.





Figure 10 Cooking area in Gambegre and others of Garo

Regarding cooking arrangements, the majority of households across both regions, accounting for 45.8%, indicate that the cooking area is indoors. However, a substantial proportion of households, comprising 41.9%, report outdoor cooking arrangements. Additionally, a small percentage of households, representing 12.4%, mention having both indoor and outdoor cooking areas.

Upon analyzing regarding varied practices regarding when households change their kitchen areas, with notable differences among the three zones. Among Garo zones, the majority (96.3%) never change their kitchen areas. In contrast, a substantial portion of Khasi households also never change their kitchen areas (83.5%), but a notable minority (14.4%) do so during the monsoon season. Interestingly, among Jaintia households, the highest proportion (45.0%) changes their kitchen areas during the monsoon, indicating a seasonal adaptation likely influenced by environmental factors. These findings underscore the importance of understanding cultural and environmental contexts when implementing policies related to household infrastructure and living conditions. Efforts to improve kitchen facilities should consider these seasonal practices to ensure they are appropriately timed and effective.

Upon analyzing the Garo zone, 99.1% of Gambegre households, 94.3% of others of Garo households reported never making changes to their kitchen areas. This suggests a prevailing tendency among households to maintain their kitchen setups without significant alterations.







However, a minority of households do engage in changes, albeit infrequently. The variation in the frequency of kitchen area changes across different seasons and household types indicates potential factors influencing these alterations, with the data hinting at a slightly higher incidence of changes during the "Monsoon" season.

Fuel commonly used for	G	iaro	Khasi		Jai	intia	Total	
cooking	Ν	%	Ν	%	Ν	%	Ν	%
Wood	685	85.60%	699	93.20%	161	89.40%	1545	89.30%
Crop residues	9	1.10%	67	8.90%	21	11.70%	97	5.60%
Dung cakes	27	3.40%	77	10.30%	39	21.70%	143	8.30%
Coal/ charcoal	94	11.80%	115	15.30%	97	53.90%	306	17.70%
Electricity	89	11.10%	95	12.70%	79	43.90%	263	15.20%
Liquified petroleum gas	9	1.10%	56	7.50%	40	22.20%	105	6.10%
Bio-gas	346	43.30%	46	6.10%	0	0.00%	392	22.70%
Other	6	0.80%	19	2.50%	4	2.20%	29	1.70%
Total	800	100%	750	100%	180	100%	1730	100%

Table 6 Fuel commonly used for cooking

Cooking fuel preferences vary significantly across these communities. Wood is the clear favorite for almost everyone (over 85% in all groups), but there are interesting differences in secondary fuels. Biogas is a popular alternative for Garos (over 43%), while coal/charcoal is more common among Jaintias (over 53%). These variations point to the need for considering cultural, economic, and environmental factors when promoting cleaner cooking practices. A one-size-fits-all approach won't work - successful policies will need to address the specific needs and preferences of each community.

Looking closer at the Garo zones, a similar pattern can be seen. Wood reigns supreme (over 85%) followed by biogas, especially in Gambegre (over 50%). This data suggests that transitioning to cleaner fuels will require tailored solutions for each community.

Availability of electricity

The data from figure 11 indicates that the majority of households across all the zones have access to electricity. Specifically, 99.8% of Garo households, 88.9% of Khasi households, and 91.1% of Jaintia households report having electricity. However, there are slight variations, with a higher percentage of Garo households reporting electricity compared to Khasi and Jaintia households.



Figure 12 Availability of Electricity

Notably, the percentage of households without electricity is minimal across all groups, with only 0.3% of Garo households, 11.1% of Khasi households, and 8.9% of Jaintia households indicating no access to electricity. These findings suggest that while electricity access is widespread, there are disparities among ethnic groups, highlighting the need for targeted interventions to ensure equitable access to basic amenities such as electricity.

Almost everyone in the Garo zone has access to electricity. This is especially pronounced in Gambegre, where 100% of respondents reported having electricity in their homes. In other Garo areas, the electrification rate is still incredibly high at 99.6%. This near-universal access to electricity likely plays a significant role in the lives of Garo communities, potentially impacting everything from lighting and appliance use to communication and access to information.





Figure 13 Availability of electricity in Gambegre and others of Garo

Primary source of water

Fuel commonly used for	G	aro	К	hasi	Jai	intia	Тс	otal
cooking	Ν	%	Ν	%	N	%	N	%
Piped water into dwelling	42	5.30%	89	11.90%	16	8.90%	147	8.50%
Piped water into yard/ plot	130	16.30%	289	38.50%	49	27.20%	468	27.10%
Public tap/stand pipe	110	13.80%	115	15.30%	29	16.10%	254	14.70%
Tube well/borehole	68	8.50%	27	3.60%	0	0.00%	95	5.50%
Protected dug well	110	13.80%	55	7.30%	4	2.20%	169	9.80%
Protected spring	0	0.00%	35	4.70%	29	16.10%	64	3.70%
Tanker-truck	0	0.00%	15	2.00%	33	18.30%	48	2.80%
Surface water	301	37.60%	3	0.40%	9	5.00%	313	18.10%
Others	39	5%	122	16%	11	6%	172	10%
Total	800	100%	750	100%	180	100%	1730	100%

Table 7 The primary source of water

Upon analyzing, it is revealed that the primary source of water for households across the three zones is piped water into yard/plot. This is followed by surface water, which is notably more prevalent among Garo households at 37.6%. Public tap/stand pipes and protected dug wells are also significant sources, each accounting for around 14.7% and 9.8% of total households, respectively. Interestingly, while rainwater collection and bottled water usage are minimal across all groups, tanker-trucks are a notable source for Jaintia households, representing 18.3% of their primary water sources. These findings highlight the diverse water access scenarios among the three zones and underscore the importance of understanding local water resource

availability and infrastructure to ensure sustainable and equitable access to clean water for all households. Specifically, in the Garo zone the primary source of water is surface water (37.6%), comprising 31.6% in Gambegre block and 41.8% in the other blocks of Garo.

Safe drinking water is a priority for most households in this survey (80.9% treat their water). This practice is consistent across ethnicities with Garo (81.9%) and Khasi (78.7%) communities treating their water at high rates. Jaintia communities lead the way with 86.1% treating their water. However, there are some variations. A small portion (17.5%) doesn't treat their water, with slightly more prevalence in Khasi (20.7%) and Garo (15.5%) communities compared to Jaintia (13.3%). Uncertainty about water treatment practices is uncommon (0.6% to 2.6%).





Within the Garo zone, Gambegre shows a higher rate of water treatment (85.4%) compared to other Garo areas (79.4%). These findings highlight the importance of water treatment for safe drinking water while also revealing variations in practices across these communities.

Ways of Water	G	aro	Kh	asi	Jair	ntia	Tota	al
treatment	Ν	%	Ν	%	N	%	N	%
Boil	578	88.20%	535	90.70%	154	99.40%	1267	90.50%
Strain it through a cloth	23	3.50%	34	5.80%	0	0.00%	57	4.10%
Use a water filter (ceramic, sand, composite, etc.)	41	6.30%	8	1.40%	1	0.60%	50	3.60%
Others	13	2%	13	2%	0	0%	26	2%
Total	655	100%	59000%	100%	15500%	100%	140000%	100%

Table 9 Type of Toilet Facility

Boiling is the undisputed champion for safe drinking water across all zones (Garo- 88.2%, Khasi - 90.7%, Jaintia - 99.4%). Jaintia communities rely on boiling the most, followed closely by Khasi and Garo households. This overwhelming preference highlights the effectiveness of boiling as a simple and reliable water treatment method. While some residents use alternative methods like adding bleach (0.7%), straining water (4.1%), or filters (3.6%), these practices are far less common. Even methods like solar disinfection or letting water settle are rarely used. Within the Garo zone, the trend holds true. Boiling reigns supreme in both Gambegre (89.7%) and

other Garo areas (87.2%). Overall, this data emphasizes that boiling is the clear favorite for safe drinking water, with alternative methods playing a much smaller role in these communities.

	G	aro	К	hasi	Jai	intia	Тс	otal
Type of tollet facility	Ν	%	Ν	%	Ν	%	Ν	%
Flush or pour flush toilet piped to sewer system	36	4.5%	9	1.2%	2	1.1%	47	2.7%
Piped water into yard/ plot	130	16.30%	289	38.50%	49	27.20%	468	27.10%
Flush or pour flush to pit latrine	620	77.5%	280	37.3%	77	42.8%	977	56.5%
Pit Latrine with slads	73	9.1%	331	44.1%	85	47.2%	489	28.3%
Pit Latrine without slads	71	8.9%	80	10.7%	4	2.2%	155	9.0%
No toilet facilities	0	0.0%	44	5.9%	11	6.1%	55	3.2%
Others	0	0.0%	6	0.8%	1	0.6%	7	0.4%
Total	800	100%	750	100%	180	100%	1730	100%

Toilet facility

Table 9 Type of Toilet Facility

Pit latrines rule the roost when it comes to toilets across these zones (56.5% overall). Garo zone stand out for preferring flush or pour-flush toilets over basic pit latrines (77.5% vs. an average of 40% for Khasi and Jaintia). Jaintia zone, on the other hand, favor pit latrines with slabs (47.2% compared to a much lower percentage in other groups). Modern flush toilets connected to sewers are less common (2.7%), and open defecation is practically nonexistent (0.2%). This data suggests different toilet preferences among ethnicities, highlighting the need for culturally appropriate sanitation improvements.

Looking closer at the Garo zone, we see a strong preference for flush or pour-flush pit latrines (76.6% to 78.1% across Gambegre and other areas). This type of toilet is the clear favorite, with very few households relying on simpler pit latrines or lacking proper sanitation facilities altogether.

A further analysis was done on the availability of hand washing area, where there's a significant difference in access to handwashing facilities across zones. Garo households fair best (61.9% have them), followed by Jaintia (58.3%) and then Khasi (a low 22.9%). This means a large portion of Khasi households (75.2%) lack this basic hygiene amenity. This unevenness highlights the need for targeted interventions, especially in Khasi communities, to promote proper handwashing practices which are crucial for good health. Even among those with facilities, a small percentage (1.7% to 5.5%) are unsure about their presence, indicating a potential knowledge gap around hygiene infrastructure. Looking within the Garo zone, the situation is better with most households (59.9% to 63.3%) having handwashing facilities. However, there's still a minority (30.4% to 35.9%) lacking them. Overall, while most households have handwashing facilities, there's a clear need to address the gap in a significant number of homes to ensure proper hygiene across these communities.





Healthcare accessibility encompasses various factors beyond just location, but proximity to facilities plays a crucial role. The analysis for the distance of the nearest healthcare facility highlights potential disparities in geographic access across zones. Garo communities are closest to healthcare facilities (averaging 5.893 kilometers), followed by Khasi communities (6.360 kilometers). Jaintia communities face the biggest challenge, residing an average of 12.887 kilometers (about 8.01 mi) away. Overall, the average distance is 6.813 kilometers. These significant variations emphasize the need to address geographical barriers, particularly for those further away, to ensure everyone has equal access to healthcare services.

4.2.4 Community Preferences for Health Facilities

Understanding the healthcare preferences of communities is essential for developing effective healthcare strategies tailored to their specific needs. In our study, we examined the preferences of different communities regarding health facilities. Here are the key findings:

Nearest	G	aro	Kh	asi	Jair	ntia	Tota	al
healthcare facility	Ν	%	N	%	Ν	%	N	%
Sub-Centre	470	58.8%	128	17.1%	79	43.9%	677	39.1%
Primary Health Centre/Urban Primary Health Centre (UPHC)	148	18.5%	403	53.7%	98	54.4%	649	37.5%
Community Health Centre (CHC)	21	2.6%	183	24.4%	0	0.0%	204	11.8%
Others	161	20.1%	36	4.8%	3	1.7%	200	11.6%
Total	800	100%	750	100%	180	100%	1730	100%

Table 10 Nearest Healthcare Facility

The predominant choice for healthcare facilities among Garo households is Sub-centres. Approximately 58.8% of Garo households reported their proximity to Sub-centres, indicating a strong reliance on these facilities for healthcare services. In contrast, Jaintia households primarily rely on Primary Health Centres/Urban Primary Health Centres, with 54.4% indicating their preference for these facilities. This suggests a distinct healthcare preference within the



Jaintia population. Khasi households exhibit a similar preference to Jaintia households, with 53.7% indicating their utilization of Primary Health Centres/Urban Primary Health Centres. However, Community Health Centers are also utilized by a significant proportion of Khasi households (24.4%), indicating a unique healthcare utilization trend among this community.

Across all zones, a considerable proportion of respondents (ranging from 9.5% to 18.8%) reported using other healthcare options. This diversity underscores the varied preferences and infrastructure utilization within the studied population. Understanding these preferences is crucial for healthcare planners and policymakers to ensure equitable healthcare delivery and address the specific needs of each community effectively.

After deeper analysis it was seen that in Gambegre and other areas of Garo, the most common nearest healthcare facility type is the Sub-Centre, with percentages ranging from 56.1% to 62.6%. Following this, the Primary Health Centre/Urban Primary Health Centre (UPHC) serves as the nearest health facility for 13.7% to 21.9% of households. These findings underscore the prominence of Sub-Centers and Primary Health Centers as the primary sources of healthcare access for surveyed households. Additionally, a diverse range of other facilities also play significant roles in providing healthcare services to communities, as indicated by the percentages in the "Other" category.

Last visit to the	G	iaro	Kh	asi	Jair	ntia	Total		
facility	N	%	Ν	%	N	%	N	%	
Never visited the nearest health facility	241	30.1%	75	10.0%	17	9.4%	333	19.2%	
Within the last week	70	8.8%	137	18.3%	73	40.6%	280	16.2%	
Within the last month	183	22.9%	138	18.4%	35	19.4%	356	20.6%	
Within the last three months	148	18.5%	134	17.9%	37	20.6%	319	18.4%	
More than three months ago	158	19.8%	266	35.5%	18	10.0%	442	25.5%	

4.2.5 Health Facility Visit Recency by geography

Table 11 Last Visit to the Nearest Health Facility

The above data sheds light on the recency of visits to the nearest health facility among households, segmented by geographic groups. Notably, a significant portion of Garo households (30.1%) reported never visiting the nearest health facility, whereas only 10.0% of Khasi households and 9.4% of Jaintia households reported the same.

Within the last week, Jaintia households showed the highest percentage (40.6%) of visits, followed by Khasi households (18.3%) and Garo households (8.8%). Conversely, more than one-third of Khasi households (35.5%) reported their last visit to be more than three months ago, contrasting with Garo (19.8%) and Jaintia (10.0%) households.

These variations highlight differences in healthcare-seeking behavior among the zones and underscore the need for targeted interventions to improve access to healthcare services, particularly among communities with lower utilization rates.





Figure 16 Last visit to nearest health facility in Gambegre and others of Garo

Respondents who never visited the nearest healthcare facility offered various reasons. Some simply felt healthy and didn't perceive a need for care. However, others expressed dissatisfaction with the closest Primary Health Center (PHC), hinting at potential issues like lack of resources or poor service there. Interestingly, a few respondents mentioned traveling to Guwahati, a larger city, for checkups, suggesting a preference for more specialized care or a perception of betterquality facilities in the city.

These reasons underscore a mix of factors influencing healthcare utilization, ranging from perceived lack of need to potential shortcomings in local services, and a desire for more advanced care.

Seeking of Primary	Garo		Kh	asi	Jair	ntia	Total		
Healthcare Services	Ν	%	Ν	%	Ν	%	Ν	%	
Sub-Centre	306	38.3%	103	13.7%	32	17.8%	441	25.5%	
Primary Health Centre/Urban Primary Health Centre (UPHC)	133	16.6%	390	52.0%	125	69.4%	648	37.5%	
Community Health Center (CHC)	17	2.1%	200	26.7%	0	0.0%	217	12.5%	
District Hospital	10	1.3%	31	4.1%	8	4.4%	49	2.8%	
Private Hospital	212	26.5%	15	2.0%	14	7.8%	241	13.9%	

Table 12 Seeking of Primary Healthcare Services



Among Garo hills respondents, a significant proportion (38.3%) sought primary healthcare services from Sub-Centres, while Primary Health Centre/Urban Primary Health Centre (UPHC) was the most preferred option for Khasi (52.0%) and Jaintia (69.4%) households. Community Health Centers (CHC) were the preferred choice for Khasi households (26.7%), while Garo households showed a preference for Private Hospitals (26.5%). District Hospitals were less commonly chosen across all the three zones, with Jaintia households showing the highest utilization rate (4.4%). Additionally, a notable proportion of households across all groups (7.7%) sought primary healthcare services from other unspecified sources. These findings highlight variations in healthcare-seeking behaviors among ethnic communities and underscore the importance of understanding and addressing their specific healthcare needs.

Within the Garo zone, private hospitals take the lead (24.6% to 27.8%) as the preferred choice for primary healthcare. Sub-Centers (38.3% overall) are another common option. While Primary Health Centers (16.6%) are used, other providers are also chosen by a significant portion (13.2% to 18.2%). Community Health Centers and District Hospitals are less frequently cited. This data underscores the importance of considering local preferences for healthcare services when designing interventions to improve access to primary care across these communities.

When asked about the reasons of choosing the mentioned services about 42.5% of all the respondents across the three zones choose doctor's availability in their area. Other 37.5% of the respondents choose accessibility of the health centres.

4.2.6 Mode of Transportation

The mode of transportation to health facilities plays a crucial role in determining healthcare accessibility, timeliness of care, health outcomes, cost considerations, and infrastructure planning. Ensuring accessible and efficient transportation options is essential for promoting equitable access to healthcare services for all individuals. Reasons for Choosing Healthcare Services

Primary mode of transportation to	Garo		Кŀ	nasi	Jair	ntia	Total		
health facilities	Ν	%	N	%	N	%	Ν	%	
Government	41	5.1%	13	1.7%	6	3.3%	60	3.5%	
108 Service	10	1.3%	51	6.8%	9	5.0%	70	4.0%	
Private Service	715	89.4%	409	54.5%	154	85.6%	1278	73.9%	
Other	34	4.3%	277	36.9%	11	6.1%	322	18.6%	
Total	800	100%	750	100%	180	100%	1730	100%	

 Table 13 Primary Mode of Transportation to Health Facilities

According to the data mentioned above, it can be observed that most of the respondents (73.9%) across all zones uses private service to commute from their home to health facilities.





5.1 Patterns of Health Seeking Behavior

Health-seeking behavior encompasses a wide range of actions undertaken by individuals or communities to address health concerns and maintain well-being. This includes seeking preventive services like vaccinations and screenings, adopting healthy lifestyle practices, consulting healthcare providers for diagnosis and treatment, and accessing healthcare facilities or resources as needed.

This section delves into the health-seeking behavior exhibited by the respondents included in the survey. It explores how individuals within the surveyed population approach and engage with healthcare services in various contexts. By analyzing these behaviors, we gain valuable insights into the patterns and dynamics that influence healthcare utilization within the surveyed population. Additionally, this section provides an opportunity to identify barriers, challenges, and opportunities for improving access to and utilization of healthcare services, ultimately contributing to the enhancement of healthcare delivery and health outcomes



5.1.1 Initial Points of Contact for Health Problems:

The initial point of contact during health problems is often the first interaction an individual has with the healthcare system when they experience medical issues or concerns. This initial contact can vary depending on several factors, including the severity of the health problem, personal preferences, and accessibility to healthcare services. When asked, the Primary Health Centre (PHC) is a significant point of contact, with 17% of respondents in the Garo zone, 40.8% in the Khasi zone, and 62.7% in the Jaintia zone, representing 32.0% overall. Sub Centres also play a vital role, accounting for 49.3% of initial contacts in the Garo zone, 13.9% in the Khasi zone, and 14.7% in the Jaintia zone, totaling 30.3%.

Initial Point of	G	aro	Kh	asi	Jair	ntia	Total		
Contact	Ν	%	Ν	%	N	%	Ν	%	
Local Doctor (Formal Physician)	9	1.1%	117	15.6%	28	15.6%	154	8.9%	
РНС	136	17.0%	306	40.8%	114	63.3%	556	32.1%	
Sub Centre	394	49.3%	104	13.9%	26	14.4%	524	30.3%	
ASHA	178	22.3%	169	22.5%	3	1.7%	350	20.2%	
Other	83	10.4%	54	7.2%	9	5.0%	146	8.4%	
Total	800	100%	750	100%	180	100%	1730	100%	

Table 14 Initial Point of Contact

Figure 19, indicates that the Sub Centre serves as the primary initial contact point for seeking healthcare, with 47.7% of respondents from Gambegre and 50.3% from the rest of Garo choosing this option. This suggests that Sub Centres play a crucial role as the first point of contact for accessing healthcare services in both Gambegre and other areas of the Garo region. These findings underscore the importance of strengthening and supporting Sub Centres to ensure they can effectively meet the healthcare needs of the communities they serve.



Figure 17 Initial point of contact



5.1.2 Primary Source of Healthcare for Minor and Severe Illnesses

• Minor illness

Minor illnesses are common health conditions that are usually mild and do not typically require extensive medical intervention or hospitalization. Examples include cold and flu, headaches, and minor injuries. These ailments often resolve on their own or with simple home remedies or over-the-counter medications. When individuals seek healthcare for minor ailments, many prefer consulting doctors at Primary Health Centers (PHCs), Zone Health Centers (CHCs), or District Medical Centers (DMs). This preference is notable, with 22.5% of respondents from the Garo zone, significantly higher at 60.1% in the Khasi zone, and 49.2% in the Jaintia zone, totaling 41.6% overall. Accredited Social Health Activists (ASHAs) are also a significant choice, with 30.3% of respondents in the Garo zone, 11.3% in the Khasi zone, and 3.4% in the Jaintia zone, making up 19.3% overall. Local pharmacies are another popular option, with 31.9% of respondents in the Garo zone, 15.9% in the Khasi zone, and 30.5% in the Jaintia zone, comprising 24.8% overall.

Upon analysis, it was found that for minor illnesses, the primary points of contact varied between Gambegre and other areas of Garo. In Gambegre, the most common point of contact was the local pharmacy, utilized by 36.2% of respondents, followed by ASHAs at 31.3%. Conversely, in other areas of Garo, the most frequent point of contact was the PHC/CHC/DM doctor, with 29.9% of respondents, followed by the local pharmacy at 28.9%.

• Severe Illness

Severe illness encompasses medical conditions or health issues that are grave in nature and often necessitate immediate and intensive medical attention. These conditions have a profound impact on an individual's health and well-being and can pose a significant threat to their life if not promptly treated or managed. Examples of severe illnesses include heart attacks, strokes, severe infections, traumatic injuries, severe allergic reactions (anaphylaxis), and advanced stages of chronic diseases such as cancer or organ failure. When faced with severe illnesses, a majority of respondents across all communities prefer consulting doctors at Primary Health Centers (PHCs), Community Health Centers (CHCs), or District Medical Centers (DMs), accounting for 35.6% in the Garo zone, 58.3% in the Khasi zone, and 66.7% in the Jaintia zone, totaling 48.6% overall. Local pharmacies are also a common choice, with 33.0% of respondents in the Garo zone, 2.1% in the Khasi zone, and 15.8% in the Jaintia zone, making up 17.8% overall. Local doctors are consulted by 2.8% of respondents in the Garo zone, 18.4% in the Khasi zone, and 10.2% in the Jaintia zone, comprising 10.3% overall. ASHAs (Accredited Social Health Activists) are preferred by 6.5% of respondents in the Garo zone, 2.0% in the Khasi zone, and 2.3% in the Jaintia zone, totaling 4.1% overall.





In Gambegre, the most common point of contact is the local pharmacy, utilized by 33.1% of respondents, followed by the PHC/CHC/DM (Primary Health Centre/Zone Health Centre/District Medical) doctor at 32.2%. On the other hand, in other areas of Garo, the PHC/CHC/DM doctor is the most frequent point of contact, with 38.0% of respondents, followed by the local pharmacy at 32.9%.

5.1.3 Health Emergency Assistance:

Health emergency assistance refers to the immediate medical care provided in situations where a person's life, health, or bodily function is at risk. It's all about getting critical care to those who need it most, as quickly as possible.

When the respondents were asked about their choice of medical assistance in health emergency, PHC/CHC/DM doctors (Primary Health Centre/Community Health Centre/District Medical) was the preferred choice across all the three zones. In the Garo zone, 40.5% of households opt for consulting PHC/CHC/DM doctors, while 40.3% choose local pharmacies, and 6.9% rely on ASHAs (Accredited Social Health Activists). Similarly, in the Khasi zone, the majority (72.9%) seek assistance from PHC/CHC/DM doctors, followed by local doctors (11.3%), and local pharmacies (3.1%). Likewise, in the Jaintia zone, 71.8% turn to PHC/CHC/DM doctors, 14.1% prefer local pharmacies, and 4.5% seek help from ASHAs.

In Gambegre, the majority (40.7%) opt for local pharmacies, followed by PHC/CHC/DM doctors (33.1%). Contrarily, in other areas of Garo, PHC/CHC/DM doctors are the preferred choice, with 45.6% of households seeking assistance from them, followed by local pharmacies (39.9%). This suggests that healthcare-seeking behavior differs between Gambegre and other areas of Garo, with Gambegre households showing a preference for local pharmacies, while households in other Garo areas prioritize seeking assistance from PHC/CHC/DM doctors.

5.1.4 Reasons for Not Seeking Healthcare:

Seeking healthcare is the active process of addressing a health concern or working to improve your overall well-being. This can involve a range of actions, depending on the situation and the healthcare system available in the area.

Across all the zones, 51.4% of respondents indicated that someone in their household had fallen sick or experienced illness in the past six months. In the Garo zone, 46.1% reported illness, while the figures were higher in the Khasi and Jaintia zones, with 58.4% and 45.8% respectively. On the contrary, 48.6% in Garo, 41.6% in Khasi, and 54.2% in Jaintia mentioned no instances of illness during this period.



In Gambegre, 41.3% of households reported illness within the last 6 months, while in other areas of Garo, this figure was slightly higher at 49.5%. In contrast, 53.9% of households in total reported no illness within their households during the specified period, with 58.7% in Gambegre and 50.5% in other areas of Garo.

Among households where illness occurred, the majority sought medical advice or visited healthcare facilities. Specifically, 92.1% of Garo households, 96.3% of Khasi households, and 93.8% of Jaintia households sought medical assistance. Conversely, a smaller proportion, comprising 7.9% in Garo, 3.7% in Khasi, and 6.2% in Jaintia communities, did not seek medical assistance.

Upon analysis, local pharmacies and PHC/CHC/DM doctors are the primary points of contact for medical assistance during health emergencies in both Gambegre and other areas of Garo.

				Name of t	he Zone:			
Reasons for not visiting	Garo		Khasi		Jaintia		Total	
the neartheare facilities	Ν	%	N	%	Ν	%	Ν	%
We Rely on Home Remedy	1	3.4%	0	0.0%	2	40.0%	3	6.0%
Illness Was Not Serious Enough to Seek Health Services	2	6.9%	6	37.5%	2	40.0%	10	20.0%
Financial Constraints	10	34.5%	5	31.3%	0	0.0%	15	30.0%
The Health Centre Was Very Far from Home	14	48.3%	4	25.0%	1	20.0%	19	38.0%
Others	2	6.9%	1	6.3%	0	0.0%	3	6.0%
Total	29	100.0%	16	100.0%	5	100.0%	50	100.0%

Table 15 Reasons for not visiting the healthcare facilities

Respondents who declined to visit healthcare facilities during sickness or illness provided various reasons, including financial constraints, distance from the health center, and reliance on home remedies. In the Garo zone, 48.3% mentioned distance as a hindrance, while 34.5% cited financial constraints. Moreover, 6.9% cited other reasons, and 6.9% preferred home remedies. Conversely, in the Khasi zone, financial constraints affected 31.3%, while 25.0% cited distance. Additionally, 37.5% believed the illness was not severe enough to warrant medical attention, and 6.3% cited other reasons. In the Jaintia zone, 40% relied on home remedies, while 40.0% did not consider the illness serious enough.

Upon analysis, in Gambegre, the primary reasons included financial constraints (43.8%) and the health center being very far from home (43.8%). In contrast, in other areas of Garo, the primary reasons were the distance to the health center (53.8%) and financial constraints (23.1%)

"Mostly, the people in this area faces difficulty while commuting from their place to PHCs" – Excerpt from IDI of Doctor, Pomlum PHC



5.1.5 Childbirth and Maternal Care

Maternal care is crucial for ensuring the health and well-being of both mothers and their babies. It encompasses the health of women during pregnancy, childbirth, and the postnatal period. This study briefly examined maternal and child health to gain insights into their status.

	Name of the Zone									
Child Born Last Year	Garo		Khasi		Jaintia		Total			
	Ν	%	Ν	%	Ν	%	Ν	%		
No	744	93.0%	711	94.8%	175	97.2%	1630	94.2%		
Yes	56	7.0%	39	5.2%	5	2.8%	100	5.8%		
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%		

Table 16 Child born last year

The analysis of households regarding the presence of children born in the last year reveals that overall, 5.8% reported having a child born during that period. Among the communities, the Jaintia zone has the lowest percentage of households with children born last year at 2.8%, followed by the Khasi zone at 5.2%. In contrast, the Garo zone has the highest percentage, with 7.0% of households reporting children born in the previous year.

Specifically, in Gambegre, 94.8% of households reported not having a child born last year, while 5.2% reported having one. Similarly, in the Rest of Garo, 91.7% of households reported not having a child born last year, with 8.3% reporting having one.



Figure 20 Child born in the last year in Gambegre and others of Garo

The mode of child delivery refers to the method by which a baby is born, which typically includes options such as vaginal delivery, cesarean section (C-section), or assisted delivery methods like forceps or vacuum extraction. In the baseline study, the respondents who had children born in the last year were asked about the mode of delivery they have undergone while giving birth to the child.



	Name of the Zone									
Mode of Child delivery	Garo		Khasi		Jaintia		Total			
	Ν	%	Ν	%	Ν	%	Ν	%		
Institutional delivery	37	66.1%	29	74.4%	4	80.0%	70	70.0%		
Home delivery	19	33.9%	10	25.6%	1	20.0%	30	30.0%		
Total	56	100.0%	39	100.0%	5	100.0%	100	100.0%		

Table 17 Mode of child delivery

Among the respondents (Table 37), 70% opted for institutional delivery, while 30% preferred home delivery. Notably, the Jaintia zone had the highest rate of institutional deliveries at 80%, followed by the Khasi zone at 74.4% and the Garo zone at 66.1%. Conversely, home delivery rates were highest among the Garo zone at 33.9%, followed by the Khasi zone at 25.6% and the Jaintia zone at 20%.

Furthermore, institutional delivery rates were slightly higher in Gambegre, constituting 70.6% of deliveries, in contrast to 64.1% in the rest of Garo. Conversely, home delivery rates were higher in the rest of Garo at 35.9%, compared to 29.4% in Gambegre. Overall, these findings shed light on the prevalent practices regarding childbirth delivery across different communities and regions.



Figure 21 Reasons of not having institutional delivery in Gambegre and others of Garo

In the Garo Zone, 84.2% of respondents identified cultural beliefs as the primary reason for not opting for institutional delivery. In contrast, in the Khasi zone, 10% of respondents each cited lack of knowledge about institutional delivery and high institutional delivery costs as their reasons. Moreover, 80% of Khasi zone respondents mentioned that healthcare centers were far from home as the rationale for choosing a non-institutional delivery. In the Jaintia zone, all respondents who didn't choose institutional delivery cited distant healthcare centers as their reason.

In Gambegre, 80% of respondents cited cultural beliefs as the reason for opting for a noninstitutional delivery, while in the rest of Garo, this figure was 85.7%. Regarding other reasons, 20% of respondents in Gambegre mentioned a lack of knowledge about institutional delivery,



while 7.1% in the rest of Garo reported the same reason. Additionally, 7.1% of respondents in the rest of Garo stated that healthcare centers were far from home as the rationale for choosing a non-institutional delivery, whereas this was not reported as a reason in Gambegre.

5.1.6 Antenatal Care (ANC) and Postnatal Care (PNC):

Antenatal care and postnatal care play critical roles in ensuring the health and well-being of both mothers and infants. Together, antenatal and postnatal care contribute significantly to promoting safe pregnancies, ensuring healthy outcomes for mothers and infants, and reducing the burden of preventable maternal and neonatal deaths. All respondents across the Garo, Khasi, and Jaintia communities reported having made ANC (Antenatal Care) visits, with 100% indicating affirmative. In both the Gambegre and rest of Garo, 100% of the respondents reported that they had undergone ANC visits during their pregnancy phase. When the respondents were enquired about the PNC visits, 100% in Garo and Jaintia zone reported to have PNC visit. In the Khasi zone, 94.9% of respondents reported making PNC visits, while 5.1% did not. In the Gamberge and rest of Garo, the respondents had undergone PNC visits after the delivery of their child.

5.1.7 Child Vaccination:

Vaccinations are a powerful tool in the public health arsenal, shielding children from a range of dangerous diseases. The benefits of vaccination extend far beyond childhood. Vaccination provides lasting immunity, reducing the risk of contracting these diseases throughout a person's life

	Name of the Zone									
Child Vaccination Status	Garo		Khasi		Ja	intia	Total			
	Ν	%	Ν	%	Ν	%	Ν	%		
No	744	93.0%	711	94.8%	175	97.2%	1630	94.2%		
Yes	53	94.6%	37	94.9%	4	80.0%	94	94.0%		
Total	56	100.0%	39	100.0%	5	100.0%	100	100.0%		

Table 18 Child vaccination status

A positive trend emerges when looking at childhood vaccination rates across the three zones. Overall, a high percentage of children (94%) have been vaccinated, with only 6% remaining unvaccinated. The Garo and Khasi communities boast particularly impressive rates, with 94.6% and 94.9% of children vaccinated respectively. However, a disparity exists in the Jaintia zone, where the vaccination rate dips to 80%.





Drilling down into the Garo community, we see a significant difference between Gambegre and other areas. In Gambegre, only 82.4% of children are vaccinated, compared to a perfect 100% vaccination rate in other Garo blocks. Interestingly, the reason for not vaccinating children aligns with this disparity. Only 6% of respondents across all zones cited personal beliefs against vaccinations. However, within the Garo community, this reason was exclusively given by respondents in Gambegre, while all other Garo areas reported complete childhood vaccination. This suggests a potential need for targeted information campaigns or interventions focused on addressing vaccine hesitancy specifically within Gambegre.

5.2 Affordability and Accessibility of Healthcare services:

Accessibility and affordability play crucial roles in determining how healthcare services are utilized. Accessibility involves the ease with which individuals can physically access and use healthcare facilities, influenced by factors such as their proximity to facilities, the availability of transportation, and their knowledge of the services offered. Affordability, on the other hand, refers to the financial feasibility of accessing healthcare, which includes expenses like consultation fees, medication costs, and hospitalization fees.

5.2.1 Insurance Coverage

Insurance coverage plays a vital role in shaping individuals' healthcare-seeking behavior, as it offers financial protection against the expenses associated with medical services. This coverage determines the degree to which individuals are safeguarded from the financial strains of accessing healthcare. According to the baseline survey findings, 66.8% of respondents across all zones have health insurance coverage, while 32.1% do not, with 1.1% expressing uncertainty about their coverage status. The maximum coverage of health insurance was reported from the Garo community (82.9%), followed by Khasi (58.1%) and Jaintia (30.5%). Upon analyzing insurance coverage in the Garo zone, it was observed that the coverage in the rest of Garo blocks (83.7%) was marginally higher than Gambegre (81.8%). This suggests slight variations in coverage levels between different areas within the Garo zone, despite overall high insurance coverage.

	Name of the Zone										
Insurance coverage	Garo		Khasi		Jaintia		Total				
	Ν	%	Ν	%	Ν	%	Ν	%			
No	129	16.1%	304	40.5%	124	68.9%	557	32.2%			
Yes	663	82.9%	436	58.1%	55	30.6%	1154	66.7%			
Don't Know	8	1.0%	10	1.3%	1	0.6%	19	1.1%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 19 Insurance Coverage

5.2.2 Insurance Plan Enrollment:

Among those with health insurance in the Garo zone, the majority (94.1%) are enrolled in the Meghalaya Health Insurance Scheme (MHIS), with 3.9% having private coverage, and 2.0% under the Pradhan Mantri Jan Arogya Yojana (PMJAY) scheme. Similarly, in the Khasi and Jaintia zones, most respondents are enrolled in MHIS, with minimal presence under PMJAY or private coverage. Analysis of insurance plan names revealed MHIS as the dominant scheme amongst respondents in both Gambegre (93.3%) and the rest of Garo (94.7%). This highlights a very high

rate of health insurance enrollment within these communities, with MHIS being the primary choice for residents.

The analysis underscores the significance of health insurance coverage in facilitating access to healthcare services. Despite overall high coverage rates, variations exist between different ethnic groups and areas within zones. The dominance of MHIS suggests its effectiveness in promoting health insurance enrollment, emphasizing the need to sustain and expand such schemes to ensure broader coverage and equitable access to healthcare services across communities.

Name of the Zone								
Garo	Khasi	Jaintia	Total					
2.0%	1.6%	0.0%	1.7%					
94.1%	98.2%	98.1%	95.8%					
3.9%	0.2%	1.9%	2.4%					
	Garo 2.0% 94.1% 3.9%	GaroKhasi2.0%1.6%94.1%98.2%3.9%0.2%	GaroKhasiJaintia2.0%1.6%0.0%94.1%98.2%98.1%3.9%0.2%1.9%					

Table 20 Name of the Schemes

5.2.3 Healthcare Expenses:

Healthcare expenses refer to the costs incurred by individuals or households for medical services, treatments, medications and other healthcare-related expenses. These expenses may include fees for doctor consultations, diagnostic tests, hospitalization, surgeries, prescription medications, medical supplies, and other healthcare services. Healthcare expenses can vary significantly depending on factors such as the type of treatment required, the severity of the medical condition, the healthcare provider's fees, insurance coverage, and geographical location. Managing healthcare expenses effectively is important to ensure access to necessary medical care while minimizing financial burden and maintaining financial stability. Among the three zones, the Jaintia zone exhibits the highest percentage of households facing affordability issues, with 85.2%. This is followed by the Khasi zone at 70.5%, and the Garo zone at 49.7%. Conversely, 37.8% of households overall reported being able to afford healthcare costs comfortably, with the Garo zone having the highest percentage at 50.3%, followed by the Khasi zone at 29.5%, and the Jaintia zone at 14.8%.

Comfortable to afford the cost of healthcare	Name of the Zone									
	Garo		Khasi		Jaintia		Total			
services when needed	Ν	%	Ν	%	Ν	%	Ν	%		
No	292	36.5%	392	52.3%	107	59.4%	791	45.7%		
Yes	508	63.5%	358	47.7%	73	40.6%	939	54.3%		
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%		

Table 21 Comfortable to afford the cost of healthcare services when needed

Affordability remains a significant concern for a notable portion of households in both Gambegre and others of Garo. Approximately half of the households in each area face challenges in affording healthcare costs when needed, with slightly higher percentages reported in others of Garo. However, it is encouraging to note that around half of the households overall are able to comfortably afford healthcare expenses. Despite variations between Gambegre and others of Garo, a considerable portion of households in both regions demonstrate financial resilience in meeting their healthcare needs.





Figure 23 Comfortable to afford the cost of healthcare services when needed in Gambegre and others of Garo

5.2.4 Primary Source of Financing:

The primary source of financing in healthcare refers to the main avenue or primary method utilized by individuals or households to cover their healthcare expenses. This may encompass diverse sources such as personal savings, income, insurance coverage, government subsidies, loans, or assistance from relatives and friends. Identifying the primary source of financing for healthcare expenses is crucial for comprehending how individuals or households navigate their healthcare expenses and the financial obstacles they encounter in accessing healthcare services.

	Name of the Zone										
Primary Source of	Garo		Khasi		Jaintia		Total				
inancing	Ν	%	Ν	%	Ν	%	Ν	%			
Employer-Sponsored Health Insurance	12	1.5%	20	2.7%	16	8.9%	48	2.8%			
Government-Sponsored Health Insurance	636	79.5%	219	29.2%	37	20.6%	892	51.6%			
Out-of-Pocket Payments	136	17.0%	509	67.9%	127	70.6%	772	44.6%			
Private Health insurance	12	1.5%	2	0.3%	0	0.0%	14	0.8%			
Others	4	0.5%	0	0.0%	0	0.0%	4	0.2%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 22 Primary source of financing

The primary source of financing when accessing healthcare services for households varies across the Garo, Khasi, and Jaintia communities. Out-of-pocket payments are the most common source, accounting for 17.0% among the Garo zone, 67.9% among the Khasi zone, and 70.6% among the Jaintia zone, totaling 44.6% overall. Government-sponsored health insurance is another significant source, particularly prevalent in the Garo zone at 79.5%, followed by 29.2% in the Khasi zone and 20.9% in the Jaintia zone, making up 51.7% overall. Employer-sponsored health insurance is less common, constituting only 1.5% in the Garo zone, 2.7% in the Khasi



zone, and 8.5% in the Jaintia zone. Government-sponsored health insurance emerges as the predominant source, constituting 84.2% in Gambegre and 76.2% in other areas of Garo, with a total of 79.5% overall. Out-of-pocket payments are another significant source, representing 11.9% in Gambegre and 20.6% in other areas of Garo.

Respondents who identified out-of-pocket payments as the primary source of healthcare expenses stated that they cover these costs through personal savings or emergency funds, accounting for 35.8% across all zones. Out-of-pocket expenditure pertains to the direct payments individuals or households make for healthcare services when they are utilized. This encompasses costs such as medical consultations, diagnostic tests medications, hospital stays, and other related expenses not covered by insurance or third-

party payers. Such expenditure can impose a notable financial strain on individuals and families, particularly in areas with elevated healthcare expenses or insufficient insurance coverage. Additionally, approximately 27% of respondents across the zones mentioned borrowing money from relatives or friends to meet healthcare expenses. These findings emphasize the need for financial planning and support mechanisms to mitigate the burden of out-of-pocket healthcare expenditures on individuals and families.



Figure 24 Primary source of funding when paying out of pocket expenditure in Gambegre and others of Garo

Across Gambegre and others blocks of Garo, the most common source of funding is personal savings or emergency funds, with percentages ranging from 48.5% to 51.3%. This highlights the significant reliance on personal financial resources to cover healthcare costs. Another notable finding is the utilization of a combination of multiple funding sources, accounting for 25.7% to 27.8% of responses across the zones.

5.2.5 Delayed Health Seeking Behavior:

Delayed health-seeking behavior is a concerning phenomenon observed within healthcare systems globally. It refers to the tendency of individuals to postpone seeking medical attention or treatment for a recognized health issue. This delay can have significant negative consequences, often leading to the exacerbation of the presenting condition and potentially hindering effective treatment options. The survey yielded valuable insights into the variations in delayed health-seeking behavior observed across the three zones.



Rating of household's	Name of the Zone										
ability to access needed healthcare services in the last one year, considering the income level	Garo		Khasi		Jaintia		Total				
	N	%	N	%	N	%	N	%			
Very Poor	3	0.4%	97	12.9%	0	0.0%	100	5.8%			
Poor	42	5.3%	185	24.7%	8	4.4%	235	13.6%			
Fair	425	53.1%	390	52.0%	84	46.7%	899	52.0%			
Good	324	40.5%	77	10.3%	82	45.6%	483	27.9%			
Excellent	6	0.8%	1	0.1%	6	3.3%	13	0.8%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 23 Rating of household's ability to access needed healthcare services in the last one year, considering the income level

After analyzing the responses, it's clear that in the Khasi zone, a substantial portion of households rated their access as "Poor" (24.7%), whereas the majority in the Garo zone assessed it as "Fair" (53.1%). In contrast, in the Jaintia community, the highest proportion of households rated their access as "Good" (45.6%). Overall, the majority of households across all communities rated their access to healthcare services as "Fair" (52.0%).

While analyzing the household's ability to access necessary healthcare services over the past year, it was observed that the majority, approximately 53.1%, rated their access as fair, with similar proportions between Gambegre (51.7%) and Others of Garo (54.1%).

Types of Healthcare	Name of the Zone										
Services that were	Garo		Khasi		Jaintia		Total				
delayed	Ν	%	Ν	%	Ν	%	Ν	%			
Routine check-ups or preventive care	192	24.0%	441	58.8%	144	80.0%	777	44.9%			
Treatment for chronic conditions	327	40.9%	325	43.3%	27	15.0%	679	39.2%			
Emergency medical care	506	63.3%	335	44.7%	46	25.6%	887	51.3%			
Dental care	147	18.4%	288	38.4%	19	10.6%	454	26.2%			
Mental health services	140	17.5%	232	30.9%	30	16.7%	402	23.2%			
Others	5	0.6%	2	0.3%	0	0.0%	7	0.4%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 24 Types of healthcare services that were delayed

Nearly half of the households (44.9%) delayed routine check-ups or preventive care, with the highest proportion among Jaintia households (80.0%), followed by Khasi (58.8%) and Garo households (24.0%). Regarding treatment for chronic conditions, 39.2% of households



postponed it, with Garo households (40.9%) being the most affected, followed by Khasi (43.3%) and Jaintia households (15.0%). Emergency medical care was delayed by 51.3% of households, particularly prominent among Garo households (63.3%), followed by Khasi (44.7%) and Jaintia households (25.6%). Dental care postponement affected 26.2% of households, predominantly Khasi households (38.4%), then Garo households (18.4%), and Jaintia households (10.6%). Mental health services were delayed by 23.2% of households, with the highest proportion among Khasi households (30.9%), followed by Garo (17.5%) and Jaintia households (16.7%).

Overall, 24.0% of households postponed routine check-ups or preventive care, with Gambegre households contributing 31.3% and Others of Garo households contributing 18.9%. For treatment of chronic conditions, 40.9% of households delayed it, comprising 45.6% from Gambegre and 37.6% from Others of Garo. Emergency medical care was postponed by 63.3% of households, with Gambegre households at 63.8% and Others of Garo households at 62.8%. Dental care postponement affected 18.4% of households, predominantly from Gambegre (24.0%) compared to Others of Garo (14.4%). Mental health services were delayed by 17.5% of households overall, with Gambegre households reporting 23.4% and Others of Garo households reporting 13.4%.

5.2.6 Government Sponsored Health Insurance Scheme:

In Meghalaya, various government-sponsored health insurance schemes aim to enhance healthcare access and financial protection for residents. These schemes include the "Megha Health Insurance Scheme", "Megha Suraksha Health Insurance Scheme", Megha Care Health Insurance Scheme".

Overall, 65.2% of households indicated they were not aware of these schemes. Among the groups, Khasi households showed the highest level of unawareness, with 86.8%, followed by Garo households at 59.0%, and Jaintia households at 45.9%. On the other hand, 34.8% of households reported being aware of these government-sponsored health insurance schemes. Among these groups, Jaintia households exhibited the highest awareness, with 54.1%, followed by Garo households at 41.0%, and Khasi households at 13.2%.



Figure 25 Awareness of Govt. sponsored health insurance schemes in Gambegre and others of Garo



Source of information	Name of the Zone										
for Govt. Sponsored schemes	Garo		Khasi		Jaintia		Total				
	Ν	%	Ν	%	Ν	%	Ν	%			
Social media	43	16.5%	13	44.8%	12	60.0%	68	21.9%			
Healthcare providers	193	73.9%	13	44.8%	14	70.0%	220	71.0%			
Friends	91	34.9%	13	44.8%	7	35.0%	111	35.8%			
Relatives	82	31.4%	8	27.6%	5	25.0%	95	30.6%			
Others	3	1.1%	0	0.0%	0	0.0%	3	1.0%			
Total	261	100.0%	29	100.0%	20	100.0%	310	100.0%			

Table 25 Source of information for Govt. Sponsored schemes

Examining the sources of information about government health insurance schemes reveals interesting variations among ethnicities. Healthcare providers emerged as the most trusted source across the board, with 71% of informed households relying on them. This dependence was particularly strong within the Garo zone (73.9%) and Jaintia zone (70.0%). Interestingly, Khasi households placed less emphasis on healthcare providers (44.8%) and instead turned more towards social media (44.8%) for information.



Figure 26 Source of information for Govt. Sponsored schemes in Gambegre and others of Garo

Social media played a role in raising awareness for some, with 21.9% citing it as a source. Here, a clear distinction emerged: Jaintia zone (60.0%) overwhelmingly favored social media compared to Garo zone (16.5%). Even within the Garo community, a disparity existed. Gambegre residents relied more on social media (19.1%) compared to those in other Garo areas (13.6%).

This suggests that social media might be a more accessible information source in Gambegre, while healthcare providers remain the preferred choice in other Garo regions.

Upon deeper analysis on the type of social media it was found that print media, traditionally considered a form of social media, to be relevant only for Khasi households (100%). Neither Garo nor Jaintia households reported using print media for social networking. Instead, electronic media like YouTube, Instagram, Facebook, and WhatsApp dominate overall preference, with 53.8% of households relying on it.



However, a deeper dive into the Garo community unveils significant disparities. In Gambegre, no households utilize social media at all for information. This contrasts sharply with the rest of the Garo areas, where electronic media reigns supreme as the information source for all respondents (100%). This suggests a potential digital divide within the Garo community, with Gambegre lagging behind in social media adoption.

5.2.7 Specialized Medical Care:

Non-communicable diseases (NCDs) are medical conditions or health disorders that are not directly transmitted from one person to another. These diseases typically result from a combination of genetic, behavioral, environmental, and metabolic factors rather than from infectious agents. NCDs are a significant global health challenge, contributing to a substantial portion of the global disease burden and posing significant economic and social burdens on individuals, families, and healthcare systems. From this survey a positive trend was seen regarding the need for specialized medical care across the three zones.

Any member of the household needs specialized medical care	Name of the Zone										
	Garo		Khasi		Jaintia		Total				
	Ν	%	Ν	%	Ν	%	N	%			
No	766	95.8%	734	97.9%	173	96.1%	1673	96.7%			
Yes	34	4.3%	16	2.1%	7	3.9%	57	3.3%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 26 Any member of the household needs specialized medical care

An overwhelming majority of households (96.7%) reported that none of their members require such care. This trend held steady across ethnicities, with 95.8% of Garo households, 97.9% of Khasi households, and 96.1% of Jaintia households not requiring specialized medical attention.



Figure 27 Specialized care for NCDs in Gambgre and Others of Garo

Interestingly, when looking within the Garo community, a small disparity emerged. While the overall need for specialized care remained low (5.7%), there was a slight difference between Gambegre and other Garo areas. In Gambegre, 96.1% of households reported no such need, whereas in other Garo areas, this number rose to 93.3%. This suggests that a slightly higher proportion of households in Gambegre might require specialized medical care compared to other parts of the Garo zone.

Among those surveyed who indicated that a member of their household requires specialized care, the majority (54.4%) reported experiencing occasional challenges, with notable differences observed among the various zone.

Garo households faced the most frequent challenges (47.1% never encountered, 50% occasional), likely due to a lower overall income level compared to other zones. Conversely, no Jaintia households reported ever facing such challenges. Khasi households presented a contrasting picture: a significantly lower proportion (6.3%) never encountered difficulties, but the highest percentage (43.8%) reported frequent challenges, suggesting a potential income disparity within the Khasi community.



Figure 28 Encountered any challenges while seeking specialized care for NCDs in Gambegre and others of Garo

5.2.8 A	Assistance	while	availing	healthcare	services
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Receivable of any assistance while availing healthcare services	Name of the Zone										
	Garo		Khasi		Jaintia		Total				
	Ν	%	Ν	%	N	%	Ν	%			
No, never	350	43.8%	247	32.9%	66	36.7%	663	38.3%			
Yes, frequently	13	1.6%	66	8.8%	4	2.2%	83	4.8%			
Yes, occasionally	437	54.6%	437	58.3%	110	61.1%	984	56.9%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 27 Receivable of any assistance while availing healthcare services

The above table reveals that a significant portion of households across the zones (66.6%) reported occasionally receiving help when accessing healthcare services. This indicates that there is a notable level of reliance on external support or aid among households when seeking medical assistance

This trend appears consistent within the Garo zone as well. Here, "Others of Garo" areas had a higher proportion (44.4%) of households receiving occasional assistance compared to Gambegre (26.8%).

5.2.9 Satisfaction Level on the affordability and accessibility of Healthcare Services

In this baseline study, the satisfaction of the respondents was taken to understand the current
situation of the healthcare services. This will help in building the interventions in an efficient manner.

Rating of satisfaction	Name of the Zone										
with the current	Garo		Khasi		Ja	intia	Total				
available in the community	N	%	N	%	N	%	N	%			
Extremely Dissatisfied	2	0.3%	5	0.7%	0	0.0%	7	0.4%			
Dissatisfied	17	2.1%	89	11.9%	5	2.8%	111	6.4%			
Neutral	626	78.3%	495	66.0%	69	38.3%	1190	68.8%			
Satisfied	150	18.8%	146	19.5%	105	58.3%	401	23.2%			
Extremely Satisfied	5	0.6%	15	2.0%	1	0.6%	21	1.2%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 28 Rating of satisfaction with the current healthcare services available in the community

A neutral sentiment dominates how residents view the current healthcare services in their communities. This neutrality is shared by a majority across all zones (68.8%), with Garo households expressing it the most (78.3%). Interestingly, Jaintia households stand out with a significantly lower proportion (38.3%) expressing neutrality, suggesting a more polarized view on healthcare services in their zone.

Diving deeper into the Garo zone reveals a disparity. While neutrality remains the dominant sentiment (78.3% overall), a closer look at Gambegre and "Others of Garo" areas shows a difference. Gambegre residents appear more neutral (80.9%) compared to "Others of Garo" (74.5%). However, a surprising finding emerges when looking at satisfaction levels within the Garo zone. Despite the high neutrality in Gambegre, this area also has the highest proportion of satisfied households (22.5%). This suggests that while Gambegre residents might not be overly critical, a significant portion finds the current services adequate.

Difficulties	Name of the Zone										
encountered while	Garo		Khasi		Ja	intia	Total				
medications or treatments	N	%	N	%	N	%	N	%			
No, never	239	29.90%	56	7.50%	14	7.80%	309	17.90%			
Yes, Often	31	3.90%	120	16.00%	11	6.10%	162	9.40%			
Yes, occasionally	530	66.30%	574	76.50%	155	86.10%	1259	72.80%			
Total	800	100%	750	100%	180	100%	1730	100%			

Table 29 Difficulties encountered while affording prescribed medications or treatments

Affordability of prescription medications and treatments emerged as a major concern across the zones. The majority of respondents (72.8% overall) reported occasionally facing difficulties, with Jaintia households experiencing the highest burden (86.1%). Khasi households (76.5%) and Garo households (66.3%) also faced significant challenges. It's worth noting a slight discrepancy between the overall data (72.8%) and the breakdown by zone. This could be due to rounding or slight variations in how the question was phrased or interpreted.

Looking within the Garo zone, we see a similar trend. Gambegre residents reported the highest proportion (73.3%) of occasionally facing difficulties, highlighting a potential issue with affordability in this specific area. However, there's a positive aspect as well. "Others of Garo" areas reported the highest proportion (35.2%) of households never facing such challenges, suggesting a better situation compared to Gambegre and other zones.

While analyzing the satisfaction level while affording healthcare services, it was found that respondents across the zones appear largely neutral (72.1%) on the affordability of healthcare services. This sentiment is particularly strong among Garo households (80.8%), followed by Khasi households (70.3%). Within the Garo zone, a closer look reveals a disparity. While neutrality dominates overall (80.8%), Gambegre and "Others of Garo" areas present a different picture. Gambegre residents lean more towards neutrality (76.3%), while "Others of Garo" show a stronger neutral sentiment (83.9%). Interestingly, satisfaction levels within the Garo zone also show a difference. Despite the high neutrality in Gambegre, this area also has the highest proportion of satisfied households (19.8%). This suggests that while Gambegre residents might not be overly critical of affordability, a significant portion finds the current situation accept.

	Name of the Zone									
	Garo		K	Khasi		Jaintia		Total		
	Ν	%	Ν	%	Ν	%	Ν	%		
No, There Are No Resources Available	130	16.3%	68	9.1%	1	0.6%	199	11.5%		
Yes, More Than Enough	5	0.6%	17	2.3%	17	9.4%	39	2.3%		
Yes, Sufficient	510	63.8%	329	43.9%	122	67.8%	961	55.5%		
No, Insufficient	155	19.4%	336	44.8%	40	22.2%	531	30.7%		
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%		

Table 30 Sufficient resource available or not

The highest proportion of respondents (55.5% overall) believe resources are sufficient, with Jaintia households expressing the strongest agreement (67.8%). Garo households also leaned towards sufficiency (63.8%). In contrast, a smaller proportion (around 45%) felt resources were inadequate, with Khasi households having the highest percentage in this category (44.8%).

However, a closer look within the Garo zone reveals a disparity. Gambegre residents were most optimistic about resource sufficiency (71.7%), while "Others of Garo" areas held a more moderate view (58.2%). This suggests that residents in Gambegre might have better access to or awareness of such programs compared to those in other Garo areas. It's important to note a slight inconsistency in the reported figures between the overall and Garo zone breakdowns. The possibility of rounding or phrasing variations in the question might explain this minor discrepancy.

5.2.10 Financial obstacles while availing healthcare services:

Financial Obstacles	Name of the Zone									
encountered while accessing Healthcare	Garo		Khasi		Jai	intia	Total			
	N	%	Ν	%	Ν	%	Ν	%		
High out-of-pocket costs for treatments	182	22.8%	502	66.9%	80	44.4%	764	44.2%		



Inability to afford insurance premiums	280	35.0%	257	34.3%	32	17.8%	569	32.9%
Limited availability of low-cost healthcare facilities	586	73.3%	437	58.3%	91	50.6%	1114	64.4%
Difficulty in affording prescription medications	235	29.4%	253	33.7%	55	30.6%	543	31.4%
Other	4	0.5%	1	0.1%	0	0.0%	5	0.3%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 31 Financial obstacles encountered while accessing healthcare

Across all the zones, a significant proportion of respondents expressed concerns about the limited availability of low-cost healthcare facilities, with 64.4% of the total respondents identifying this as a major issue. Additionally, high out-of-pocket costs for treatments were reported as a significant concern, particularly among Khasi households, where 66.9% indicated this as a challenge. Inability to afford insurance premiums was another common issue, with 32.9% of the total respondents expressing this concern. Difficulty in affording prescription medications was also cited as a challenge, albeit to a slightly lesser extent compared to other factors. This obstacle is particularly pronounced among Garo households, with 73.3% reporting it, followed by Others of Garo at 71.5% and Gambegre at 75.7%. It is important to note that there is a slight discrepancy in the reported percentages between the overall data (64.4%) and the breakdown by block (73.3%).

Respondents across the zones generally perceive healthcare facilities or providers as somewhat accommodating towards those facing financial difficulties (74.5% overall). This sentiment is particularly strong among Garo households (83.3%), suggesting they believe these facilities are more understanding of financial hardships.

Within the Garo zone, a closer look reveals a similar trend but with a slight variation. Gambegre residents hold the strongest belief in accommodation (85.7%), followed by "Others of Garo" areas (81.5%). This might indicate that Gambegre respondents have had more positive experiences with facilities being flexible for those facing financial constraints.

				Name of	the Zone	:			
	G	aro	K	Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	Ν	%	
Significantly limits access	19	2.4%	97	12.9%	2	1.1%	118	6.8%	
Moderately limits access	136	17.0%	232	30.9%	91	50.6%	459	26.5%	
Slightly limits access	261	32.6%	394	52.5%	84	46.7%	739	42.7%	
Does not limit access	37	4.6%	20	2.7%	2	1.1%	59	3.4%	
Prefer not to answer	347	43.4%	7	0.9%	1	0.6%	355	20.5%	
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%	

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Societal attitudes are perceived as a significant barrier to accessing healthcare based on income level. A large majority of respondents (78.6% overall) believe these attitudes have some impact, with this sentiment particularly strong among Garo households (86.3%). This widespread perception within the Garo community, especially in Gambegre (87.8%) and "Others of Garo" areas (85.1%), underscores the recognition of social determinants influencing healthcare access. It highlights the importance of addressing not just financial hurdles but also societal biases to ensure equitable healthcare for all.



Figure 29 Societal attitudes affect the ability to access healthcare services based on income level in Gambegre and others of Garo

"Because of the society norms, sometimes we don't seek healthcare services in the facilities" – Excerpt from FGD, Community members

Income equality in				Name of	the Zone	:		
ensuring equal access	Garo		Khasi		Jai	intia	Total	
to healthcare	Ν	%	Ν	%	N	%	N	%
Affording health insurance premiums	66	8.3%	181	24.1%	3	1.7%	250	14.5%
Paying out-of-pocket costs for treatments	483	60.4%	520	69.3%	121	67.2%	1124	65.0%
Accessing specialized medical care	485	60.6%	407	54.3%	71	39.4%	963	55.7%
Affording prescription medications	217	27.1%	202	26.9%	30	16.7%	449	26.0%
Other	2	0.3%	0	0.0%	0	0.0%	2	0.1%

Table 33 Income equality in ensuring equal access to healthcare



Income equality presents a complex issue regarding its impact on healthcare access. The majority of respondents (58.7% overall) view it as a neutral factor, with this sentiment particularly strong among Garo households (70.5%). This neutrality, especially in Gambegre (67.5%) and "Others of Garo" areas (72.6%), suggests a perception that income disparity is just one factor among many affecting healthcare accesses. This highlights the need for a multifaceted approach that goes beyond just income equality to address the various social determinants of health and ensure equitable healthcare provision for all.

Delayed seeking	Name of the Zone										
necessary medical treatment due to	G	iaro	Khasi		Ja	intia	Total				
financial reasons	N	%	Ν	%	Ν	%	N	%			
No, never	349	43.6%	142	18.9%	27	15.0%	518	29.9%			
Yes, Often	29	3.6%	103	13.7%	2	1.1%	134	7.7%			
Yes, occasionally	422	52.8%	505	67.3%	151	83.9%	1078	62.3%			
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%			

Table 34 Delayed seeking necessary medical treatment due to financial reasons

Overall, 29.9% of households responded that they have never delayed seeking medical treatment for financial reasons. However, a significant portion of households, constituting 62.3% of the total respondents, reported occasionally delaying medical treatment due to financial constraints. Among the ethnic groups, Khasi households had the highest percentage (67.3%) of occasionally delaying medical treatment for financial reasons, followed by Garo households (52.8%) and Jaintia households (83.9%). Additionally, a smaller percentage of households, representing 7.7% of the total respondents, reported often delaying necessary medical treatment due to financial reasons. This data underscores the financial barriers faced by households in accessing timely medical care, highlighting the need for interventions to address healthcare affordability issues, particularly among communities with higher rates of delayed treatment.



Figure 30 Delayed seeking necessary medical treatment due to financial reasons in Gambegre and others of Garo

Fig 30, presents data on household members delaying necessary medical treatment due to financial constraints over the past year, categorized by Gambegre and Others of Garo. In Gambegre households, 42.6% reported never delaying treatment, while 54.1% occasionally faced delays due to financial reasons. Additionally, 3.3% experienced frequent delays. Conversely, in Others of Garo households, 44.4% never delayed treatment, while 51.8% occasionally did so.

The percentage of frequent delays was slightly higher at 3.8%. Overall, the data highlights a significant portion of households facing occasional delays in seeking medical treatment due to financial constraints, with minimal instances of prolonged delays exceeding 6 months

	Name of the Zone										
Impact of delayed health	Garo		Kł	Khasi		intia	Total				
Seeking benavior	N	%	N	%	Ν	%	N	%			
Condition worsened	37	8.2%	165	27.1%	9	5.9%	211	17.4%			
Required more extensive treatment later	137	30.4%	288	47.4%	98	64.1%	523	43.2%			
No significant impact	135	29.9%	109	17.9%	34	22.2%	278	22.9%			
Not applicable, sought care despite cost concerns	7	1.6%	20	3.3%	5	3.3%	32	2.6%			
Prefer not to answer	135	29.9%	26	4.3%	7	4.6%	168	13.9%			
Total	451	100%	608	100%	153	100%	1212	100%			

Table 35 Impacts of delayed health seeking behavior

The survey painted a concerning picture of how delaying healthcare due to cost can negatively impact health outcomes. Among Garo households, while some (8.2%) experienced a worsening of their condition, a much larger portion (30.4%) ended up needing more extensive treatment later. This negative impact was even more pronounced in the Khasi community (27.1% worsening, 47.4% needing more treatment later). Surprisingly, the Jaintia community showed a different pattern. While fewer (5.9%) reported worsening conditions, a staggering 64.1% required more extensive treatment due to the delay. It's important to note that not everyone faced negative consequences. Across all groups, a significant portion (17.4% to 22.9%) reported no major impact, and a small percentage (1.6% to 3.3%) prioritized seeking care despite cost concerns. Interestingly, a considerable number of respondents (13.9% to 29.9%) chose not to answer the cost-related question, suggesting potential discomfort discussing financial limitations. Overall, these findings highlight the urgency of addressing cost-related barriers to healthcare, particularly for vulnerable populations. Measures need to be implemented to lessen these negative consequences and ensure timely access to necessary care.

Upon detailed analysis of the Garo zone, it was found that in Gambegre households, 10.6% reported a worsening of the condition due to the delay, while 22.8% required more extensive treatment later. Additionally, 31.2% stated that there was no significant impact. On the other hand, in Others of Garo households, 6.5% reported a worsening of the condition, while 35.9% required more extensive treatment later. Additionally, 29.0% stated no significant impact. Overall, the data highlights the adverse consequences of delaying healthcare due to financial constraints, including worsened conditions and the need for more extensive treatment later.

Delay in seeking healthcare	Name of the Zone								
due to cost concerns result in any additional financial	Garo		Khasi		Ja	intia	Total		
burdens for your household	N	%	N	%	N	%	N	%	
Not applicable	14	3.1%	24	3.9%	2	1.3%	40	3.3%	
Yes, significant additional costs incurred later	28	6.2%	148	24.3%	13	8.5%	189	15.6%	



Yes, some additional costs incurred later	359	79.6%	416	68.4%	113	73.9%	888	73.3%
No, no additional financial burdens	50	11.1%	20	3.3%	25	16.3%	95	7.8%
Total	451	100.0%	608	100.0%	153	100.0%	1212	100.0%

Table 36 Delay in seeking healthcare due to cost concerns result in any additional financial burdens for your household

While a small portion (3.1% to 3.9%) across all communities didn't experience a delay due to cost, the majority did. Even after the delay and eventual treatment, most households (68.4% to 79.6%) faced some additional financial burden. This suggests that delaying care often leads to higher costs compared to seeking treatment earlier. Even more troubling is that a significant number (6.2% to 24.3%) incurred substantial additional costs, possibly due to needing more extensive treatment or complications from the delay. Only a small minority (3.3% to 16.3%) avoided any additional financial burden. These findings highlight the widespread issue of cost-related delays in healthcare and the often-steeper financial consequences they bring. It's clear that initiatives to address cost barriers, like expanding health insurance or financial assistance programs, are crucial. Additionally, raising awareness about the long-term financial impact of delaying care can encourage people to seek treatment sooner. Interestingly, the Jaintia community seems to have a lower percentage experiencing significant additional costs despite needing more treatment later. This difference warrants further investigation. Overall, the survey underlines the urgent need for solutions that tackle the financial hurdles preventing timely healthcare access in these communities. In Gambegre households, 6.3% experienced significant additional costs later, and 76.2% experienced some additional costs later. Conversely, in Others of Garo households, 82.1% experienced some additional costs later. Additionally, 12.2% of Gambegre households and 10.3% of Others of Garo households stated that there were no additional financial burdens. Overall, the data underscores the prevalence of additional financial burdens incurred by households as a result of delays in seeking healthcare due to cost concerns.

Delay in seeking healthcare				Name o	f the Zoı	ne		
impact person's ability to	G	iaro	Khasi		Ja	intia	Total	
work	N	%	N	%	N	%	N	%
Yes, significantly affected	11	2.4%	115	18.9%	4	2.6%	130	10.7%
Yes, somewhat affected	267	59.2%	430	70.7%	122	79.7%	819	67.6%
No, did not affect	58	12.9%	46	7.6%	20	13.1%	124	10.2%
Prefer not to answer	115	25.5%	17	2.8%	7	4.6%	139	11.5%
Total	451	100.0%	608	100.0%	153	100.0%	1212	100.0%

Table 37 Delay in seeking healthcare impact person's ability to carry out daily activities of work

The survey painted a troubling picture of how delaying healthcare due to cost can disrupt daily life across the Garo, Khasi, and Jaintia communities. While a minority (7.6% to 13.1%) reported no impact on their ability to function normally, a significant majority faced challenges.



The impact was most pronounced in the Jaintia community, where a staggering 79.7% reported some level of impairment in daily activities or work due to the delay. Even in the Garo households (59.2% somewhat affected) and Khasi community (70.7% somewhat affected), a substantial portion experienced limitation. An even more concerning finding is that a smaller percentage (2.4% to 18.9%) across the groups reported a significant decline in their ability to function due to the delay.



Figure 31 Impact of delay in health seeking behavior in daily activities in Gambegre and others of Garo

Fig 32, presents data on the impact of delays in seeking healthcare on the ability to carry out daily activities or work. In Gambegre households, 63.0% indicated that it somewhat affected them. In Others of Garo households, 3.4% reported significant impact, while 56.5% indicated some level of effect on daily activities or work. Overall, the data suggests that delays in seeking healthcare have had varying degrees of impact on individuals' ability to carry out daily activities or work, with a notable proportion experiencing some level of effect.

5.2.11 Relation with the HealthCare providers

Comfortable on discussing				Name o	of the Zo	ne		
cost-related concerns with	G	Garo		Khasi		ntia	Total	
healthcare providers	N	%	Ν	%	N	%	N	%
Very uncomfortable	48	6.0%	56	7.5%	24	13.3%	128	7.4%
Uncomfortable	18	2.3%	46	6.1%	6	3.3%	70	4.0%
Neutral	537	67.1%	472	62.9%	74	41.1%	1083	62.6%
Comfortable	193	24.1%	163	21.7%	75	41.7%	431	24.9%
Very comfortable	4	0.5%	13	1.7%	1	0.6%	18	1.0%
Total	800	100%	750	100%	180	100%	1730	100%

Table 38 Comfortable on discussing cost-related concerns with healthcare providers



The majority of respondents across all the zones feel neutral about discussing cost-related concerns with healthcare providers, with 67.1% of the total respondents selecting this option. The Jaintia zone has the highest percentage of respondents who feel comfortable (50.0%) discussing these concerns, which is significantly higher than the Garo and Khasi zones. Very few respondents feel very comfortable discussing cost-related concerns, with the total across all zones being only 1.1%. The Khasi zone has a notably higher percentage of respondents who feel uncomfortable (6.1%) compared to the other groups. None of the Jaintia respondents reported feeling very uncomfortable, which is unique among the zones.

While analyzing the Garo Zone, it was seen that in Gambegre households, a small percentage (2.1%) felt uncomfortable, while the majority (65.1%) remained neutral, and a significant portion (30.9%) felt comfortable discussing cost-related concerns with healthcare providers. In the "Others" category of Garo households, a few individuals (3.2%) felt very uncomfortable, some (2.1%) felt uncomfortable, and the majority (73.6%) remained neutral. Additionally, a notable percentage (21.1%) felt comfortable. Overall, the data highlights that a significant number of individuals feel neutral about discussing cost-related concerns with healthcare providers, with varying levels of discomfort or comfort observed across different demographic groups.

Any opinion that healthcare				Name o	f the Zo	ne		otal % 16.1%				
providers sufficiently	G	iaro	K	nasi	Jaintia		Total					
before treatment	N	%	N	%	Ν	%	N	%				
Never	166	20.8%	105	14.0%	8	4.4%	279	16.1%				
Yes, always	19	2.4%	96	12.8%	1	0.6%	116	6.7%				
Sometimes	416	52.0%	273	36.4%	129	71.7%	818	47.3%				
Rarely	199	24.9%	276	36.8%	42	23.3%	517	29.9%				
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%				

Table 39 Any opinion that healthcare providers sufficiently discuss cost implications before treatment

This analysis reveals a concerning disparity in communication regarding healthcare costs across the Garo, Khasi, and Jaintia communities. A significant proportion of respondents across all zones (16.1%) expressed the sentiment that healthcare providers never discuss treatment costs upfront. This perception was most prevalent among the Garo population (20.8%). Conversely, only a small percentage of respondents felt that costs are consistently addressed before treatment (6.7%). The Khasi community exhibited the highest proportion (12.8%) reporting such discussions, while the Garo group reported the lowest (2.4%).

An interesting divergence emerged within the Jaintia community. While they had the fewest respondents indicating a complete absence of cost discussions (28.3%), a significant majority (71.7%) reported that these discussions occurred occasionally.

A significant portion (26.8%) reported cost discussions never happening, with only a small percentage (1.5%) experiencing them always. The majority (61.7%) reported discussions occurring sometimes, while 24.6% said they occur rarely. While better than Gambegre, communication remains a concern. Here, 20.8% never experienced cost discussions, and only 3.0% always did. Similar to Gambegre, most respondents (45.2%) reported discussions happening sometimes, with 25.1% experiencing them rarely.

5.2.12 Other/alternative Healthcare options

Explored alternative,				Name o	f the Zo	ne		
non-traditional healthcare	G	iaro	Khasi		Jai	ntia	Total	
about the cost of conventional healthcare	N	%	N	%	N	%	N	%
No, never	279	34.9%	197	26.3%	20	11.1%	496	28.7%
Yes, Frequently	37	4.6%	25	3.3%	7	3.9%	69	4.0%
Yes, occasionally	484	60.5%	528	70.4%	153	85.0%	1165	67.3%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 40 Explored alternative, non-traditional healthcare options due to concerns about the cost of conventional healthcare

Among Garo households, 34.9% reported never exploring alternative options, while 4.6% said they frequently did so. The majority, comprising 60.5%, reported occasionally exploring non-traditional options. In the Khasi community, a similar trend was observed, with 26.3% never exploring alternatives, 3.3% frequently doing so, and 70.4% occasionally doing so. However, in the Jaintia community, a smaller percentage (11.1%) reported never exploring alternatives, while 3.9% frequently did and the majority (85.0%) occasionally explored non-traditional healthcare options. These findings underscore the prevalence of exploring alternative healthcare options, particularly among the Jaintia community, and highlight the impact of cost concerns on healthcare-seeking behavior.

Increasing the number of				Name o	f the Zo	ne		
healthcare professionals	G	iaro	Khasi		Jai	ntia	Total	
for every individual	Ν	%	N	%	Ν	%	Ν	%
Yes, significantly	45	5.6%	172	22.9%	24	13.3%	241	13.9%
Yes, to some extent	579	72.4%	465	62.0%	142	78.9%	1186	68.6%
No, not significantly	139	17.4%	92	12.3%	14	7.8%	245	14.2%
Not sure/Don't Know	37	4.6%	21	2.8%	0	0.0%	58	3.4%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 41 Perceiving the potential effectiveness of telemedicine or virtual healthcare services in improving access for every individual

The above table entails the perception of respondents regarding the potential effectiveness of telemedicine or virtual healthcare services in enhancing access for every individual. Among Garo respondents, only 0.1% considered telemedicine as very ineffective, while 2.0% found it ineffective, and the majority, constituting 79.3%, held a neutral stance. Regarding effectiveness, 13.6% of Garo respondents found telemedicine effective, and 1.4% considered it very effective. For Khasi respondents, 0.7% found it effective, and 4.3% found it very effective. Among Jaintia respondents, 0.6% found it effective, and 4.3% found it very effective. Among Jaintia respondents, 0.6% found telemedicine very ineffective, 1.1% found it ineffective, 31.7% were neutral, 59.4% found it effective, and 2.2% found it very effective. Notably, 3.4% of respondents across all groups found the question not applicable. These findings highlight varying perceptions regarding the potential effectiveness of telemedicine across zones, with a notable proportion holding a neutral stance.



In Gambegre, telemedicine was deemed very ineffective by 0%, while 2.1% found it ineffective, and the majority, comprising 80.2%, remained neutral. Moreover, 12.2% perceived telemedicine as effective, with 0.6% considering it very effective. Among Others of Garo, 0.2% found telemedicine very ineffective, 1.9% found it ineffective, and 78.6% held a neutral stance. Additionally, 14.6% perceived telemedicine as effective, while 1.9% considered it very effective. Across all respondents, 3.6% found the question not applicable. These results highlight differing perceptions regarding the potential effectiveness of telemedicine across various demographic groups, with a substantial portion maintaining a neutral standpoint.

Increasing the number of				Name o	f the Zo	ne		
healthcare professionals	Ģ	Garo	K	Khasi		ntia	Total	
for every individual	N	%	N	%	Ν	%	Ν	%
Yes, significantly	45	5.6%	172	22.9%	24	13.3%	241	13.9%
Yes, to some extent	579	72.4%	465	62.0%	142	78.9%	1186	68.6%
No, not significantly	139	17.4%	92	12.3%	14	7.8%	245	14.2%
Not sure/Don't Know	37	4.6%	21	2.8%	0	0.0%	58	3.4%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 42 Increasing the number of healthcare professionals would help improve access for every individual

In the Garo community, 5.6% believe it would significantly aid, while 72.4% think it would help to some extent. Among the Khasi community, 22.9% feel it would significantly improve access, and 62.0% believe it would help to some extent. In the Jaintia community, 13.3% think it would significantly contribute, while 78.9% believe it would help to some extent. Overall, 68.6% of all respondents think increasing healthcare professionals would be beneficial, with 14.2% expressing doubt about its significant impact, and 3.4% remaining unsure or unaware.

Specifically in the Garo region, when asked if augmenting the number of healthcare professionals would enhance access for every individual, 5.8% of respondents from Gambegre and 5.5% from Others of Garo believed it would have a significant impact, with the overall percentage being 5.6%. Meanwhile, 76.0% in Gambegre and 69.9% in Others of Garo opined that it would help to some extent, totaling 72.4%. Conversely, 14.3% in Gambegre and 19.5% in Others of Garo felt that it would not significantly improve access, resulting in an overall percentage of 17.4%. Additionally, 4.0% in Gambegre and 5.1% in Others of Garo were unsure or didn't know, amounting to 4.6% overall.

Community education				Name o	of the Zo	ne		
programs about healthcare	Garo		Khasi		Jaintia		Total	
have a positive impact on healthcare access for lower- income individuals	N	%	N	%	N	%	N	%
Yes, strongly agree	70	8.8%	248	33.1%	31	17.2%	349	20.2%
Yes, somewhat agree	628	78.5%	457	60.9%	145	80.6%	1230	71.1%
No, strongly disagree	72	9.0%	38	5.1%	4	2.2%	114	6.6%
No, somewhat disagree	30	3.8%	7	0.9%	0	0.0%	37	2.1%
Total	800	100%	750	100%	180	100%	1730	100%

Table 43 Community education programs about healthcare resources and options would have a positive impact on healthcare access for lower-income individuals



The above table reveals varying opinions among different ethnic groups regarding the effectiveness of community education programs on healthcare access for lower-income individuals. Among Garo respondents, 87.3% agreed (8.8% strongly and 78.5% somewhat) that such programs would have a positive impact. In contrast, Jaintia respondents showed the highest agreement, with 97.8% (17.2% strongly and 80.6% somewhat) expressing belief in the positive impact of community education programs. Khasi respondents also displayed considerable agreement, with 93.9% (33.1% strongly and 60.9% somewhat) supporting the idea. Only a small percentage of respondents across all groups disagreed with the notion, indicating general consensus on the potential benefits of community education programs for improving healthcare access among lower-income individuals. This underscores the importance of community-based health education initiatives in addressing healthcare disparities and promoting health equity.



Figure 32 Community education programs about healthcare resources and options would have a positive impact on healthcare access in Gambegre and others of Garo

In Gambegre households, 78.4% somewhat agree that such programs would have a positive impact. Similarly, in Others of Garo households, 7.9% strongly disagree, and 3.8% somewhat disagree, while 7.9% strongly agree, and 78.6% somewhat agree. Overall, the data indicates strong support across both demographic groups for the positive impact of community education programs on healthcare access for lower-income individuals.

Utilized any specific				Name o	f the Zo	ne		
programs or initiatives that	G	iaro	K	Khasi		ntia	Total	
access	Ν	%	N	%	N	%	Ν	%
No	241	30.1%	559	74.5%	120	66.7%	920	53.2%
Yes	53	6.6%	57	7.6%	8	4.4%	118	6.8%
Prefer not to answer	506	63.3%	134	17.9%	52	28.9%	692	40.0%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 44 Utilized any specific programs or initiatives that have improved healthcare access



The above table indicates that a significant proportion of respondents across all ethnic groups have not personally utilized or known someone who has utilized specific programs or initiatives to improve healthcare access. Among Garo respondents, 30.1% answered negatively, while a much larger proportion of Khasi (74.5%) and Jaintia (66.7%) respondents reported no personal or known utilization of such programs. Conversely, only a small percentage of respondents across all groups indicated affirmative responses, with Garo respondents at 6.6%, Khasi at 7.6%, and Jaintia at 4.4%. Additionally, a substantial portion of respondents preferred not to answer, with 63.3% of Garo, 17.9% of Khasi, and 28.9% of Jaintia respondents choosing this option. This suggests a need for further investigation into the awareness and accessibility of healthcare programs and initiatives within these communities.

In Gambegre households, 26.4% reported not utilizing any such programs, while 5.5% stated yes, and 68.1% preferred not to answer. Conversely, in Others of Garo households, 32.7% reported not utilizing any programs, and 59.9% preferred not to answer. Overall, a considerable proportion of respondents preferred not to answer, suggesting a reluctance to disclose personal information or experiences regarding healthcare access programs or initiatives.

Among Garo respondents, 2.4% indicated that their household income significantly limits access to healthcare services, while 17.0% reported a moderate limitation, and 32.6% mentioned a slight limitation. In comparison, Khasi respondents reported higher percentages across all categories, with 12.9% indicating a significant limitation, 30.9% a moderate limitation, and 52.5% a slight limitation. Similarly, Jaintia respondents reported significant limitations at 1.1%, moderate limitations at 50.6%, and slight limitations at 46.7%. Interestingly, a considerable proportion of Garo respondents (43.4%) preferred not to answer, while only a small percentage of Khasi (0.9%) and Jaintia (0.6%) respondents chose this option. These findings highlight the perceived influence of income levels on healthcare access within these communities, emphasizing the need for targeted interventions to address disparities. In Gambegre households, 2.7% reported that household income significantly limits access to healthcare, while 16.1% stated it moderately limits access, and 31.0% mentioned it slightly limits access. Conversely, in Others of Garo households, 17.6% reported moderate limitation, and 33.8% reported slight limitation. A significant portion of respondents across both groups, 45.3% in Gambegre households and 42.0% in Others of Garo households, preferred not to answer, indicating a reluctance to disclose information regarding the impact of household income on healthcare access.

Household income level				Name o	f the Zo	ne		
influenced ability to access	Garo		Khasi		Jai	ntia	Total	
specific healthcare services	N	%	N	%	N	%	N	%
No significant impact	106	13.3%	34	4.5%	4	2.2%	144	8.3%
Caused stress and anxiety	62	7.8%	143	19.1%	25	13.9%	230	13.3%
Resulted in compromised health outcomes	141	17.6%	258	34.4%	33	18.3%	432	25.0%
Forced tough trade-offs in family budgeting	129	16.1%	306	40.8%	112	62.2%	547	31.6%
Prefer not to answer	362	45.3%	9	1.2%	6	3.3%	377	21.8%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 45 Household income level influenced ability to access specific healthcare services



The above data sheds light on how household income level influences the ability to access specific healthcare services across different ethnic groups. Among Garo respondents, 8.3% indicated challenges in affording health insurance premiums, while a substantial majority (60.4%) reported difficulties in paying out-of-pocket costs for treatments. Similarly, a significant percentage (60.6%) faced hurdles in accessing specialized medical care. In terms of affording prescription medications, 27.1% of Garo respondents expressed concerns. Among Khasi respondents, a higher proportion (24.1%) struggled with health insurance premiums, and 69.3% encountered challenges in paying for treatments out-of-pocket. However, a relatively smaller percentage (54.3%) faced difficulties accessing specialized medical care. In the Jaintia community, only 1.7% cited issues with health insurance premiums, while a majority (67.2%) faced challenges in paying for treatments out-of-pocket. Additionally, 16.7% reported difficulties affording prescription medications. These findings highlight the nuanced ways in which income levels impact healthcare access, emphasizing the need for targeted support to address financial barriers.

Prioritization of healthcare				Name o	f the Zoi	ne		
needs when confronted	G	iaro	Khasi		Jaintia		Total	
with financial limitations	Ν	%	N	%	Ν	%	Ν	%
Choose only the most urgent needs	110	13.8%	179	16.4%	83	46.1%	307	17.7%
Delayed less urgent treatments or check-ups	391	48.9%	196	5.9%	22	12.2%	92	5.3%
Sought alternative or cheaper options	281	35.1%	305	49.9%	55	30.6%	615	35.5%
Skipped treatments or appointments altogether	14	1.8%	70	24.7%	15	8.3%	307	17.7%
Others	4	0.5%	0	3.2%	5	2.8%	409	23.6%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 46 Prioritization of healthcare needs when confronted with financial limitations

Among Garo respondents, 13.8% opted to address only the most urgent needs, while a significant proportion (48.9%) chose to delay less urgent treatments or check-ups. Another notable strategy was seeking alternative or cheaper options, chosen by 35.1% of Garo respondents. Conversely, among Khasi respondents, a higher percentage (23.9%) prioritized only the most urgent needs, while 26.1% delayed less urgent treatments or check-ups. Additionally, 40.7% sought alternative or cheaper options. In the Jaintia community, 19.4% prioritized urgent needs, while 18.3% delayed less urgent treatments. A majority (58.9%) sought alternative or cheaper options, indicating a significant reliance on cost-effective healthcare solutions. These findings underscore the diverse approaches employed by households to manage healthcare needs within limited financial means.

A significant majority in both Gambegre (59.9%) and Others of Garo (60.7%) reported difficulties affording out-of-pocket treatment costs. This highlights the financial burden associated with even basic healthcare services. Access to specialized medical care (e.g., for complex conditions) was also a major concern. Over half (65.3% in Gambegre and 57.3% in Others of Garo) faced obstacles in obtaining this essential care. Affording medications emerged as another key barrier. Over a quarter (31.0% in Gambegre and 24.4% in Others of Garo) struggled to pay for prescribed drugs, impacting their ability to complete treatment plans. These findings emphasize



the diverse ways financial limitations hinder access to a comprehensive range of healthcare services. Addressing these financial barriers is crucial for ensuring equitable access to quality healthcare for all communities within Garo Hills.

				Name o	f the Zoı	ne		
Effect on decision making	Garo		Khasi		Jaintia		Total	
	N	%	N	%	Ν	%	N	%
No significant impact	106	13.30%	34	2.00%	0	0.00%	50	2.90%
Caused stress and anxiety	62	7.80%	143	1.50%	5	2.80%	58	3.40%
Resulted in compromised health outcomes	141	17.60%	258	66.50%	136	75.60%	1275	73.70%
Forced tough trade-offs in family budgeting	129	16.10%	306	30.00%	39	21.70%	347	20.10%
Total	362	45.30%	9	100%	180	100%	1730	100%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 47 Effect on decision making due to financial limitations

The above table provides insights into how financial limitations impact decision-making regarding healthcare needs across different communities. Among Garo respondents, 13.3% reported that financial constraints had no significant impact on their decision-making, while 7.8% indicated that it caused stress and anxiety. Additionally, 17.6% reported compromised health outcomes due to financial limitations, and 16.1% faced tough trade-offs in family budgeting. In the Khasi community, a lower proportion (4.5%) reported no significant impact, while a substantial 19.1% experienced stress and anxiety. Furthermore, 34.4% reported compromised health outcomes, and 40.8% faced tough trade-offs in family budgeting. Similarly, among Jaintia respondents, only 2.2% reported no significant impact, with 13.9% experiencing stress and anxiety. Moreover, 18.3% reported compromised health outcomes, and a significant 62.2% faced tough trade-offs in family budgeting. These findings highlight the multifaceted challenges faced by individuals in managing healthcare needs amidst financial constraints, emphasizing the need for targeted interventions to alleviate these pressures.



Figure 33 Financial limitations affect decision-making regarding healthcare needs in Gambegre and others of Garo

The above figure depicts the impact of financial limitations on decision-making regarding healthcare needs. In Gambegre households, 14.3% reported no significant impact. Additionally, 15.5% indicated compromised health outcomes, and 14.6% mentioned forced tough trade-offs

in family budgeting. Conversely, in Others of Garo households, 12.5% reported no significant impact, while 8.1% experienced stress and anxiety due to financial limitations. Furthermore, 19.1% noted compromised health outcomes, and 17.2% reported forced tough trade-offs in family budgeting. A significant proportion of respondents across both groups, 48.3% in Gambegre households and 43.1% in Others of Garo households, preferred not to answer, indicating a reluctance to disclose information regarding the impact of financial limitations on healthcare decision-making.

Prioritizing healthcare				Name o	f the Zo	ne		
needs impact on family's	G	iaro	Khasi		Jai	ntia	Total	
wellbeing	N	%	N	%	N	%	Ν	%
No significant impact	101	12.6%	123	16.4%	83	46.1%	307	17.7%
Negatively affected physical health	26	3.3%	44	5.9%	22	12.2%	92	5.3%
Increased financial burden in the long run	186	23.3%	374	49.9%	55	30.6%	615	35.5%
Created emotional stress and strain	107	13.4%	185	24.7%	15	8.3%	307	17.7%
Prefer not to answer	380	47.5%	24	3.2%	5	2.8%	409	23.6%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 48 Prioritizing healthcare needs impact on family's wellbeing

Among Garo respondents, 12.6% reported no significant impact on their well-being, while 3.3% indicated negative effects on physical health. Additionally, 23.3% mentioned an increased long-term financial burden, and 13.4% experienced emotional stress and strain. Notably, a substantial proportion (47.5%) preferred not to answer. In the Khasi community, 16.4% reported no significant impact, with 5.9% experiencing negative effects on physical health. Moreover, a significant 49.9% mentioned an increased long-term financial burden, and 24.7% faced emotional stress and strain. In contrast, among Jaintia respondents, a higher proportion (46.1%) reported no significant impact, while 12.2% experienced negative effects on physical health. Furthermore, 30.6% mentioned an increased long-term financial burden, and 8.3% faced emotional stress and strain. These findings underscore the complex interplay between prioritizing healthcare needs and overall well-being, highlighting the need for holistic support mechanisms to mitigate adverse effects.



Figure 34 Prioritizing healthcare needs impact family's overall well-being in Gambegre and others of Garo



The above figure outlines the impact of prioritizing healthcare needs on overall well-being, categorized by Gambegre and Others of Garo households. In Gambegre households, 12.8% reported no significant impact. Additionally, 19.8% mentioned increased financial burden in the long run, and 12.5% indicated it created emotional stress and strain. Conversely, in Others of Garo households, 12.5% reported no significant impact, while 3.2% experienced negative effects on physical health. Furthermore, 25.7% noted increased financial burden in the long run, and 14.0% reported emotional stress and strain. A significant proportion of respondents across both groups, 51.7% in Gambegre households and 44.6% in Others of Garo households, preferred not to answer, indicating a reluctance to disclose information regarding the impact of prioritizing healthcare needs on overall well-being.

				Name o	f the Zo	ne		
Understanding of	Garo		Khasi		Jaintia		Total	
	N	%	N	%	Ν	%	N	%
No, not at all understanding	35	4.4%	15	2.0%	0	0.0%	50	2.9%
Yes, very understanding	42	5.3%	11	1.5%	5	2.8%	58	3.4%
Yes, somewhat understanding	640	80.0%	499	66.5%	136	75.6%	1275	73.7%
No, not very understanding	83	10.4%	225	30.0%	39	21.7%	347	20.1%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 49 Understanding of Healthcare Provider

According to the data given in table above, the majority of respondents across all communities feel that healthcare providers or facilities are at least somewhat understanding of patients prioritizing healthcare needs due to financial limitations. Specifically, 80.0% of Garo respondents, 66.5% of Khasi respondents, and 75.6% of Jaintia respondents expressed that healthcare providers or facilities are somewhat understanding. However, there are variations in the levels of understanding. While only 4.4% of Garo respondents felt that healthcare providers were not at all understanding, this percentage was slightly higher among Khasi respondents at 30.0%. Similarly, 21.7% of Jaintia respondents felt that healthcare providers were not very understanding. Overall, these findings suggest that while a significant portion of respondents perceive healthcare providers to be understanding of financial limitations, there is still room for improvement in ensuring empathy and support for patients facing such challenges.



Figure 35 Understanding Healthcare providers in Gambegre and others of Garo



When asked whether healthcare providers or facilities are understanding of patients prioritizing healthcare needs due to financial limitations, the majority of respondents across all categories, comprising 80.9% in Gambegre, 79.4% in Others of Garo, and 80.0% overall, indicated that they are somewhat understanding. Additionally, 5.2% in Gambegre, 5.3% in Others of Garo, and 5.3% overall felt that they are very understanding. Conversely, 4.9% in Gambegre, 4.0% in Others of Garo, and 4.4% overall stated that they are not at all understanding, while 9.1% in Gambegre, 11.3% in Others of Garo, and 10.4% overall mentioned that they are not very understanding.

Prioritize healthcare needs				Name o	f the Zo	ne		
in the future if have more	Garo		Khasi		Jai	ntia	Total	
financial resources	N	%	Ν	%	Ν	%	Ν	%
Yes, significantly	45	5.6%	182	24.3%	15	8.3%	242	14.0%
Yes, somewhat	607	75.9%	430	57.3%	147	81.7%	1184	68.4%
No, not significantly	89	11.1%	99	13.2%	17	9.4%	205	11.8%
Not sure	59	7.4%	39	5.2%	1	0.6%	99	5.7%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 50 Prioritize healthcare needs in the future if have more financial resources

The above data indicates that a considerable portion of respondents across all communities believe that having more financial resources would impact how they prioritize healthcare needs in the future. Specifically, 75.9% of Garo respondents, 57.3% of Khasi respondents, and 81.7% of Jaintia respondents expressed that having more financial resources would somewhat change their prioritization of healthcare needs. Additionally, a smaller percentage of respondents indicated that having more financial resources would significantly change their prioritization: 5.6% of Garo respondents, 24.3% of Khasi respondents, and 8.3% of Jaintia respondents. Meanwhile, 11.1% of Garo respondents, 13.2% of Khasi respondents, and 9.4% of Jaintia respondents stated that having more financial resources would not significantly change their prioritization. Finally, a small proportion of respondents expressed uncertainty about the potential impact of increased financial resources on their healthcare prioritization.

Specifically, in the Garo zone, when asked whether having more financial resources would significantly change how they prioritize healthcare needs in the future, the majority of respondents, comprising 79.0% in Gambegre, 73.7% in Others of Garo, and 75.9% overall, answered affirmatively, stating that it would change their priorities somewhat. Additionally, 5.5% in Gambegre, 5.7% in Others of Garo, and 5.6% overall indicated that having more financial resources would significantly alter their prioritization of healthcare needs. Conversely, 8.5% in Gambegre, 13.0% in Others of Garo, and 11.1% overall stated that having more financial resources would not significantly change their prioritization, while 7.0% in Gambegre, 7.6% in Others of Garo, and 7.4% overall were unsure.



				Name o	f the Zo	ne		
Seeking of lower cost	Garo		Khasi		Jaintia		Total	
	N	%	N	%	Ν	%	Ν	%
No, never	122	15.3%	180	24.0%	33	18.3%	335	19.4%
Yes, always	45	5.6%	148	19.7%	15	8.3%	208	12.0%
Yes, sometimes	588	73.5%	402	53.6%	131	72.8%	1121	64.8%
Not applicable	45	5.6%	20	2.7%	1	0.6%	66	3.8%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 51 Seeking of lower cost healthcare options

A significant proportion of respondents across all communities actively seek out lower-cost healthcare options, such as community health clinics or free health screenings. Specifically, 73.5% of Garo respondents, 53.6% of Khasi respondents, and 72.8% of Jaintia respondents indicated that they sometimes seek out these lower-cost options. Additionally, a smaller percentage of respondents stated that they always seek out such options: 5.6% of Garo respondents, 19.7% of Khasi respondents, and 8.3% of Jaintia respondents. Conversely, a portion of respondents stated that they never seek out lower-cost healthcare options: 15.3% of Garo respondents, 24.0% of Khasi respondents, and 18.3% of Jaintia respondents. Lastly, a small percentage of respondents mentioned that seeking lower-cost healthcare options was not applicable to them.

				Name o	f the Zo	ne		Total %					
Review or reassess health	Garo		Khasi		Jai	ntia	Total						
	N	%	N	%	Ν	%	Ν	%					
Never	292	36.5%	166	22.1%	27	15.0%	485	28.0%					
Annually	23	2.9%	83	11.1%	0	0.0%	106	6.1%					
Every few years	171	21.4%	188	25.1%	56	31.1%	415	24.0%					
Rarely	314	39.3%	313	41.7%	97	53.9%	724	41.8%					
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%					

Table 52 Review or reassess health insurance plan

The table presents insights into how frequently households review or reassess their health insurance plans for cost-effectiveness across different communities. It's evident that a significant portion of households, particularly in Garo and Khasi communities, seldom review their plans, with 36.5% and 22.1% respectively stating they never do so. Conversely, the Jaintia community demonstrates relatively higher engagement, with only 15.0% reporting they never review their plans. Meanwhile, the majority of respondents across all communities rarely or never reassess their health insurance plans. This suggests a potential lack of awareness or active management of health insurance policies, which could impact the financial efficiency and adequacy of coverage for healthcare needs among these households.

In the Garo zone, when inquired about their frequency of reviewing or reassessing health insurance plans for cost-effectiveness, most respondents, comprising 39.3% overall, indicated that they rarely engage in such practices. Furthermore, 36.5% overall stated that they never review or reassess their health insurance plans, with 46.8% in Gambegre and 38.0% in Others of Garo sharing this sentiment. Conversely, 21.4% overall reported reviewing or reassessing

their plans every few years, with Gambegre at 16.7% and Others of Garo at 24.6%. A minority, accounting for 2.9% overall, engage in annual reviews, with Gambegre at 2.1% and Others of Garo at 3.4%.

				Name of	the Zor	ie		
Budgeting of healthcare	Garo		Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	N	%
No, rarely consider healthcare in budgeting	211	26.40%	265	35.30%	23	12.80%	499	28.80%
Yes, rigorously	13	1.60%	21	2.80%	11	6.10%	45	2.60%
Yes, to some extent	513	64.10%	384	51.20%	146	81.10%	1043	60.30%
Not applicable	63	7.90%	80	10.70%	0	0.00%	143	8.30%
Total	800	100%	750	100%	180	100%	1730	100%

Table 53 Budgeting of healthcare expenses

The table illustrates the extent to which households actively budget for healthcare expenses within their financial planning across different communities. It reveals that a significant proportion of households, particularly in the Jaintia community, actively incorporate healthcare expenses into their budgeting, with 81.1% indicating they do so to some extent. In contrast, a smaller percentage, particularly in the Garo community, rarely consider healthcare expenses in their budgeting, with 26.4% admitting to this approach. Additionally, a minority of households, regardless of community, rigorously budget for healthcare expenses, suggesting varied levels of financial preparedness for healthcare costs among respondents. This data underscores the importance of financial planning for healthcare to ensure adequate coverage and mitigate potential financial burdens associated with medical expenses.

Approximately 26.4% of respondents, across both Gambegre and Others of Garo, rarely factor healthcare costs into their budgeting. Only a small proportion, about 1.6%, rigorously budget for healthcare expenses. The majority, constituting 64.1%, include healthcare expenses to some extent in their budget planning. Additionally, 7.9% of respondents found the question not applicable to their situation.

Strategies employed to				Name of	the Zon	е		
manage healthcare costs	C	Garo	К	Khasi Jaintia		Т	Total	
within the household	Ν	%	Ν	%	Ν	%	Ν	%
Comparison shopping for healthcare services or medications	155	19.40%	385	51.30%	55	30.60%	595	34.40%
Negotiating payment plans or discounts with healthcare providers	379	47.40%	294	39.20%	26	14.40%	699	40.40%
Using generic medications instead of brand-name drugs	297	37.10%	366	48.80%	33	18.30%	696	40.20%
Opting for preventive care to avoid larger health expenses later	353	44.10%	416	55.50%	124	68.90%	893	51.60%



Seeking financial assistance or charity care from healthcare facilities	244	30.50%	149	19.90%	32	17.80%	425	24.60%
Other	2	0.30%	2	0.30%	0	0.00%	4	0.20%
Total	800	100%	750	100%	180	100%	1730	100%

Table 54 Strategies employed to manage healthcare costs within the household

The data provides insights into the strategies employed by households to manage healthcare costs. Comparison shopping for healthcare services or medications is commonly practiced across all communities, with Khasi households (51.3%) exhibiting the highest percentage. Negotiating payment plans or discounts with healthcare providers is prevalent, particularly among Garo households (47.4%). Using generic medications instead of brand-name drugs is another common approach, with Khasi households (48.8%) leading in this strategy. Opting for preventive care to mitigate larger health expenses later is widespread, especially among Jaintia households (68.9%).

Comparison shopping for healthcare services or medications is more common in Gambegre, with 31.0% of respondents, compared to 11.3% in Others of Garo and 19.4% overall. Negotiating payment plans or discounts with healthcare providers is equally prevalent across both regions, with 47.7% in Gambegre, 47.1% in Others of Garo, and 47.4% overall. Similarly, the use of generic medications instead of brand-name drugs is comparable between Gambegre (38.3%) and Others of Garo (36.3%), totaling 37.1% overall. Opting for preventive care to avoid larger health expenses later is more common in Gambegre, with 50.8% of respondents, compared to 39.5% in Others of Garo and 44.1% overall. Seeking financial assistance or charity care from healthcare facilities is slightly more prevalent in Others of Garo, with 33.1% of respondents, compared to 26.7% in Gambegre and 30.5% overall.

		Name of the Zone							
Alternative healthcare	Garo		Khasi		Jaintia		Total		
	N	%	N	%	N	%	N	%	
No, never	410	51.3%	424	56.5%	80	44.4%	914	52.8%	
Yes, frequently	22	2.8%	6	0.8%	0	0.0%	28	1.6%	
Yes, occasionally	301	37.6%	216	28.8%	90	50.0%	607	35.1%	
Not applicable	67	8.4%	104	13.9%	10	5.6%	181	10.5%	
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%	

Table 55 Alternative healthcare options

The data reveals the extent to which households explore alternative or complementary healthcare options to manage costs. The majority across all communities (52.8%) have never explored such options. However, a notable percentage (35.1%) occasionally do, with Jaintia households (50.0%) showing the highest tendency. Only a small proportion (1.6%) frequently explore these alternatives, indicating a less common practice overall. Interestingly, there's a segment (10.5%) for whom this question is not applicable, suggesting diverse healthcare-seeking behaviors within the communities. These findings underscore the importance of understanding and addressing the varying preferences and practices related to alternative healthcare options among different populations.



A majority of respondents in both Gambegre (47.1%) and Others of Garo (54.1%), comprising 51.3% overall, reported never exploring such options. Conversely, a small percentage of respondents in both regions stated exploring these options frequently (2.7% in Gambegre, 2.8% in Others of Garo, and 2.8% overall) or occasionally (39.5% in Gambegre, 36.3% in Others of Garo, and 37.6% overall). A portion of respondents in both regions also indicated that this question was not applicable to them (10.6% in Gambegre, 6.8% in Others of Garo, and 8.4% overall).

Additional work or				Name of	the Zon	e		
changing jobs for better	Garo		Kł	Khasi		intia	Total	
manage healthcare costs	Ν	%	Ν	%	Ν	%	N	%
No, not at all	99	12.4%	165	22.0%	21	11.7%	285	16.5%
Yes, definitely	13	1.6%	103	13.7%	12	6.7%	128	7.4%
Yes, maybe	285	35.6%	433	57.7%	135	75.0%	853	49.3%
Prefer not to answer	403	50.4%	49	6.5%	12	6.7%	464	26.8%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 56 Additional work or changing jobs for better healthcare benefits to manage healthcare costs

The data suggests that a significant proportion of households are open to considering taking on additional work or changing jobs for better healthcare benefits to manage healthcare costs. Across all communities, nearly half of the respondents (49.3%) expressed a possibility of doing so, with the Jaintia community showing the highest inclination (75.0%). Conversely, a notable portion (16.5%) stated that they would not consider this option at all. Interestingly, a substantial number of respondents (26.8%) preferred not to provide an answer, indicating the sensitivity and complexity of this issue. These findings highlight the importance of healthcare benefits in employment decisions and the diverse attitudes toward making such changes to manage healthcare expenses among different communities.

A considerable portion of respondents in both Gambegre (53.8%) and Others of Garo (48.0%), totaling 50.4% overall, preferred not to answer this question. Among those who did respond, a minority expressed a definite willingness to take on additional work or change jobs for better healthcare benefits, with 2.1% in Gambegre, 1.3% in Others of Garo, and 1.6% overall. Additionally, a significant percentage indicated a possibility of considering such options, with 33.1% in Gambegre, 37.4% in Others of Garo, and 35.6% overall responding affirmatively.

Seek financial advice or				Name of	the Zon	e		
counseling to manage	Garo		Khasi		Ja	intia	Total	
financial challenges	N	%	Ν	%	N	%	N	%
No, never	340	42.5%	232	30.9%	61	33.9%	633	36.6%
Yes, regularly	21	2.6%	20	2.7%	11	6.1%	52	3.0%
Yes, occasionally	349	43.6%	345	46.0%	98	54.4%	792	45.8%
Not aware of such services	90	11.3%	153	20.4%	10	5.6%	253	14.6%
Total	800	100.0%	750	100.0%	180	100.0%	1730	100.0%

Table 57 Seek financial advice or counseling to manage healthcare related financial challenges



The above table indicates that a considerable portion of households seek financial advice or counselling to manage healthcare-related financial challenges, although there are variations among communities. Overall, 48.8% of respondents reported seeking such assistance either regularly or occasionally. However, a significant proportion (36.6%) stated that they never actively seek financial advice for healthcare-related financial challenges. Interestingly, the Jaintia community showed the highest inclination toward seeking financial advice, with 54.4% reporting doing so occasionally. Conversely, the Garo community had the highest percentage (42.5%) of respondents who never sought such assistance. These findings underscore the importance of financial counseling services and the need for increased awareness and access, particularly among communities where utilization rates are lower.

In the Garo zone, a substantial proportion of respondents in Others of Garo (50.3%) and a significant percentage overall (42.5%) reported never actively seeking financial advice or counseling for managing healthcare-related financial challenges. Conversely, a smaller percentage of respondents, including 31.3% in Gambegre and 43.6% overall, mentioned occasionally seeking such advice. Additionally, a minority of respondents, comprising 3.6% in Gambegre, 1.9% in Others of Garo, and 2.6% overall, reported seeking financial advice or counseling regularly. Furthermore, a notable portion of respondents, accounting for 10.9% in Gambegre, 11.5% in Others of Garo, and 11.3% overall, stated that they were not aware of such services.

Specific initiatives or				Name of	f the Zon	e		
practices can healthcare	(Garo	Kł	Khasi		intia	Total	
to better accommodate patients from lower income brackets	N	%	N	%	N	%	N	%
Allocate specific clinic hours for lower-income patients	151	18.9%	433	57.7%	69	38.3%	653	37.7%
Create partnerships with community resources for financial	435	54.4%	440	58.7%	124	68.9%	999	57.7%
Streamline processes to reduce administrative burdens on low-income patients	325	40.6%	490	65.3%	80	44.4%	895	51.7%
Offer telehealth options to improve accessibility	358	44.8%	183	24.4%	35	19.4%	576	33.3%
Other	1	0.1%	2	0.3%	0	0.0%	3	0.2%
Total	800	100%	750	100%	180	100%	1730	100%

Table 58 Specific initiatives or practices can healthcare providers implement to better accommodate patients from lower income brackets

The above data highlights several initiatives healthcare providers can implement to better accommodate patients from lower income brackets. Firstly, allocating specific clinic hours for lower-income patients received significant support across all communities, with 37.7% of respondents favoring this approach. Additionally, creating partnerships with community resources for financial assistance was highly endorsed, particularly among the Khasi and Jaintia

communities, with 58.7% and 68.9% respectively expressing support. Streamlining processes to reduce administrative burdens on low-income patients was also favored, especially among the Khasi community, with 65.3% supporting this initiative. Lastly, offering telehealth options to improve accessibility garnered support, although to a lesser extent, with 33.3% of respondents expressing favorability. These findings suggest a multifaceted approach is needed to address healthcare access disparities among lower-income individuals, incorporating both structural and technological interventions.

A considerable number of respondents, with 51.4% in Gambegre, 56.5% in Others of Garo, and an overall 54.4%, proposed establishing partnerships with community resources to provide financial assistance. Additionally, a significant portion, accounting for 45.9% in Gambegre, 36.9% in Others of Garo, and a total of 40.6%, suggested simplifying procedures to alleviate administrative burdens on individuals with lower incomes. Furthermore, the idea of introducing telehealth options for enhanced accessibility garnered support from 46.5% of respondents in Gambegre, 43.5% in Others of Garo, and an aggregate of 44.8%. However, the concept of allocating specific clinic hours for lower-income patients received less endorsement, with only 23.1% in Gambegre, 15.9% in Others of Garo, and a combined 18.9% proposing this approach.

Conclusion:

- Understanding the demographic composition, particularly age distribution alongside gender distribution, is essential for effective planning. This knowledge ensures that social services, infrastructure, and programs including healthcare, education, and employment opportunities cater to the diverse needs of the entire population.
- Considering gender distribution is crucial for effective healthcare interventions. By acknowledging local demographics, we can ensure equitable access to healthcare services for all.
- The preferences for healthcare facilities vary among different ethnic communities. Garo households predominantly rely on Sub-centers, while Jaintia households prefer Primary Health Centers/Urban Primary Health Centers. Khasi households exhibit a similar preference to Jaintia households but also utilize Community Health Centers to a significant extent. Understanding these preferences is vital for tailoring healthcare strategies to meet the specific needs of each community effectively.
- Local preferences play a significant role in healthcare service utilization. Considering these preferences is crucial when designing interventions to improve access to primary care across different ethnic communities.
- Cost is a major barrier to healthcare access: Many respondents reported delaying care, experiencing financial burden, or skipping treatments altogether due to cost concerns.
- Income level significantly impacts access to care: A substantial portion of respondents across all communities reported that their household income limited their ability to access healthcare services.
- Income level significantly impacts access to care: A substantial portion of respondents across all communities reported that their household income limited their ability to access healthcare services.







Chapter 6: Facility Level Analysis



6.1 Healthcare Infrastructure

A total of 14 primary health centers were assessed across the three zones to get to gain a concise understanding of the facilities' functionality and staffing. Many insights were seen while analysis.

6.1.1. Physical and Human Resources

Together, physical and human resources play a vital role in ensuring the accessibility, efficiency, and quality of healthcare services provided by health centers. Proper allocation and management of these resources are essential for meeting the healthcare needs of communities and promoting overall well-being.

The data indicates that in the Garo and Khasi regions, 100% of the facilities have a designated nodal person from the Primary Health Centre (PHC) for communication with block and district health authorities as part of emergency response. However, in the Jaintia region, although the percentage of facilities with a designated nodal person is not specified, it can be inferred from

the absence of a "No" response that all facilities in this region also have such a designated person. Therefore, across all three regions, there is a complete presence of designated nodal persons for communication with higher health authorities during emergency situations.

Across the Garo and Jaintia zones, all facilities have Information, Education, and Communication (IEC) materials for disseminating key messages to the target audience in preparation for emergency response. However, in the Khasi zone, 85.7% of facilities have these materials, while the remaining 14.3% do not. Overall, the majority of facilities (92.9%) have IEC materials, indicating a strong presence of resources for communicating important messages related to emergency response to the target audience.



From the survey it was found that in the Garo and Jaintia zones, all facilities have displayed contact lists of key officials as part of their emergency response protocols. However, in the Khasi zone, 71.4% of facilities have these contact lists displayed, while 28.6% do not. Overall, the majority of facilities (85.7%) have contact lists of key officials visibly displayed, serving as a crucial component of their emergency response preparedness.

The facilities which were covered in the survey have information available about the following



to coordinate with them to ensure the continuous provision of essential medical services throughout the community:

- » **Health authorities**: In the Garo and Khasi zone, there is 100% availability of the health authorities.
- » **Field Functionaries:** In the Garo and Khasi zone, there is 100% availability of the field functionaries
- » **Neighboring PHCs:** In the Garo zone, all PHCs have neighboring counterparts, as indicated by the 100% "Yes" response. Similarly, in the Jaintia zone, all PHCs also have neighboring counterparts, constituting another 100% "Yes" response. However, in the Khasi zone, there is a lower proportion of PHCs with neighboring counterparts, with only 57.1% reported as "Yes." Conversely, 42.9% of PHCs in the Khasi zone do not have neighboring PHCs.
- » **Private Practitioners:** In the Garo zone, 57.1% of health facilities do not have private practitioners, while 42.9% do. In the Jaintia zone, all health facilities included in the survey do not have private practitioners, resulting in 0% reporting "Yes." However, in the Khasi zone, the situation is reversed, with 57.1% of health facilities having private practitioners and 42.9% not having them. Overall, across all zones, 50% of health facilities have private practitioners, while the other 50% do not.

6.1.2 Ambulance Service:

After observing 14 facilities, it was found that in the Garo zone, 14.3% of the facilities do not have such vehicles, while 85.7% do. In the Jaintia zone, none of the facilities surveyed reported having a functional ambulance or similar vehicle for emergency transportation. However, in the Khasi zone, 42.9% of the facilities lack this resource, while 57.1% have it. Overall, across all zones, 71.4% of the surveyed facilities have a functional ambulance or vehicle for emergency patient transportation, while 28.6% do not. On the day of survey, across all the zones, the ambulance had fuel in it (100%).

In the Garo zone, 85.7% of facilities reported having access to the 108 service, while 14.3% reported having access to private ambulance services. However, in both the Jaintia and Khasi zones, there were no facilities that reported having access to any of the specified ambulance services (102 service, 104 service, or 108 service). Overall, among all surveyed facilities, 78.6% have access to the 108 service, while 7.1% have access to private ambulance services, with no reported availability of the 102 or 104 services across all zones.

6.1.3 Power Supply:

In the Garo zone, all facilities (100.0%) reported having electricity from some source, while in the Khasi zone, 71.4% of facilities reported the same. However, in the Jaintia zone, only 71.4% of facilities reported having access to electricity, with the remaining 28.6% indicating a lack of access. Overall, among all surveyed facilities, 85.7% have access to electricity from some source, while 14.3% do not. The main source of electricity is grid supply (85.7%) across all the zones.

Approximately 85.7% of facilities across all zones receive uninterrupted electricity service 24 hours a day, 7 days a week, during their operational hours. This suggests that the majority of the surveyed facilities have access to reliable electricity supply without frequent disruptions, ensuring continuous operation of essential medical equipment, lighting, and other electrical systems required for providing healthcare services.

In the Garo zone, all facilities (100.0%) reported having backup arrangements for oxygen supply. Similarly, in the Jaintia zone, all facilities (100.0%) also reported having such backup arrangements. However, in the Khasi zone, 85.7% of facilities reported having backup arrangements for oxygen supply, with the remaining 14.3% indicating a lack thereof. Overall, among all surveyed facilities, 92.9% reported having backup arrangements for oxygen supply, while 7.1% did not.

6.1.4 Basic Client Amenities:

In the Garo zone, 100% of facilities operate 24 hours a day. In contrast, in the Jaintia zone, none of the facilities reported being open for 24 hours, with 28.6% indicating being open for 28.6% of the day. Similarly, in the Khasi zone, 71.4% of facilities reported being open for 24 hours. This suggests that there are variations in the operating hours of healthcare facilities across different zones, with some operating round the clock while others have shorter operational durations.

Upon observation it was seen that the commonly used source water for facility is piped into facility (50%). For drinking water, majority of the facilities use fresh water (71.4%). In the Garo zone, 28.6% of facilities reported having both sound and visual privacy for patient consultations. Similarly, in the Khasi zone, 28.6% of facilities also reported having both types of privacy. In contrast, in the Jaintia zone, none of the facilities reported having sound or visual privacy exclusively; instead, 57.1% reported having visual privacy only. Additionally, 64.3% of facilities across all zones reported having visual privacy only, indicating that this is the most common type of privacy available for patient consultations. Approximately, 57.1% of facilities has toilets with flush.

6.1.5 Command Centre:

Insights into the emergency response preparedness of primary healthcare facilities (PHCs) across different zones. In the Garo zone, all facilities have designated an Emergency Response Committee as a Command Centre, possess an action plan for emergency response activities, and have defined job responsibilities for PHC staff in emergency situations. Additionally, all staff members in the Garo zone are adequately trained and aware of emergency responses. Furthermore, all facilities in this zone have a duty roster available for the Control Room/ Command Center. Conversely, in the Jaintia zone, none of the facilities reported having designated an Emergency Response Committee, an action plan, or a duty roster, indicating a lack of preparedness. In the Khasi zone, while a majority of facilities have designated an Emergency Response Committee, an action plan, and defined job responsibilities, not all facilities have a duty roster available for the Control Room/ command Center, suggesting some gaps in emergency response readiness.

6.1.6 Safety and Security:

provides insights into the security and safety measures implemented in primary healthcare facilities (PHCs) across different zones. In the Garo zone, approximately 71.4% of facilities have a provision for a PHC security guard, while in the Khasi zone, this percentage increases to 85.7%. Conversely, none of the facilities in the Jaintia zone reported having a PHC security guard. Regarding procedures for stepping up security needs at special areas, a majority of facilities in the Garo and Khasi zones have such procedures in place, with 85.7% and 42.9%, respectively. In contrast, none of the facilities in the Jaintia zone reported having such procedures. However, all facilities across all zones have laid down procedures for maintaining safety and security in case of emergencies. Concerning the display of fire exit signs, approximately 64.3% of

facilities in the Garo zone have them displayed well, while in the Khasi zone, this percentage is 28.6%. Moreover, all facilities in the Jaintia zone lack fire exit signs. Regarding the tracking of extinguisher expiry dates and refilling, a majority of facilities in the Garo and Khasi zones do not have a system for tracking, with 100% and 71.4%, respectively, while in the Jaintia zone, 28.6% of facilities do track such information.

In terms of training staff for using fire extinguishers, approximately 78.6% of facilities in the Garo zone and 71.4% in the Khasi zone do not provide periodic training, whereas in the Khasi zone, 85.7% of facilities do provide such training. Regarding the staff's skills to operate fire extinguishers, 71.4% of facilities in the Garo zone and 71.4% in the Khasi zone reported lacking skilled staff, while in the Jaintia zone, no facilities reported having skilled staff. Additionally, the majority of facilities across all zones (71.4% to 85.7%) do not organize periodic mock drills for fire safety. When it comes to maintaining service details of electrical equipment, approximately 42.9% to 57.1% of facilities in different zones lack such records. Regarding provisions for the safety of persons with special needs, approximately 42.9% to 71.4% of facilities do not have appropriate provisions in place. Finally, concerning the fire alarm system's working condition, 42.9% to 85.7% of facilities have issues with their fire alarm systems, with the highest percentage reported in the Khasi zone. Moreover, in terms of guidelines on standard precautions for infection prevention, while 64.3% of facilities in the Garo zone have observed instructional posters or guidelines, in the Khasi zone, all facilities have them, although not all were observed during the assessment.

6.1.7 Infection control precautions:

Regarding the provision of separate color-coded bins for biomedical waste management, while 57.1% of facilities in the Garo zone had observed bins, none were observed in the Jaintia zone, and all facilities in the Khasi zone reported having them, though they were not observed during the assessment. Concerning the types of color-coded bins available, all zones reported having yellow, red, and blue bins, while white translucent bins were observed in 50% of facilities across all zones, and black/green bins were observed in the remaining 50% of facilities. Regarding the presence of a biomedical waste storage room, 57.1% of facilities in the Khasi zone reported having one, though not observed during the assessment, while 42.9% of facilities in the Garo zone had observed storage rooms. Additionally, 71.4% of facilities across all zones reported having a drainage system, though only observed in the Garo and Khasi zones. When it comes to partitions for infection prevention between healthcare providers and beneficiaries, all facilities in the Khasi zone reported having them, while none were observed in the Garo zone, and all facilities in the Jaintia zone neither reported nor observed such partitions.

6.1.8 Equipment available:

Across all zones, no instances were reported or observed concerning pharmacy-related issues such as drug stock out, expiry, or records, staffing concerns including availability and training, and data-related issues such as completeness and timely reporting. Furthermore, clean running water, hand-washing soap, alcohol-based hand rub, waste bins with lids and liners, sharp's containers, disposable syringes with needles, and auto-disable syringes were observed to be available in all zones, with some exceptions noted for specific items. This suggests an overall satisfactory provision of essential resources and infrastructure across the evaluated PHCs in the respective zones.

All the essential items such as syringes with needles, disposable gloves, and syringes of various capacities are also available across all the facilities. However, there is some variability in the availability of specific items across zones. For instance, items like mucus extractors, Foley's

catheters, and disposable sterile swabs are available in most facilities but show some variation in availability among the zones. Similarly, items like sanitary napkins, wooden spatulas, and routine immunization monitoring charts are available in most facilities, although there are slight differences in availability across zones. Overall, the data underscores the importance of ensuring consistent availability of essential medical supplies across all healthcare facilities to meet the diverse needs of patients.

6.1.9 Location and Condition of the facilities:

All the facilities evaluated are located in government-owned buildings, indicating a consistent pattern across the zones. The condition of these buildings varies, with a majority being in good or satisfactory condition, although some require repairs. Additionally, most facilities undertake regular repair and maintenance activities on a yearly basis. Regarding cleanliness, both the premises and wards are reported to be cleaned in all zones. Furthermore, all the facilities serve as delivery points, and they have separate rooms for drug and consumables storage, which are not infested by pests. Moreover, a significant portion of the facilities have additional physical space available for the storage of emergency supplies. Overall, the data suggests a generally adequate infrastructure and maintenance level across the evaluated PHCs in the respective zones.

6.1.10 Availability of Medications:

Firstly, all facilities have an updated inventory of supplies and medicines as per norms. However, there are disparities in the availability of essential drugs, with 71.4% of facilities in the Khasi zone having all drugs as per the defined Essential Drug List (EDL). Moreover, while most facilities have the necessary drugs for treating Non-Communicable Diseases (NCDs) and emergency situations, there are gaps in the availability of drugs for treating Communicable Diseases (CDs). Additionally, while all facilities have the required drugs for Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCHA+) services, only half of them have mechanisms in place to estimate consumption against OPD visits. However, it is encouraging that all facilities have pharmacists or Medical Officers (MOs) aware of forecasting methods for medication required during disasters and pandemics such as COVID-19. These findings highlight areas of strength and areas for improvement in the management of medicines and supplies across the surveyed zones.

6.1.11 Human Resources:

Across all zones, a comprehensive and up-to-date list of PHC staff, health authorities, and emergency response services is universally available, ensuring that facilities in the Garo, Jaintia, and Khasi zones have access to essential personnel and services vital for primary healthcare and emergency response.

In the Garo zone, there are no reported vacancies against the sanctioned positions at the PHC. However, in the Khasi zone, approximately 28.6% of facilities report having unfilled positions. Overall, across all zones, a substantial 85.7% of facilities face staff shortages, underscoring a significant challenge in maintaining adequate staffing levels in these areas.

Regarding alternative arrangements for sick staff, injured members, or dependents of staff, the availability varies across zones. In the Garo zone, no facilities have such provisions, while in the Khasi zone, around 14.3% of facilities lack these arrangements. However, in the Jaintia zone, a majority of facilities (85.7%) have put in place alternative arrangements for such situations. Overall, across all zones, 57.1% of facilities do not have these alternative arrangements, while 42.9% do.



Concerning contingency plans for providing food, water, and living space during public health emergencies, the situation also varies. In the Garo zone, none of the facilities have such plans. However, in the Khasi zone, the majority (57.1%) lack these contingency plans, whereas in the Jaintia zone, most facilities (42.9%) do have them. Overall, across all zones, 78.6% of facilities lack contingency plans for this purpose, while 21.4% do.

In the Garo and Khasi zones, around 71.4% of healthcare facilities have cross-trained healthcare providers available for high-demand services, like emergency situations, whereas none of the facilities in the Jaintia zone reported having such cross-trained personnel. Overall, across all zones, 28.6% of facilities lack cross-trained healthcare providers, while the majority (71.4%) do have them, indicating disparities in availability across regions. In terms of arrangements for regular health checkups and mental health support for staff, all healthcare facilities in the Garo zone (100%) have them, while only 28.6% of facilities in the Khasi zone reported having such arrangements. Interestingly, none of the facilities in the Jaintia zone reported having these arrangements. Overall, 35.7% of facilities lack these support services, while the majority (64.3%) have them, indicating regional variations.

Regarding linkages with multidisciplinary psychosocial support networks, all facilities in the Garo zone (100%) have established connections, while in the Khasi zone, only 57.1% reported having such linkages. Meanwhile, in the Jaintia zone, 42.9% of facilities lack these connections. Overall, 21.4% of facilities lack linkages with such networks, while the majority (78.6%) have established them, showing regional disparities. In terms of ensuring appropriate vaccinations for staff dealing with epidemic-prone respiratory illnesses, 85.7% of facilities in the Garo zone and 71.4% in the Khasi zone do not comply with national policy and guidelines. Conversely, in the Jaintia zone, all facilities (100%) ensure staff receive necessary vaccinations. Overall, 78.6% of facilities do not provide appropriate vaccinations, while 21.4% adhere to national policy and guidelines in this regard.

6.1.12 Availability and quality of healthcare provision

A major analysis revealed a troubling gap in healthcare availability and quality across Garo, Jaintia, and Khasi zones. Garo stands out with its strong emergency preparedness – dedicated committees and trained staff - while Jaintia lacks these crucial elements. Resource availability also varies greatly. Garo boasts the best access to ambulances and consistent electricity, followed by Khasi. Jaintia, unfortunately, faces critical shortages in both areas. This disparity extends to service delivery – Garo offers 24/7 care, while Jaintia has limited hours, restricting access to healthcare. Staff shortages are a universal concern. Although basic hygiene supplies are present everywhere, proper management of medical waste varies. Khasi demonstrates the most consistent practices, while Jaintia shows concerning gaps. Fire safety measures are weak across all zones. Medication availability also differs – Khasi has the highest stock of essential drugs, followed by Garo and then Jaintia. While all zones have some essential medications, gaps exist for communicable diseases. Staff wellbeing presents another challenge. Jaintia offers the best solutions for covering sick staff, but Garo excels in staff health checkups and mental health support, which are entirely absent in Jaintia. In conclusion, significant improvements are needed to bridge this healthcare gap. All zones require better emergency preparedness, improved resource availability, solutions for staff shortages, and implementation of proper infection control and fire safety measures. By addressing these areas, healthcare systems can work towards achieving a more equitable and high-quality service for all residents across these zones.



Chapter 7: System Strengthening



7.1 Village Health Councils:

Village Health Councils are community-based organizations typically established at the village level to address local healthcare needs and concerns. These councils play a vital role in promoting health awareness, facilitating access to healthcare services, and advocating for the health-related needs of the community. They often collaborate with local healthcare providers, government agencies, and non-profit organizations to implement health programs, conduct health education sessions, and coordinate health initiatives. Village Health Councils serve as platforms for community members to voice their healthcare needs, participate in decision-making processes, and contribute to improving the overall health and well-being of their villages.

These chapter delves with the awareness, and functioning of VHCs among the respondents in the three zones. The aim is to gain insights into the respondents' knowledge about the presence and functions of VHCs, while also evaluating the effectiveness of these councils in their respective zones.

7.1.1 Awareness about Village Health Councils

In the baseline study, a glaring lack of awareness regarding Village Health Councils (VHCs) plagues tribal communities in Meghalaya



Awareness of VHCs	Garo		Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	Ν	%
No	696	87%	635	84.70%	168	93.30%	1499	86.60%
Yes	104	13%	115	15.30%	12	6.70%	231	13.40%
Total	800	100%	750	100%	180	100%	1730	100%

Table 59 Awareness of VHCs

A mere 13.4% of respondents across all groups were familiar with VHCs. This knowledge gap is particularly concerning among the Jaintia community, where only 6.7% reported awareness, compared to 15.3% for Khasi and 13% for Garo communities.

The Garo zone itself mirrors this trend. A substantial majority in both Gambegre (90.9%) and other areas (84.3%) expressed no knowledge of VHCs. To bridge this gap, multifaceted interventions are necessary. Community outreach programs, educational campaigns, and collaboration with local leaders hold promise in boosting awareness, especially among the Jaintia community. Further qualitative research could provide valuable insights into the reasons behind these disparities and identify specific knowledge gaps surrounding VHCs within each community. Ultimately, improving awareness and understanding of VHCs is critical to maximizing their effectiveness in promoting community health and well-being throughout Meghalaya.

Source of information	Garo		к	hasi	Jai	intia	Total	
on VHCs	Ν	%	N	%	Ν	%	Ν	%
Family members	21	20.2%	15	13.0%	2	16.7%	38	16.5%
Social media	7	6.7%	7	6.1%	4	33.3%	18	7.8%
Friend	21	20.2%	30	26.1%	2	16.7%	53	22.9%
Healthcare providers	54	51.9%	63	54.8%	4	33.3%	121	52.4%
Others	1	1.0%	0	0.0%	0	0.0%	1	0.4%
Total	104	100%	115	100%	12	100.0%	231	100%

Table 60 Source of information on VHCs

Upon deeper analysis, it was discovered that among respondents with some level of awareness regarding VHCs, healthcare providers emerged as the primary source of information, underscoring their significance in promoting VHCs. Family members (16.5%) and friends (23%) also contribute to disseminating information, while social media proves to be relevant for a portion of respondents, particularly in the Jaintia zone (27.3%). It is evident that a comprehensive approach incorporating healthcare workers, community engagement, and social media, especially in the Jaintia region, is essential to enhance awareness about VHCs.

Even specifically in the Garo Zone, the healthcare providers remained the predominant source at 50%, with friends being the next significant source at 24.3%. Family members and social media also played notable roles across both categories, with 20.2% and 6.7% respectively. These findings underscore the importance of healthcare providers in disseminating information about VHC development, while also highlighting the influence of interpersonal networks such as family and friends in certain communities.

In contemporary times, social media has become a significant information source for the general population. Among respondents who learned about Village Health Councils (VHCs)

through social media, the majority (81.5%) primarily use electronic media platforms. This digital preference remains consistent in both the Garo (76.9%) and Khasi (77.8%) communities. Interestingly, the Jaintia community exclusively relies on electronic media platforms, with 100% utilizing them. Print media plays a smaller role, accounting for 14.8% of respondents, while a minority (3.7%) use other social media platforms. These findings underscore the vital role of digital channels in community outreach, particularly for initiatives like promoting village health councils.

Further analysis in the Gambegre block and other areas of the Garo community reveals that approximately 75% and 77.8% of respondents, respectively, utilize electronic media platforms. These findings reinforce the significance of digital channels in reaching communities, especially for initiatives aimed at promoting village health councils.

7.1.2 Membership of Village Health Councils

Village Health Councils (VHCs) comprise a diverse group of individuals from the local community. The members of the councils consist male and female heads of the households, executive committee, Village headman, President of VO, Secretary, ASHA, AWW, ANM, CGHA and teachers.

Member of VHC	Garo		к	hasi	Jai	intia	Total	
	Ν	%	N	%	Ν	%	Ν	%
No	62	59.6%	110	95.7%	12	100.0%	184	79.7%
Yes	42	40.4%	5	4.3%	0	0.0%	47	20.3%
Total	104	100%	115	100%	12	100%	231	100%

Table 61 Member of VHC

When the respondents were asked if they are a member of VHC, In the Garo community, a notable proportion of respondents (40.4%) reported being members of these councils, suggesting active community involvement in health-related initiatives. However, in the Khasi community, the majority of respondents (95.7%) indicated that they are not members of Village Health Councils, indicating a lack of participation or engagement in such community health programs. Similarly, in the Jaintia community, none of the respondents reported being members of these councils, reflecting a complete absence of participation in this regard. These findings highlight





the need for targeted efforts to promote community engagement and participation in Village Health Councils, particularly in communities where membership rates are low or non-existent. Such initiatives could enhance the effectiveness of community-based healthcare programs and contribute to improved health outcomes for residents. In both Gambegre and other areas of the Garo region, the majority of respondents, comprising 60.0% and 59.5% respectively, are not members of village health councils (VHCs). In contrast, 40.0% of respondents in Gambegre and 40.5% in other areas of the Garo region reported being VHC members. Overall, approximately 40.4% of the total surveyed population are VHC members, indicating a relatively balanced distribution between members and non-members across the regions.

This necessitates further investigation into the reasons behind this gap. Understanding these factors, like community attitudes or healthcare access, could be key to boosting participation and strengthening VHCs in each tribal group.

"I am not a VHC member but I have heard about it" – Excerpt IDI of Doctor, PHC in Jaintia

7.1.3 Training sessions

Training sessions for Village Health Councils (VHCs) are organized to provide members with the necessary knowledge, skills, and resources to fulfill their roles effectively within the community healthcare system. These sessions typically cover various topics relevant to community health, including health promotion, disease prevention, maternal and child health, sanitation, nutrition, and basic first aid. The training aims to empower VHC members to identify health needs, advocate for health promotion activities, facilitate access to healthcare services, and mobilize community resources for health-related initiatives. By equipping VHC members with the required training and support, these sessions contribute to strengthening the capacity of communities to address health challenges and improve overall well-being.

Training Sessions	Garo		K	hasi	Jai	intia	Total		
	N	%	Ν	%	N	%	Ν	%	
No	26	61.9%	0	0.0%	0	0.0%	26	55.3%	
Yes	16	38.1%	5	100.0%	0	0.0%	21	44.7%	
Total	42	100.0%	5	100.0%	0	0.0%	47	100.0%	

Table 62 Training Sessions

The above table reveals uneven participation in VHC member training. Overall, only 44.7% of VHC members attend block office training sessions. This varies by Zone, with all Khasi VHC members participating but none from Jaintia. Garo participation is moderate (38.1%). Similarly, training participation differs within the Garo zone (16.7% in Gambegre vs 46.7% others of Garo). These disparities call for investigating reasons behind low attendance and developing strategies to improve training outreach and inclusivity for effective VHC functioning across Meghalaya.

When the respondents were asked about the training topics for village health council (VHC) members across the three zones. The Block Office prioritizes importance and objectives of forming the Village Health Committee (VHC) (74.5% of respondents) and roles and responsibilities of VHC members (19.1%). Interestingly, training in Gambegre (75%) and other Garo areas (76.7%) emphasized VHC formation even more. While topics like sustainable planning (21.6%) and community engagement (21.6%) are covered. Further analysis is needed to assess the effectiveness of these trainings in improving VHC performance across Meghalaya.



7.1.4 Community meetings:

Community meetings are organized to introduce candidates for the Village Health Council Executive Committee (VHC EC) to the community members. These meetings serve as a platform for candidates to present themselves, share their qualifications, experience, and vision for the role they aspire to undertake within the VHC. Community members have the opportunity to ask questions, express concerns, and provide feedback to the candidates. These meetings facilitate transparency, democratic participation, and community engagement in the selection process of VHC EC members, ensuring that individuals chosen to represent the community are trusted and supported by the community members they serve.

Community Meeting to introduce EC members		aro	Khasi		Jaintia		Total	
		%	Ν	%	Ν	%	Ν	%
Yes, there were community meetings held to introduce the candidates and discuss their potential roles	14	33.3%	3	60.0%	0	0.0%	17	36.2%
No, there were no community meetings organized for this purpose	9	21.4%	1	20.0%	0	0.0%	10	21.3%
There were forums conducted to introduce candidates, but potential roles were not discussed	1	2.4%	0	0.0%	0	0.0%	1	2.1%
Community meetings were organized, but they did not specifically focus on introducing VHC candidates	18	42.9%	1	20.0%	0	0.0%	19	40.4%
Total	42	100%	5	100%	0	0.0%	47	100%

Table 60 Source of information on VHCs

The above table reveals inconsistencies in community meetings to introduce VHC EC candidates. Overall, only 36.2% attended meetings specifically for introductions and role discussions. This highlights a need to improve outreach, with 21.3% reporting no meetings at all.

Households' active	Garo		Kł	nasi	Jai	ntia	Total	
engagement in the establishment process of Village Health Council (VHCs)	Ν	%	Ν	%	Ν	%	Ν	%
Taking part in training sessions to build capacity and understanding of VHC	26	25.0%	15	13.0%	3	25.0%	44	19.0%
Participating in community meetings to discuss the purpose and benefits of forming VHCs	35	33.7%	95	82.6%	6	50.0%	136	58.9%


Supporting the mobilization of resources, both human and material, for the establishment of VHCs	22	21.2%	22	19.1%	6	50.0%	50	21.6%
Any Other	31	29.8%	6	5.2%	1	8.3%	38	16.5%
Total	104	100%	115	100%	12	100%	231	100.0%

Table 64 Households active engagement in the establishment process of Village Health Council (VHCs)

The above table sheds light on how communities participated in setting up Village Health Councils (VHCs). The most common activity was attending meetings to discuss VHCs (59.1% overall). This highlights the value communities place on open dialogue. Capacity building was also important, with 18.7% of households attending training sessions. Looking within the Garo zone, participation differed between Gambegre and other areas. Gambegre focused more on resource mobilization (26.7%) and training (20.0%), while other areas had higher participation in meetings (36.5%). Overall, community meetings (33.7%) and training sessions (25.0%) were the most common forms of engagement across both regions. These findings emphasize the importance of understanding how communities participate in VHC establishment. By tailoring outreach efforts to each community's preferences, VHCs can be built on a strong foundation of local involvement, leading to greater effectiveness and sustainability.

7.1.5 Monthly Meetings:

A mixed awareness of Village Health Council (VHC) monthly meetings was seen during the survey. Overall, 58.7% are aware of them, but 41.3% are not. This awareness varies by Zone, with the Khasi community showing the highest awareness (67.0%) and the Jaintia community the lowest (18.2%). Garo awareness falls in the middle (53.8%).





Looking at attendance within the Garo zone, participation differs between Gambegre and other areas. In Gambegre, only 43.3% attend meetings, while in other areas, attendance is higher at 58.1%. This suggests a need for improved communication, particularly among the Jaintia community, and further exploration into why attendance varies within the Garo zone. By addressing these issues, VHCs can increase community engagement and strengthen their role in addressing local health needs.

A mixed picture of participation in Village Health Council (VHC) meetings was seen when the respondents who said that they know about the monthly meeting held by Village Health councils.

Participation in those meetings	Garo		Khasi		Jaintia		Total	
	Ν	%	Ν	%	Ν	%	Ν	%
No	48	46.2%	38	33.0%	10	83.3%	96	41.6%
Yes	56	53.8%	77	67.0%	2	16.7%	135	58.4%
Total	104	100.0%	115	100.0%	12	100.0%	231	100.0%

Table 65 Participation in those meetings

Overall, 62.2% actively participate, but 37.8% do not. This participation varies by Zone. The Khasi community shows strong engagement (83.5%), while Garo (39.4%) and Jaintia (54.5%) communities have lower participation.

Looking within the Garo zone, the difference is even starker. In Gambegre, only 23.3% actively participate, while 76.7% don't. In other areas, participation is higher (45.9%) with fewer not participating (54.1%). These findings highlight the need to understand why participation varies across communities and within the Garo zone. By addressing these reasons and promoting greater participation, VHCs can strengthen their role in addressing local health needs.

Topics discussed in the	Garo		Khasi		Jaintia		Total	
meetings	Ν	%	Ν	%	Ν	%	Ν	%
Maternal and Child health	15	36.6%	58	60.4%	5	71.4%	78	54.2%
Immunization of Children	12	29.3%	61	63.5%	6	85.7%	79	54.9%
Health and Nutrition	34	82.9%	83	86.5%	3	42.9%	120	83.3%
Non- Communicable diseases	6	14.6%	46	47.9%	4	57.1%	56	38.9%
Mental Health	4	9.8%	46	47.9%	5	71.4%	55	38.2%
HIV-AIDS	1	2.4%	49	51.0%	1	14.3%	51	35.4%
ТВ	2	4.9%	62	64.6%	0	0.0%	64	44.4%
Others	0	0.0%	3	3.1%	0	0.0%	3	2.1%
Total	41	100.0%	96	100.0%	7	100.0%	144	100.0%

Table 66 Topics discussed in the meetings

The above table shows Village Health Councils (VHCs) prioritize health and nutrition (84%), maternal/child health (54%), and childhood immunization (55%) in meetings. Discussions on mental health and non-communicable diseases are less frequent, but still addressed.

Looking within the Garo zone, Gambegre and other areas discuss similar topics but with varying emphasis. Health and nutrition dominate in both (85.7% and 82.4% respectively). Maternal and child health is also important (28.6% in Gambegre, 38.2% elsewhere). Immunization is a bigger focus in other areas (32.4%) compared to Gambegre (14.3%). Notably, non-communicable diseases receive more attention in Gambegre (42.9% vs 8.8% in other areas). This suggests different health concerns between the two regions. Mental health and HIV/AIDS are discussed less frequently in both areas.

In these monthly meetings, pregnant women have the lowest attendance (5.7%), suggesting a need for targeted outreach. The head of the household is a common attendee (23.0%), highlighting the role of family leadership in health discussions. Interestingly, family member attendance varies by Zone and gender. Among those sending one family member, Garo leans towards females (25.4%), Khasi towards females (36.8%), and Jaintia is split (20.0% each for male and female). A significant portion (36.8%) falls under "Other," which likely includes community leaders, health workers, and local organizations, showcasing the involvement of various stakeholders. These findings emphasize the inclusivity of VHC meetings while suggesting opportunities to improve participation from pregnant women and ensure a balanced presence of both genders across communities.

Within the Garo zone, attendance patterns differ. In Gambegre, female family members are most likely to attend (39.1%), followed by male heads of household (13.0%). In other Garo areas, female family member attendance is still common (17.5%), but a significantly higher proportion (47.5%) report attendance by "others," suggesting broader community participation beyond the listed categories. This highlights the importance of gender-inclusive VHC initiatives, with both Gambegre and other areas showing strong female family member involvement.

7.1.6 Initiative implemented by Village Health Council

Initiatives implemented by Village Health Councils (VHCs) encompass a wide range of activities aimed at promoting health and well-being within the community. These initiatives may include health education and awareness campaigns, vaccination drives, maternal and child health programs, sanitation and hygiene projects, nutrition programs, and efforts to address specific health issues prevalent in the community. VHCs also play a role in facilitating access to healthcare services, organizing health screenings and check-ups, and advocating for community health needs to relevant authorities. Through their collaborative efforts and community-driven approach, VHCs strive to improve the health outcomes and quality of life for residents within their communities.

Specific Initiatives	Garo		Khasi		Jaintia		Total	
taken by VHC members that had bring positive change in addressing health outcomes	Ν	%	Ν	%	Ν	%	N	%
Conducting regular health awareness campaigns and educational workshops	14	34.1%	28	29.2%	0	0.0%	42	29.2%



Collaborating with local healthcare providers to enhance healthcare access	17	41.5%	53	55.2%	1	14.3%	71	49.3%
Encouraging and supporting healthy lifestyle initiatives within the community	10	24.4%	15	15.6%	6	85.7%	31	21.5%
Total	41	100.0%	96	100.0%	7	100.0%	144	100.0%

Table 67 Specific Initiatives taken by VHC members that had bring positive change in addressing health outcomes

The above data reveals how Village Health Councils (VHCs) are effectively tackling health concerns. Collaborating with local healthcare providers (49.7%) is the most impactful strategy, highlighting its effectiveness in improving access to quality care. VHCs also recognize the value of health awareness campaigns (29.4%) in boosting community knowledge and preventive behaviors. Promoting healthy lifestyles (21.0%) through exercise, healthy eating, and tobacco control emerges as another key strategy for reducing chronic diseases and fostering overall well-being. Interestingly, these priorities vary by Zone, with the Khasi community prioritizing collaboration with providers (55.2%) and the Jaintia community emphasizing healthy lifestyles (83.3%).



Figure 39 Specific initiatives taken by VHC members in Gambegre and others of Garo

A separate survey among Gambegre and Others of the Garo zone (Fig.54) shows strong engagement in VHC initiatives. Collaboration with healthcare providers remains a top priority for both Gambegre (42.9%) and Others of Garo (41.2%), highlighting a shared interest in improved access to care. Additionally, both groups significantly support regular health awareness campaigns and educational workshops. This emphasis on health literacy across the Garo zone suggests a strong commitment to community well-being by both VHCs and residents.

Overall, the findings underscore the importance of collaboration between VHCs, healthcare providers, and the community. By continuing and expanding these successful initiatives, VHCs can further strengthen their capacity to address local health needs and improve health outcomes throughout Meghalaya.

Regarding the positive outcomes resulting from initiatives implemented by the Village Health Councils (VHCs), a majority of respondents (65.7%) across all zones observed enhancements in health-seeking behavior. However, the extent of this impact differs among the zones, with the Garo (59.6%) and Khasi (74.8%) communities indicating the most substantial improvements.



In contrast, the Jaintia community (27.3%) reported a lower perception of improvement, highlighting a necessity for more focused VHC initiatives in that region.

Encouragingly, a majority of respondents in both Gambegre (53.3%) and Others of the Garo zone (62.2%) acknowledge having VHCs in their communities. While a substantial portion (around 40%) in each area reported no VHC presence, the overall recognition of VHCs is strong (59.6% across both zones). This widespread presence lays a solid foundation for continued engagement and collaboration between VHCs, healthcare providers, and the community to further improve health outcomes throughout Meghalaya.



7.1.7 Recommendations for Strengthening VHCs:

Rating of Accessibility	Garo		Khasi		Jaintia		Total	
of VHC members	Ν	%	Ν	%	Ν	%	Ν	%
Very accessible and highly responsive during health emergencies	37	35.6%	46	40.0%	2	16.7%	85	36.8%
No, there were no community meetings organized for this purpose	9	21.4%	1	20.0%	0	0.0%	10	21.3%
Generally accessible with a prompt response to urgent situations	15	14.4%	49	42.6%	5	41.7%	69	29.9%
Adequately accessible, but with occasional delays in responsiveness	11	10.6%	13	11.3%	2	16.7%	26	11.3%
Others	24	23.1%	2	1.7%	2	16.7%	28	12.1%
Total	104	100.0%	115	100.0%	12	100.0%	231	100.0%

Table 68 Rating of Accessibility of VHC members

When the respondents were asked to rate the accessibility of VHC members and their responsiveness to community health emergencies or urgent situations, over a third (37.0%) find VHC members readily available and helpful during emergencies, while nearly another third

(29.6%) perceive them as generally accessible with a prompt response. However, a combined 21.3% of respondents acknowledge accessibility issues and occasional delays, highlighting areas for improvement. Notably, some respondents (12.2%) provided unique insights beyond these categories.

Satisfaction with VHC accessibility and responsiveness varies by Zone. The Khasi community fares best, while the Jaintia community has the least satisfaction. This underscores the need for tailored approaches to enhance VHC effectiveness across Meghalaya. Looking within the Garo zone, this variation is even more evident. Gambegre residents (50.0%) express high satisfaction with VHC responsiveness, compared to 29.7% in Others of Garo. Conversely, concerns about responsiveness are more prevalent in Others of Garo (20.3%) compared to Gambegre (6.7%). These findings highlight the importance of improving VHC accessibility and response times throughout Meghalaya, potentially through better training, communication, and collaboration among VHC members.

Skills or capacities that	Garo		Khasi		Jaintia		Total	
VHC members should possess	Ν	%	N	%	Ν	%	Ν	%
Problem-Solving Skills	29	27.9%	64	55.7%	1	8.3%	94	40.7%
Health Education Expertise	51	49.0%	46	40.0%	3	25.0%	100	43.3%
Communication Skills	13	12.5%	5	4.3%	4	33.3%	22	9.5%
Leadership Skills	11	10.6%	0	0.0%	4	33.3%	15	6.5%
Total	42	100.0%	5	100.0%	0	0.0%	47	100.0%

Table 69 Skills or capacities that VHC members should possess

The above data reveals the various skills valued for effective VHC members. Across communities, problem-solving (40.9%) and health education expertise (43.5%) are most emphasized. Problem-solving skills allow VHCs to identify and address local health challenges, while health education expertise equips them to educate communities about preventive measures and healthy behaviors. Communication (9.1%) and leadership skills (6.5%) are seen as less essential but still important for collaboration and community mobilization. Interestingly, these priorities vary by zones. The Khasi community prioritizes problem-solving (55.7%) and health education (40.0%), while the Jaintia community values leadership skills (36.4%) more. Within the Garo zone, similar trends emerge. Health education expertise is most valued by both Gambegre (60.0%) and Others of Garo (44.6%), with an overall rating of 49.0%. Problem-solving skills are also important (26.7% in Gambegre, 28.4% in Others of Garo). Communication and leadership skills receive less emphasis, suggesting areas for improvement in VHC member training. Overall, these findings highlight the need for multifaceted training programs that address these diverse skill sets. By empowering VHC members with the right skills, they can become more effective in addressing community health needs and improving health outcomes across Meghalaya.

7.1.8 Challenges and gaps identified

Challenge 1: Variation in VHC effectiveness and accessibility

A critical challenge revealed in the data is the variation in effectiveness and accessibility of VHCs across tribal communities in Meghalaya. This means some communities experience



greater benefits from their VHCs compared to others. For instance, the survey shows a range of satisfaction with VHC performance. While some communities report significant improvements in health-seeking behavior due to VHC efforts (e.g., Khasi at 74.8%), others show a lower perception of improvement (e.g., Jaintia at 27.3%). This suggests that some VHCs may require additional support or improved strategies.

Accessibility also varies. While a majority across zones acknowledge having VHCs (59.6% in Garo zone), a significant portion (around 40%) reported no VHC presence in their area. Additionally, responsiveness differs – over a third find VHC members helpful during emergencies, but a combined 21.3% acknowledge occasional delays or a need for improvement in response times. These variations point to potential gaps in VHC training, resources, or their ability to adapt to specific community needs. Overall, this uneven landscape of VHC effectiveness and accessibility creates disparities in healthcare support across Meghalaya. It highlights the need for targeted interventions to strengthen VHCs and ensure equitable access to quality healthcare services throughout the state.

Challenge 2: Limited responsiveness of VHCs to urgent situations

Another challenge identified in the data is the limited responsiveness of some VHCs to urgent health situations. While over a third of respondents find VHC members available during emergencies, a significant portion (around 21.3%) acknowledge occasional delays or a need for improvement in response times. This disparity is even more concerning for the Jaintia community, which reports the lowest satisfaction level regarding VHC responsiveness. Limited responsiveness could be due to several factors. There might be gaps in communication between VHCs, healthcare providers, and the community, leading to delays in referrals or unclear procedures during emergencies. Resource limitations like lack of transportation or communication equipment could also hinder VHCs from reaching those in remote areas promptly. Additionally, inadequate training for VHC members in handling emergencies or providing basic first aid could lead to hesitation or delays in critical situations.

These limitations are crucial to address, as delays in receiving medical attention during emergencies can have serious consequences for community health. Furthermore, a perception of slow response times can erode trust within the community, discouraging residents from seeking help from VHCs in the future. Therefore, strengthening VHCs' ability to respond effectively to urgent situations is critical.

Challenge 3: Gaps in specific skill sets of VHC members

Another challenge identified is the potential lack of well-rounded skill sets among VHC members. While the survey highlights the importance of problem-solving (40.9%) and health education expertise (43.5%) for VHCs, communication (9.1%) and leadership skills (6.5%) receive less emphasis. This is further supported by variations across Zones, with the Khasi community prioritizing problem-solving and health education, and the Jaintia community valuing leadership more. Limited communication skills can hinder collaboration with healthcare providers and clear communication with the community, potentially reducing the impact of VHC initiatives. Similarly, weak leadership skills can affect VHCs' ability to mobilize the community and advocate for their healthcare needs.

These skill gaps might be due to training programs that overemphasize technical skills like health education and neglect communication and leadership aspects. Standardized training across communities may also fail to consider the specific needs of each zone.





Chapter 8: Qualitative Insights



Healthcare providers:

The interview with healthcare providers shed light on the intricacies of healthcare access and community engagement in rural settings, underscoring the significance of promoting healthy lifestyles and addressing the challenges encountered by individuals facing illness, particularly those constrained by financial limitations. The interview delved into the transition from traditional homebased childbirth to utilizing primary healthcare centers (PHCs), highlighting the hurdles faced by pregnant women due to geographical distances and transportation constraints. The respondent acknowledged the fledgling stage of the Village Health Committee (VHC), aimed at bolstering community health awareness while noting obstacles such as limited awareness, participation, and comprehension among VHC members. Furthermore, it was noted that although income levels do not directly influence healthcare utilization, prevalent barriers such as communication and transportation hinder access, resulting in low institutional delivery rates due to accessibility challenges. Strategies to address cultural considerations and dispel misconceptions surrounding traditional medicine were emphasized, along with initiatives to bridge communication gaps through the dissemination of materials in local languages. The dearth of healthcare facilities in remote areas underscores the imperative of establishing additional centers while enhancing emergency medical services necessitates the provision of better-equipped care units. Challenges within existing healthcare settings, including insufficient medical tools, equipment, and a shortage of healthcare professionals, adversely impact overall service delivery. By leveraging existing healthcare schemes like MHIS (Medical Health Insurance Scheme) and engaging with community health workers like ASHAs (Accredited Social Health Activists), providers strive to overcome barriers to healthcare access and promote preventive care practices. Moreover, their recognition of the importance of collaboration between healthcare institutions and grassroots organizations like Anganwadi centers underscores a holistic approach to addressing healthcare needs in rural areas. Despite facing challenges in resource-constrained settings, healthcare providers remain dedicated to improving healthcare delivery and fostering positive health-seeking behaviors among community members.

Community Members:

The insights provided yield a nuanced understanding of healthcare dynamics within the community, portraying a balanced reliance on both traditional remedies and formal healthcare facilities. For minor ailments, community members often turn to home remedies, but they opt for healthcare facilities, particularly those offering free services like primary health centers (PHCs), for more serious health issues. While negative experiences with healthcare services are infrequent, challenges such as



poor road conditions hinder access to these facilities, indicating a need for improved infrastructure. Interestingly, cultural factors do not seem to significantly sway healthcare decisions, and there's evident progress in specific healthcare domains such as maternal and elderly care. However, there is a collective desire for enhanced infrastructure, especially regarding roads and the availability of nearby hospitals. The high uptake of health insurance indicates a level of financial preparedness, and there's a notable emphasis on gender equality in healthcare participation. Collaboration with external healthcare initiatives is generally viewed positively, although there's a call for greater clarity and engagement regarding program specifics. Challenges arise during sickness due to the lack of available medicines and pharmacies in the village, further exacerbated by financial constraints hindering access to healthcare institutions. While there is awareness of the importance of Antenatal Care (ANC) check-ups, traditional home-based childbirth persists due to cultural traditions, although there is a growing trend towards hospital births among educated individuals. Limited awareness of health insurance schemes like MHIS and other financial assistance options contributes to low enrolment rates. Despite these challenges, community members generally demonstrate a cooperative attitude towards healthcare providers and adhere to prescribed treatments. However, preference for traditional healers and practices, limited healthcare facilities, transportation challenges in remote areas, and misinformation post-COVID continue to impact healthcare-seeking behaviors and access to formal healthcare services among community members. Overall, the community appears receptive to government health schemes and initiatives such as the Village Health Committee (VHC), although suggestions for enhancement are reserved pending its implementation.

VHC members:

The Village Health Committee (VHC) is still in its nascent stages, with members expressing uncertainty about its functioning and the level of knowledge among participants. Despite having conducted multiple trainings under Self-Help Groups (SHGs), the VHC has only convened two meetings thus far. Discussions during these initial meetings have revolved around issues such as household immunization, with plans to conduct home visits, although execution has yet to occur. While the establishment of the VHC holds promise for enhancing community understanding of healthcare issues, challenges such as ensuring regular meetings, attendance, and equal participation among members persist. To improve, the VHC requires enhanced knowledge and comprehension among members regarding its objectives and functions, along with increased cooperation and active involvement from all participants for effective operation. As educated individuals equipped with schooling and training, VHC members are poised to play a pivotal role in community health initiatives. Despite their efforts, the VHC encounters hurdles in addressing vaccination hesitancy among villagers, despite involvement from local leaders and healthcare workers. Strategies such as forming community households and holding regular meetings aim to boost awareness and engagement in healthcare services. However, cooperation and support from community members are essential for the VHC to effectively execute its objectives, notwithstanding persisting hesitancy towards healthcare interventions. Challenges faced by the VHC include difficulty in program implementation and motivating community members to visit health institutions, compounded by the occupation of many community members in agricultural fields. Suggestions for improvement encompass increasing community motivation to seek treatment and fostering collaboration between village committees and healthcare service providers. Despite the absence of significant language or cultural barriers, VHC members recognize transportation challenges as a barrier to healthcare access in remote areas and endeavor to assist residents in seeking medical attention. Efforts to address literacy levels include organizing health camps and educational programs to raise health awareness, particularly targeting schools and villages. However, the limited availability of emergency services and medical resources, coupled with a shortage of doctors and specialists, pose significant challenges to delivering quality healthcare services, underscoring the need for enhanced emergency care units and improved healthcare infrastructure in rural areas.





Chapter 9: Findings and Recommendations

9.1 Summary of Key Findings

9.1.1 Socio-economic and Demographic Factors

The Garo, Khasi, and Jaintia communities in Meghalaya, India, showcase unique demographics. Garo Hills have a young population with more males, while Khasi Hills have a higher female population and Jaintia Hills are more balanced. Christianity dominates, and nuclear families prevail across all zones. Livelihoods vary, with Garo Hills focusing on cultivation, Khasi Hills on agricultural labor, and Jaintia Hills on service jobs. Despite high homeownership, separate kitchens are less common, especially in Jaintia Hills. Wood remains the primary cooking fuel, but LPG use is higher in Jaintia Hills and biogas is unique to Garo Hills.

While there are shared traits among these communities, their healthcare preferences diverge significantly. Khasi prioritize proximity and efficiency, Garo emphasize the presence of skilled practitioners and high-quality care, and Jaintia value flexibility in appointment scheduling. Garo communities tend to favor private hospitals, whereas others predominantly utilize public healthcare centers. Transportation plays a pivotal role, with private modes being the prevalent choice, underscoring the importance of understanding their specific transportation needs. Despite facing obstacles, the majority can access healthcare facilities within an hour. To enhance accessibility, addressing factors such as doctor availability, service excellence, and dependable transportation services is imperative.

9.1.2 Health Seeking Behavior

Two-thirds of the population has health insurance, with the MHIS scheme being the most common. Patients primarily rely on PHCs, sub-centres and local pharmacies for initial consultations. For both minor and severe illnesses, PHC/CHC/DM doctors are the preferred choice, although pharmacies are also popular for minor ailments. During emergencies, most people visit PHC/CHC/DM doctors. Financial limitations, distance to healthcare facilities and traditional remedies are the main reasons why some residents avoid seeking medical attention. Institutional delivery is favored for childbirth, with the Jaintia zone having the highest rate. Cultural beliefs are a major barrier to institutional delivery, especially in the Garo zone. ANC visits are universal during pregnancy, but 5.1% of Khasi



zone respondents did not receive PNC visits after childbirth. Childhood vaccination rates are high except in the Jaintia zone. There's a significant disparity within the Garo zone, with Gambegre having a much lower vaccination rate compared to other areas. Notably, only Gambegre reported vaccine hesitancy as a reason for not vaccinating children.

9.1.3 Accessibility and Affordability of Health Care services

This survey exposes concerning disparities in healthcare access and affordability across the Garo, Khasi, and Jaintia communities. While a significant portion in all zones manage healthcare expenses, the Jaintia community struggles the most, followed by Khasi and then Garo. Out-of-pocket payments are a major financial burden for everyone.

However, access to care varies greatly. The Khasi zone reports a substantial portion with poor access, while Garo is mostly fair and Jaintia has the highest ratings for good access. This disparity extends to specific services. Routine check-ups and preventive care are most often delayed, and awareness of government health insurance schemes differs widely, with Khasi households particularly unaware. Social media and healthcare providers are the main sources of information about these programs.

Despite most households having government health insurance, particularly in Garo, disparities exist within that community for specialized care, suggesting income-related challenges. Satisfaction with healthcare is mostly neutral across zones, but Garo households show the most variation in satisfaction levels, potentially due to differing affordability experiences.

Financial obstacles remain significant concerns, especially for Khasi households. These include high out-of-pocket costs, limited low-cost options, and difficulty affording medications. While some healthcare facilities seem understanding, societal attitudes are a barrier, with Garo households feeling this most strongly. Delays in seeking care due to finances are common, often leading to worsened health and additional costs.

The effectiveness of telemedicine, increasing healthcare professionals, and community education programs differ in perception across groups, highlighting the need for tailored solutions. The multifaceted nature of access challenges underscores the need for holistic approaches to ensure equitable healthcare for all. Addressing financial barriers, particularly out-of-pocket costs, insurance premiums, and medication affordability, is crucial. Partnering with community resources and streamlining processes can improve accessibility, especially for lower-income populations. Overall, income significantly impacts healthcare access and decision-making, and addressing these financial barriers is essential for equitable healthcare across diverse communities.

9.1.4 Cultural beliefs and Healthcare utilization

Cultural beliefs exert a notable influence on healthcare utilization patterns, extending beyond just institutional delivery, to include seeking medical advice, across various zones like the Garo, Khasi, and Jaintia regions. In the Garo Zone, a significant majority of respondents (84.2%) cited cultural beliefs as the primary reason for not opting for institutional delivery, suggesting that these beliefs might deter individuals from seeking not only delivery services but also medical advice at healthcare institutions.

Similarly, in the Khasi Zone, although cultural beliefs were not explicitly mentioned, 10% of respondents each cited factor such as lack of knowledge about institutional delivery and high institutional delivery costs. Additionally, 80% of Khasi Zone respondents highlighted the distance of healthcare centers from their homes as a significant factor influencing their decision-making, indicating that cultural beliefs could affect the choice to seek medical advice beyond delivery services.

In the Jaintia Zone, all respondents who did not opt for institutional delivery cited distant healthcare centers as their reason, emphasizing the pivotal role of accessibility and proximity to healthcare facilities in healthcare utilization decisions, including seeking medical advice.

Moreover, in specific sub-regions such as Gambegre and the rest of Garo, where cultural beliefs were attributed to 80% and 85.7% of non-institutional delivery choices respectively, it is evident that cultural norms significantly influence healthcare-seeking behavior, encompassing both medical advice and delivery services.

Overall, these findings underscore how deeply entrenched cultural beliefs shape preferences and decisions regarding healthcare utilization, not limited to institutional delivery alone. Addressing these cultural barriers necessitates culturally sensitive strategies that honor local traditions while advocating for the importance of seeking medical advice from healthcare institutions for overall well-being.

9.1.5 Literacy level and healthcare utilization

The analysis of educational attainment and occupational distribution across the Garo, Khasi, and Jaintia regions sheds light on significant disparities and diverse employment patterns, which in turn impact healthcare utilization. The data indicates that educational attainment varies across the zones, with a notable proportion of respondents exhibiting matric/secondary education across all regions. However, disparities exist, with the Garo zone having the highest illiteracy rate at 22%, while the Jaintia zone has the highest percentage of individuals below the primary level at 37.3%.

Literacy level significantly influences healthcare utilization as individuals with higher education levels tend to have better health literacy, enabling them to understand health information, seek appropriate medical care, and engage in preventive health practices. Conversely, individuals with lower education levels may face challenges in comprehending healthcare instructions, navigating healthcare systems, and making informed decisions about their health.

Moreover, diverse employment patterns observed across the zones, such as cultivators being prominent in the Garo zone, agricultural laborers in the Khasi zone, and service workers in the Jaintia zone, also impact healthcare utilization. For instance, individuals engaged in physically demanding occupations may be more prone to health risks and injuries, necessitating regular access to healthcare services.

Addressing educational disparities is crucial for promoting equitable access to healthcare and improving healthcare utilization rates. Tailored interventions focusing on health education and literacy programs can empower individuals with lower education levels to make informed healthcare decisions, thereby reducing barriers to accessing healthcare services and improving overall health outcomes across communities. Additionally, efforts to provide economic opportunities and improve educational infrastructure can contribute to uplifting communities and fostering a healthier population.

9.1.6 Income Level and Healthcare utilization

Income levels play a pivotal role in shaping healthcare utilization patterns across diverse communities, as evident from the distinct variations in reported total monthly incomes across the Garo, Khasi, and Jaintia zones. In the Garo zone, where the mean monthly income stands at 8617 rupees, individuals likely possess comparatively greater financial means, facilitating easier access to healthcare services and potentially resulting in higher utilization rates. Conversely, the Khasi zone exhibits a significantly lower mean monthly income of 3789 rupees, suggesting that residents may encounter financial constraints hindering their ability to seek healthcare, possibly leading to lower utilization rates compared to the Garo zone.

Conversely, the Jaintia zone presents a notably higher mean monthly income of 14495 rupees, indicative of relatively superior economic well-being among respondents. Here, individuals likely enjoy enhanced financial flexibility, enabling them to afford healthcare services more readily and potentially resulting in higher utilization rates compared to both the Garo and Khasi zones.

Overall, considering all communities where the average means total monthly income reported by respondent's averages at 7123 rupees, income levels emerge as a significant determinant of



healthcare utilization. Higher income levels correlate with increased accessibility to healthcare services due to enhanced affordability, while lower income levels may pose barriers to healthcare access, thereby influencing utilization rates accordingly. Addressing income level disparities and ensuring equitable access to healthcare services irrespective of financial status are critical measures for advancing healthcare equity and fostering improved overall health outcomes across diverse communities.

9.1.7 Gender disparities and Healthcare Utilization

The data analysis from households in various zones unveils notable insights into gender disparities and healthcare utilization. Across all zones, the majority of respondents reported no disparities in accessing healthcare services based on gender, indicating a relatively equitable distribution. However, a small yet significant percentage acknowledged gender-based disparities, signaling areas for improvement in ensuring equal access to healthcare for all genders. Furthermore, the analysis reveals varying levels of familiarity with health policies addressing women's healthcare needs, with a substantial portion of respondents indicating unfamiliarity. This highlights the importance of raising awareness and providing education about such policies to ensure equitable healthcare provision for women.

When examining healthcare utilization patterns, it becomes evident that decision-making authority predominantly lies with spouses, followed by self, indicating a significant role of familial dynamics in healthcare-seeking behaviors. Additionally, awareness of village health councils appears to be relatively low across all zones, suggesting a potential gap in community engagement and participation in healthcare initiatives. Overall, these findings underscore the need for targeted interventions and awareness campaigns to address gender disparities in healthcare utilization. Strategies should focus on promoting equitable access to healthcare services, increasing awareness of health policies addressing women's needs, and fostering community engagement to enhance healthcare utilization among women and marginalized populations.

9.1.8 Healthcare infrastructure

The comprehensive assessment of primary healthcare facilities across the Garo, Jaintia, and Khasi zones reveals various aspects of their readiness and capacity to respond to emergencies and provide essential healthcare services. Firstly, the availability of designated nodal persons for communication with higher health authorities during emergencies is universal across all zones, ensuring effective coordination. Additionally, the majority of facilities have Information, Education, and Communication (IEC) materials and contact lists of key officials displayed, contributing to preparedness and communication strategies. However, disparities exist in ambulance availability, with some facilities lacking functional vehicles for emergency patient transportation. Furthermore, while there are variations in staff availability and contingency planning across zones, the presence of cross-trained healthcare providers and support services indicates efforts to address staffing challenges and ensure staff well-being. Overall, the data emphasizes the importance of addressing gaps in resources, infrastructure, and staffing to enhance the resilience and effectiveness of primary healthcare services in the surveyed regions.

9.1.9 Functioning of Village Health Councils

Village Health Councils (VHCs) in Meghalaya could be a game-changer for healthcare access, but face roadblocks in public awareness and participation. A mere 13.3% of the population understands VHCs, with a particularly low awareness among the Jaintia community. This knowledge gap translates to participation, with the Garo community being the most involved. Even member training needs a closer look to ensure effectiveness. However, there are glimmers of hope. Communities are open to discussing VHCs, and VHCs themselves prioritize areas important to the public. Collaboration with local healthcare providers seems to be working, with many reporting improved health-seeking behavior. To truly unlock VHCs' potential, raising awareness, especially among the Jaintia community, and boosting participation across the board are essential.







10.1 Summary of Study

This comprehensive study on the healthcare landscape in Meghalaya, India, aimed at identifying effective strategies for improving healthcare delivery and achieving Universal Health Coverage (UHC). Through an extensive analysis encompassing socio-economic and demographic factors, healthcare infrastructure, and community health behaviors, the study illuminated the multifaceted challenges and opportunities within Meghalaya's healthcare system. Key elements explored included the role and functionality of Village Health Councils (VHCs), access to primary healthcare services, integration of traditional healthcare practices with modern medicine, and the utilization of digital health interventions to enhance healthcare access in remote areas. The study also delved into community health education, the importance of an integrated approach to healthcare, and strategies for fostering public-private partnerships to expand healthcare service delivery.

10.2 Implications for Policy and Practice

The findings from this study offer valuable insights for policymakers and healthcare practitioners aiming to improve healthcare accessibility and quality in Meghalaya. First, strengthening VHCs through additional training and resources can significantly improve health-seeking behavior and healthcare service utilization at the community level. Second, prioritizing the enhancement of primary healthcare facilities, especially in rural and remote areas, is critical for providing comprehensive healthcare services closer to the population. Furthermore, the integration of digital health technologies presents a promising avenue for overcoming geographical barriers to healthcare access, enabling telemedicine, and improving health information systems.



Policies aimed at expanding health insurance coverage to ensure minimal out-of-pocket expenses for all citizens can accelerate progress towards UHC. Additionally, the study highlights the need for cross-sectoral collaborations to address social determinants of health effectively. Implementing these policy recommendations requires a coordinated approach involving government agencies, healthcare providers, community organizations, and private sector partners. By focusing on these strategic areas, Meghalaya can make significant strides in enhancing healthcare delivery and moving closer to achieving UHC

10.3 Limitations and Areas for Future Research

While this study provides a thorough analysis of the current healthcare landscape in Meghalaya and identifies several strategies for improvement, it acknowledges certain limitations. The geographical focus on Meghalaya, while providing depth, may limit the generalizability of the findings to other regions with different socio-economic and cultural contexts. Additionally, the reliance on quantitative and qualitative data may not fully capture the nuanced experiences and perceptions of all community members.

Future research should aim to explore the long-term impacts of implementing the recommended strategies on healthcare outcomes and UHC progress. Comparative studies involving other regions with similar challenges can offer additional insights and validate the effectiveness of the proposed interventions. Investigating the role of technology in healthcare, specifically the scalability and impact of digital health interventions in rural settings, would also provide valuable information for policymakers and practitioners. Lastly, further research into the integration of traditional and modern healthcare practices could reveal innovative approaches to enhancing healthcare accessibility and acceptance among diverse population groups.

By addressing these areas for future research, subsequent studies can build on the foundation laid by this report, contributing to a more comprehensive understanding of the pathways to achieving Universal Health Coverage in Meghalaya and beyond.

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