Impact assessment report

Smile Foundation -Smile on Wheels Project

KMPL Project ID - KMPL202324005

A report by Crisil Limited

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Ethical Consideration

Informed consent: The interviews were done after the respondents gave their consent. Even after the interviews were completed, their permission was sought to proceed with their responses.

Confidentiality: The information provided by participants has been kept private. At no point were their data or identities disclosed. The research findings have been quoted in a way that does not expose the respondents' identities.

Comfort: The interviews were performed following the respondents' preferences. In addition, the interview time was chosen in consultation with them. At each level, respondents' convenience and comfort were considered.

Right to reject or withdraw: Respondents were guaranteed safety and allowed to refuse to answer questions or withdraw during the study.

Contents

Understanding of Context

Health is a foundational component of human well-being and societal development. Access to quality healthcare influences life expectancy, productivity, educational attainment and poverty reduction. Yet, healthcare remains highly unequal globally, with vulnerable groups such as women, children, the elderly, migrants and low-income communities often suffering the worst consequences of weak health infrastructure. Total healthcare outlays have exceeded $12 trillion[1]. Despite increased spending, large funding gaps remain, especially in low and middle-income countries (LMICs). In 2019, out-of-pocket health spending pushed 344 million people into extreme poverty and 1.3 billion into relative poverty, saddling 2 billion people with financial hardship[2].

Challenges and role of MMVs in Indian healthcare

The Indian healthcare system faces multiple systemic challenges, including low public spending, unequal distribution of resources, human resource gaps, a dual disease burden, infrastructure deficiencies and social barriers for the urban poor. The share of government health expenditure is low, leading to heavy out-of-pocket expenses for patients. On top of that, rural areas do not have enough doctors and facilities. The distribution of healthcare resources is skewed, with public clinics concentrated in affluent urban wards, leaving slum populations underserved. Additionally, India faces a rising burden of non-communicable diseases, requiring sustained primary care, and many public systems struggle to provide chronic care management at scale

Government initiatives and schemes

To address these issues, the Government of India has implemented several large-scale initiatives:

- **National Health Mission (NHM):** Encompassing the National Rural Health Mission (NRHM) and the National Urban Health Mission (NUHM), it subsidises infrastructure, staffing and outreach across rural and urban areas. It also finances MMVs for states.
- **Ayushman Bharat:** The flagship programme launched in 2018 aims to transform healthcare delivery through two main components: Health and wellness centres (HWCs) and the PM Jan Arogya Yojana (PM-JAY). The scheme provides cashless health insurance (INR 5 lakh per family per year) to 40% of the poorest households within country.
- **Ayushman Bharat Digital Mission**: Supports health data portability (ABHA ID), digital records and telemedicine (eSanjeevani), which facilitates tracking of patients and remote follow-up. It makes the MMV remote care more sustainable.

Despite growing investments, MMVs face challenges like inefficient operations and logistical issues, hindering their impact. With the right support, MMVs can be a transformative solution for universal healthcare access in India.

[1] World Health Day: 8 trends shaping global healthcare, April 5, 2023, World Health Forum, https://www.weforum.org/stories/2023/04/world-health-day-healthcare-trends/

[2] Universal health coverage (UHC), March 26, 2025, World Health Organization, https://www.who.int/news-room/fact-sheets/detail/universal-health-coverage-(uhc)

Approach and Methodology

The evaluation employs a concurrent mixed methods design, integrating both quantitative and qualitative datasets from principal program stakeholders to construct a rigorous multi-dimensional impact evaluation.

Quantitative Insights - Measuring Program Efficacy: Quantitative evidence is acquired via a semi-structured questionnaire administered directly to program beneficiaries. This instrument measures core impact metrics and program effectiveness, leveraging structured scaling and closed-ended responses.

Qualitative Narratives - Capturing Stakeholder Perspectives: Qualitative data is collected through in-depth key informant interviews with medical professionals and other pivotal stakeholders. These interviews utilize open-ended probes to capture nuanced perspectives on program execution.

Convergent Evidence Mapping and Analysis: All findings are triaged using a formal convergence-divergence analysis to identify corroborative and contradictory evidence streams across quantitative and qualitative dimensions.

Benchmarking Against Global Standards: OECD-DAC & SDG Focus: The evaluation maps the impact of the program with the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) framework to determine the merit of an intervention on the basis of six defined evaluation criteria – **relevance, coherence, effectiveness, efficiency, impact** and **sustainability**. Additionally, outcomes are mapped to the UN SDGs for global alignment.

In addition to the above, the study also uses **SWOT (Strengths, Weaknesses, Opportunities, Threats) Analysis** to systematically assess the program's strengths, weaknesses, opportunities, and threats, informing core evaluation and strategic recommendations.

Sampling framework

A sample of 71 patients has been selected to satisfy the conventional minimum of around 30 observations required for the Central Limit Theorem to yield an approximately normal sampling distribution of the mean.

Key Stakeholders	Data collection tool	Sample
Beneficiaries/ Community Members	Structured survey questionnaires	71
Medical Staff (including van operators)	Key informant interviews	4
Smile Foundation officials	Key informant interviews	2
KMPL CSR Team	Key informant interviews	2

About the Program and Primary Findings

Program ID	**KMPL202324005**
Program duration	1st October 2023 – 15th May 2024
Partner organization	Smile Foundation
Location	Bangalore (Karnataka) and Jalandhar (Punjab)

Theory of Change (ToC)				
Need	**Input**	**Output**	**Outcome**	**Impact**
Underserved populations in urban slums and rural areas face significant barriers to accessing primary healthcare services, leading to poor health outcomes, increased morbidity and mortality	6 Mobile Medical Vans (MMVs) deployed with multidisciplinary teams to provide doorstep healthcare services, including curative healthcare services, point-of-care diagnostics, maternal and child health services, IEC activities on preventive and promotive health habits, and referral services.	Regular OPD sessions, point-of-care diagnostics, maternal and child health services, IEC activities on various health topics, and referrals to higher-level care facilities; strengthened community mobilization and referral linkages with frontline health workers such as ASHAs, ANMs, and Anganwadi Workers.	Enhanced health status of 45,000 underserved individuals, increased access to primary healthcare services; enhanced health awareness and knowledge among community members; strengthened linkages with public healthcare systems; improved continuity of care through follow-ups and referrals.	Improved health outcomes and enhanced quality of life among underserved populations; strengthened public healthcare systems through effective linkages and referrals; empowered communities with improved health literacy and ability to access relevant government schemes.

Primary key findings – Community members

Demographic profile

The assessment engaged **71 respondents**, distributed across **Bangalore (62%) and Jalandhar (38%), capturing diverse demographic and socio-economic realities across the two locations.** Women constituted a majority across all locations, with participation highest in Bangalore (68%) followed by Jalandhar at 56%, reflecting women's central role in household health management and their consistent reliance on doorstep primary-care services.

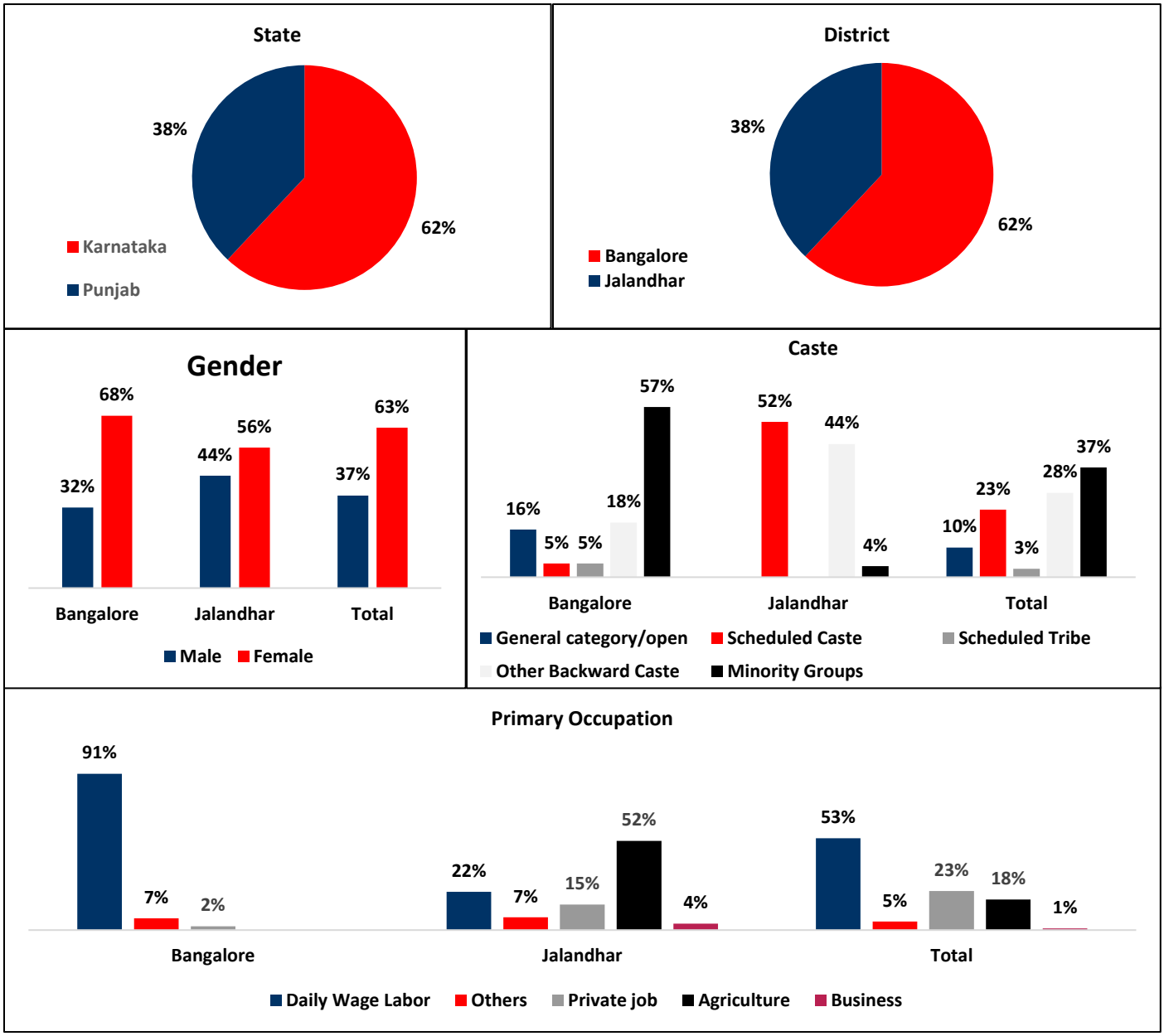


Figure 1: Demographic profile

Occupational profiles varied sharply across locations, highlighting distinct livelihood contexts. **Bangalore exhibited overwhelming dependence on daily-wage labor, with 91% of respondents engaged in daily-wage work, suggesting high vulnerability to wage loss and time constraints.** Jalandhar presented a predominantly agricultural workforce, with 52% engaged in agriculture and 22% in daily-wage labour, shaped by seasonal employment cycles. These distinctions influence the nature of healthcare barriers faced in each district—whether wage loss, seasonal workload, or rigid job timings—and affirm the MMV's role in reducing access constraints for varied livelihood contexts.

Residential patterns further underscored differences in community stability. **Jalandhar recorded the highest proportion of long-term residents, with 100% living in the community for more than a decade.** Bangalore, in contrast, showed significantly greater mobility, with 59% of respondents residing in the locality for less than one year, far higher than in Jalandhar.

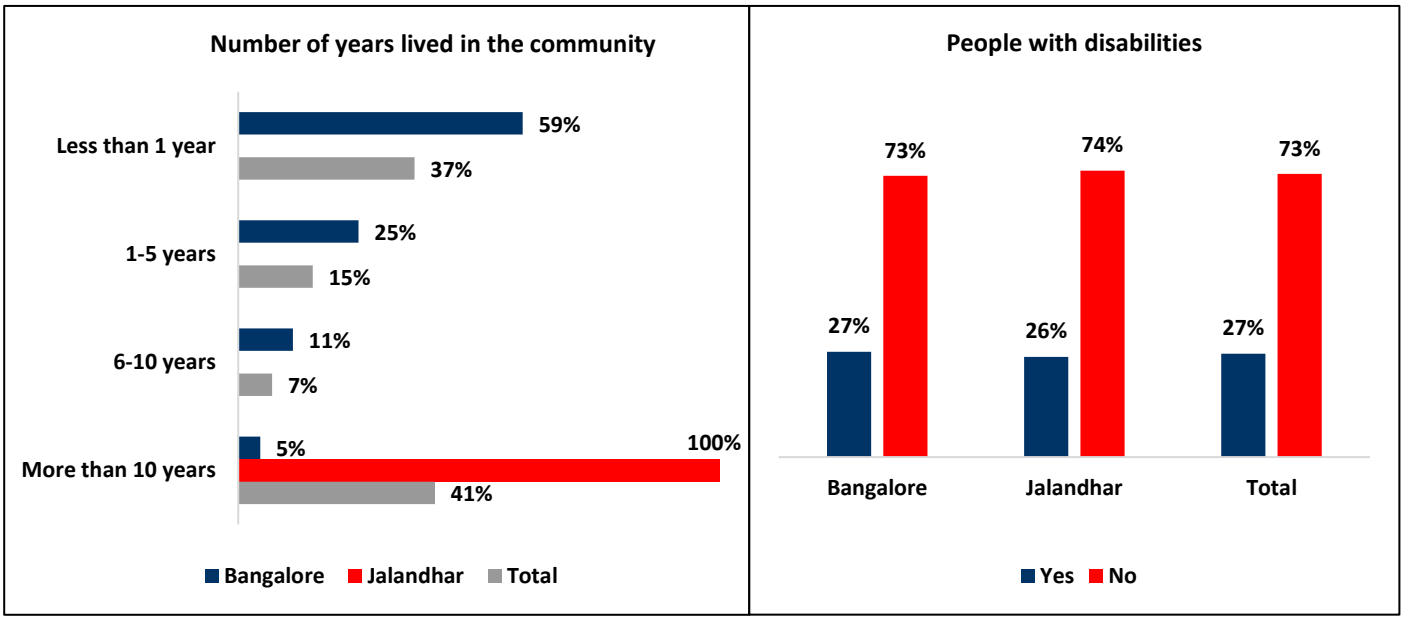


Figure 2: Socio-Demographic Profile

Notably, 27% of all respondents reported having a household member with a disability, a proportion that is mirrored in Bangalore (27%) and closely followed in Jalandhar (26%). This concentration of households with disabilities in these two cities underscores the critical need for accessible and continuous healthcare support. **This indicates that both Bangalore and Jalandhar host a considerate share of households requiring continuous, mobility-sensitive healthcare support, reinforcing the importance of doorstep services for these communities.**

Awareness remained uniform across the two districts, with **100% of respondents reporting familiarity with the MMV services operating in their locality.** Every respondent also reported

awareness about Smile on Wheels as a collaborative initiative of KMPL and Smile Foundation, **demonstrating strong visibility and consistent communication across locations.** This universal awareness positions the programme focus on service quality and health outcomes rather than basic outreach or information gaps.

The income distribution across the two districts reflects the programme's reach among financially constrained households. These differences demonstrate how household spending structures vary according to livelihood patterns, yet both the districts include communities for whom healthcare costs can easily become prohibitive.

- For **Bangalore**, with most households (43%) **earning INR 5,001–INR 10,000**, **income levels remain low** and heavily **dependent on daily-wage work**. The findings also highlights a significant proportion of **households (64%)** having **monthly expenses of less than INR 2,000**, indicating a tight budget with limited financial flexibility. This leaves households with very little flexibility to allocate money toward medical needs, making free MMV services particularly critical.
- In Jalandhar, despite a relatively higher proportion of households (44%) **earning INR 30,001–40,000**, financial vulnerability persists due to high and largely non-discretionary monthly expenditures, with **63%** of households incurring expenses in the **INR 20,000–30,000 range**, and the seasonal nature of agricultural incomes. This disconnect between income adequacy and income reliability significantly constrains households' capacity to manage unexpected healthcare costs, particularly during periods of income fluctuation.

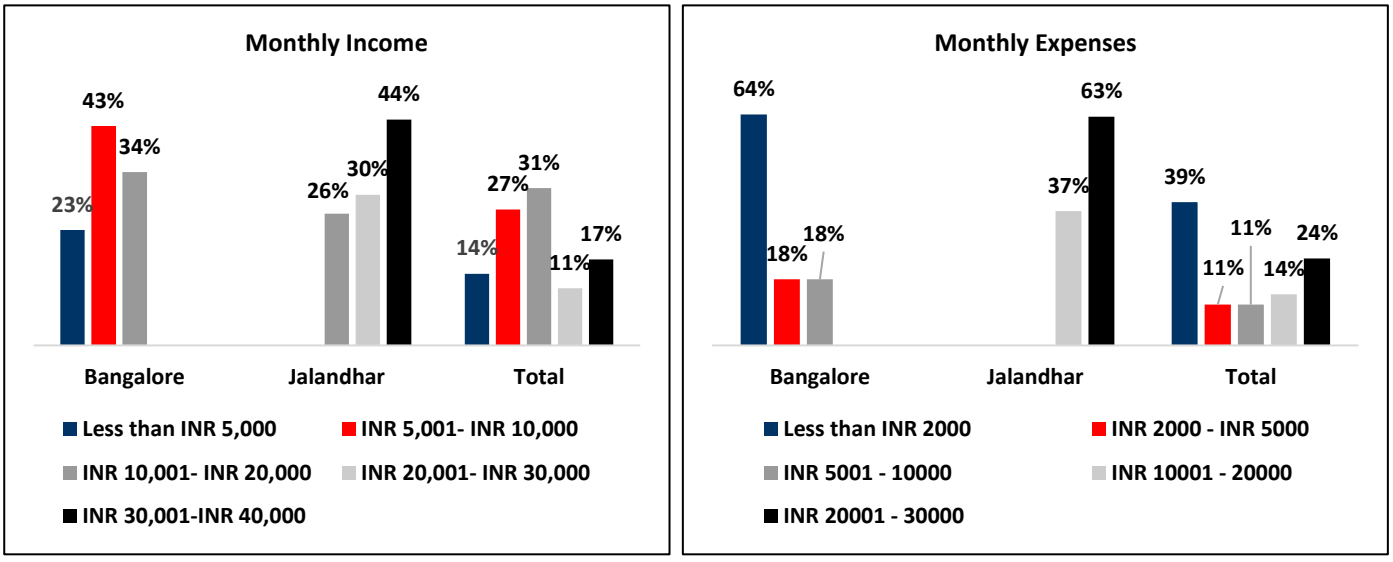


Figure 3: Economic Profile of the respondents

Disease profile and pre-MMV health challenges

The reported disease patterns show that both the districts face a high burden of both infectious and chronic illnesses, though the intensity varies across locations.

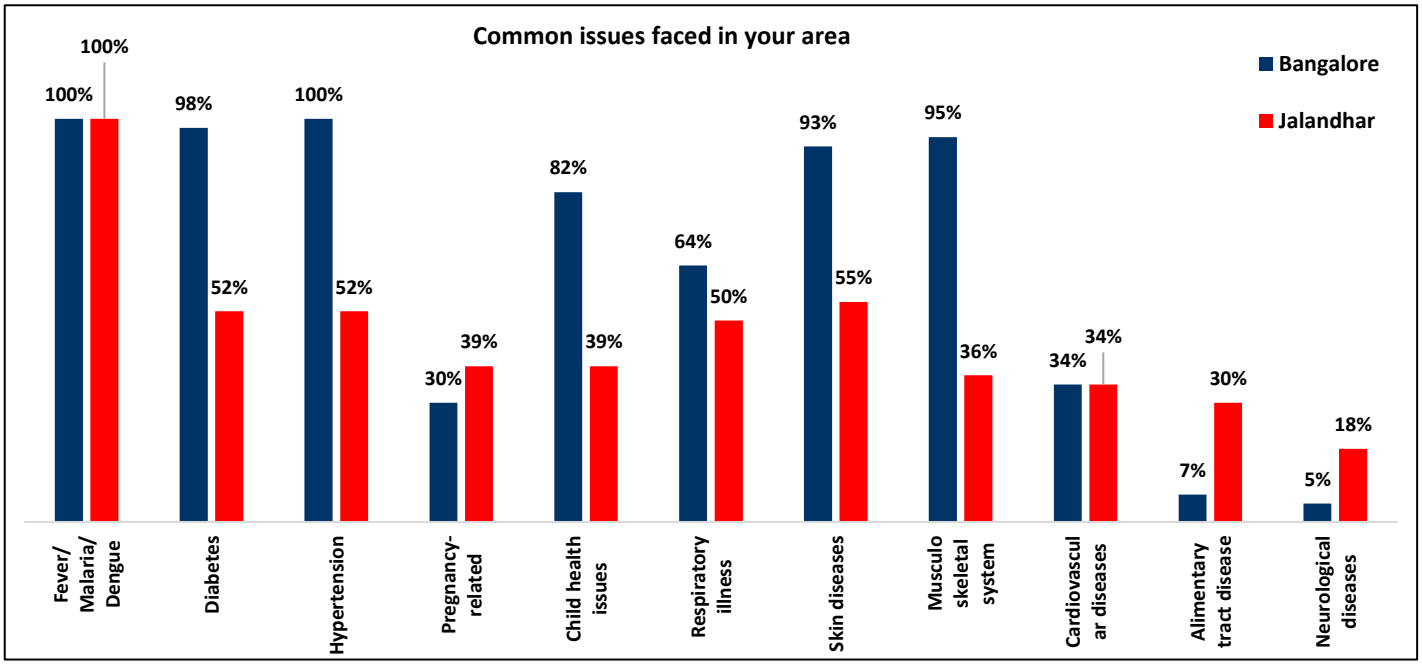


Figure 4: Common issues faced in the area

The disease landscape across the two districts reveals high burden of both acute and chronic illnesses, though the intensity and patterns varied distinctly by location. **Acute fevers, malaria and dengue were universally reported (100% across both the districts),** indicating persistent exposure to vector-borne infections and seasonal surges that affect every community served by the MMV.

- **Bangalore** recorded a very **high prevalence of musculoskeletal pain (95%)**, This aligns with the district's large daily-wage workforce engaged in physically demanding labor. **Child-health concerns** were also strong, with **82%** reporting issues among children, pointing to gaps in early and preventive care. **Hypertension (100%), Diabetes (98%)** and **skin diseases (93%)** were also reported, making it one of the district's most dominant concerns.
- **Jalandhar** exhibited a relatively moderate disease burden compared to Bangalore though several conditions remained significant. **Skin diseases (55%), Diabetes (52%) and hypertension (52%)** were the most prominent chronic illnesses, shaping the district's long-term care needs. Respiratory illnesses were also high at 50%, followed by substantial levels of musculoskeletal issues (36%). **While these illnesses were widely reported, their prevalence remained lower than in the other two locations, positioning Jalandhar as the comparatively less affected district in terms of overall disease intensity.**

Healthcare Challenges before MMV services:

The presence of chronic illnesses within households varied notably across districts, highlighting distinct levels of underlying health vulnerability. **Jalandhar reported the highest household burden, with 48% of respondents having at least one family member** living with a chronic condition. This was followed by **Bangalore at 16%**, indicating a smaller but still important share of families coping with long-term illnesses.

Overall, 28% of all respondents across the two locations indicated that at least one family member was managing a chronic condition—underscoring the need for regular medical monitoring and affordable access to follow-up care.

Across all districts, hypertension and diabetes emerged as the dominant chronic conditions, reflecting the rising burden of lifestyle diseases in underserved communities.

- **Hypertension** was highest in **Jalandhar (69%)**, followed **by Bangalore (57%)**.
- **Diabetes** followed a similar pattern, reported at **43% in Bangalore**, and **23% in Jalandhar**.
- **Asthma/COPD,** though less common, was present particularly in **Jalandhar (8%).**

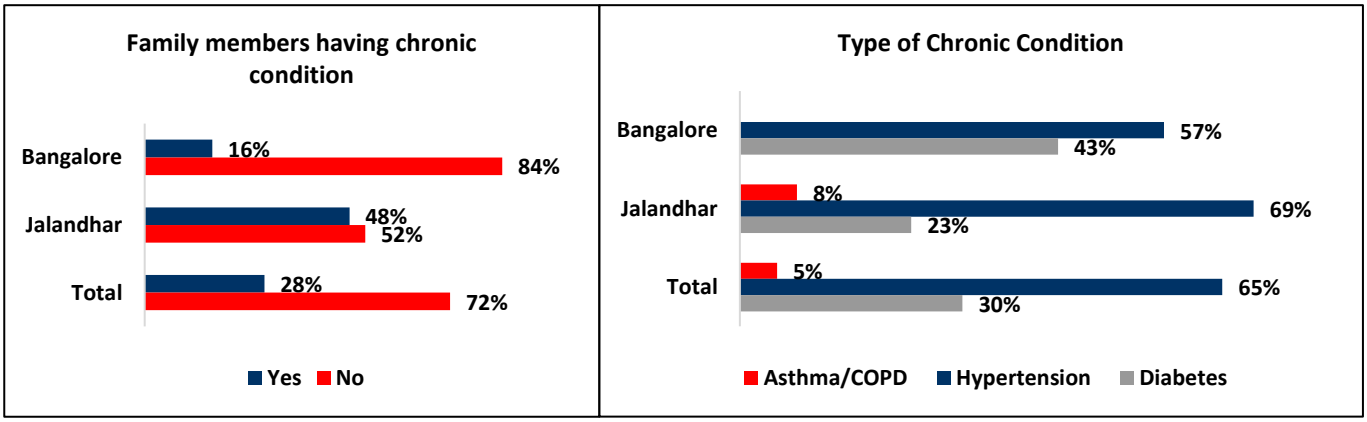


Figure 5: Current scenario of chronic conditions in community

Reliance on government healthcare services was consistently strong across all locations due to their affordability and accessibility. **In Bangalore, complete reliance on government hospitals (100%) reflects constrained healthcare choice, whereas in Jalandhar, partial dependence on private clinics (26%) points to higher out-of-pocket exposure, reinforcing financial vulnerability despite moderate income levels.**

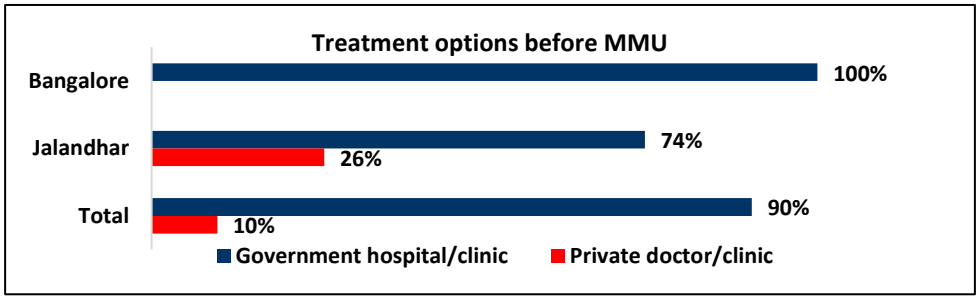


Figure 6: Healthcare options prior to MMV

Frequency of Healthcare Visits

Before the introduction of Mobile Medical Units (MMVs), healthcare utilisation patterns showed clear differences across locations. In **Bangalore,** beneficiaries reported relatively higher engagement with healthcare services, with **41% visiting healthcare facilities 7–10 times and 11% reporting more than 10 visits**, indicating sustained healthcare needs and repeated care-seeking. In contrast, healthcare utilisation in **Jalandhar remained limited**, with **81% of beneficiaries reporting only 1–3 visits**, suggesting constrained access to facility-based care.

Reasons for Not Visiting Healthcare Facilities

Across both locations, multiple financial and structural barriers influenced healthcare access prior to MMV deployment.

In Bangalore, the **most frequently** cited barriers were the **high cost of services and medicines (95%)** and **long distances to healthcare facilities (80%)**, pointing to affordability and geographic accessibility as key constraints. Additional factors such as unavailability of doctors (23%) and long waiting times (14%) further affected timely access to care.

In **Jalandhar,** access barriers were more widespread. **100% beneficiaries reported the cost of services and medicines as a limiting factor, while long distances to clinics (100%) and extended waiting times (37%) were also significant deterrents.** A substantial proportion of respondents also indicated that their **illness was perceived as minor (100%)**, **suggesting a notable lack of awareness and limited formal education regarding the severity of the illness**

The findings demonstrate that affordability and physical accessibility were the primary constraints to healthcare access in both Bangalore and Jalandhar prior to MMV implementation. While Bangalore beneficiaries accessed healthcare services more frequently, persistent cost and distance barriers limited continuity and convenience of care. In Jalandhar, lower visit frequency combined with widespread cost and distance constraints points to significant unmet healthcare needs.

These patterns underscore the importance of MMVs in bringing healthcare closer to communities, reducing out-of-pocket expenditure, and enabling timely utilisation of essential health services, particularly for populations facing financial, geographic, and infrastructural barriers.

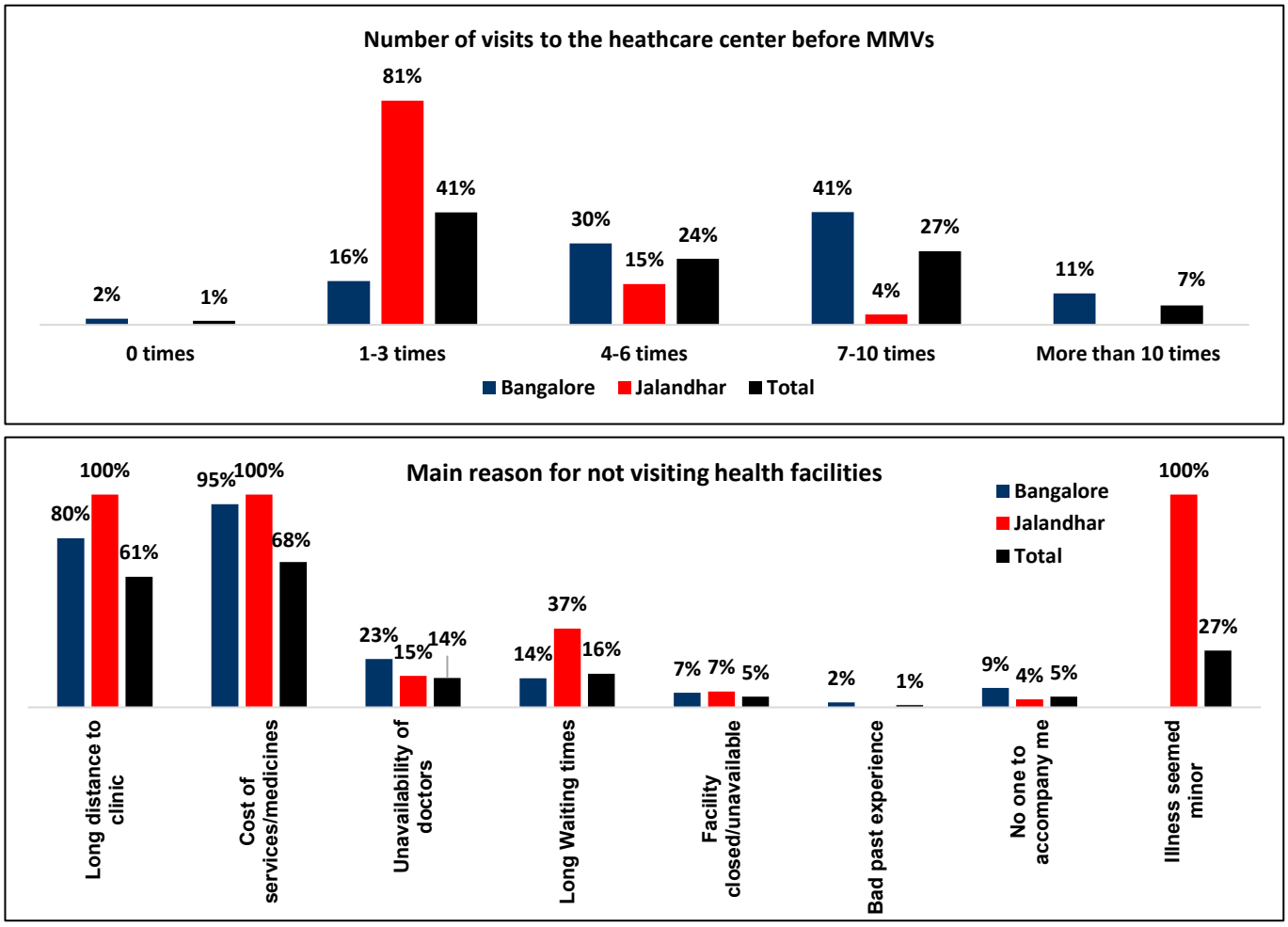


Figure 7: Details of healthcare visits prior to MMVs

Awareness, access and utilisation of MMV services

100% of the respondents reported that the MMVs had **addressed their long-standing challenges, making healthcare truly accessible**.

The assessment of beneficiary experiences across Bangalore and Jalandhar reveals a consistently strong performance of the MMV services, with high levels of satisfaction, clear communication from providers, and reliable access to essential diagnostics and medicines. While several service elements demonstrated near-universal agreement—reflecting the uniform quality of care delivered by the MMVs—other aspects showed meaningful variation across locations, shaped by differences in community outreach, accessibility, and follow-up mechanisms.

Awareness & Communication

Overall awareness of MMV services across the study locations was strong, supported by a mix of community-based and programme-led communication mechanisms. The findings indicate that outreach efforts have been effective in ensuring that communities are both familiar with MMV services and informed about their presence in local areas, enabling timely utilisation.

Awareness of MMV operations was high across both locations, supported by structured community-level communication mechanisms.

In **Bangalore,** awareness of MMV services was almost entirely facilitated **through community mobilisers (98%)**, indicating strong on-ground engagement and effective dissemination of information on service availability. Other channels such as family members, friends, and local health workers played a minimal role.

In Jalandhar, awareness was established through a combination of outreach methods. **Public announcements emerged as the primary source (52%), supported by home visits by the MMV team (26%) and local health workers (21%), reflecting a more diversified communication approach.**

Information on MMV visit timings and operational intervals was communicated consistently in both locations. In **Bangalore, 75%** of beneficiaries **reported receiving schedule information through community announcements at regular intervals**, supporting predictability and planned utilisation of services. **In Jalandhar, all beneficiaries (100%) received schedule information through community announcements, indicating uniform communication of visit schedules.**

Overall, high awareness of MMV operations combined with regular dissemination of visit schedules contributed to improved predictability of services and supported timely utilisation across both programme locations.

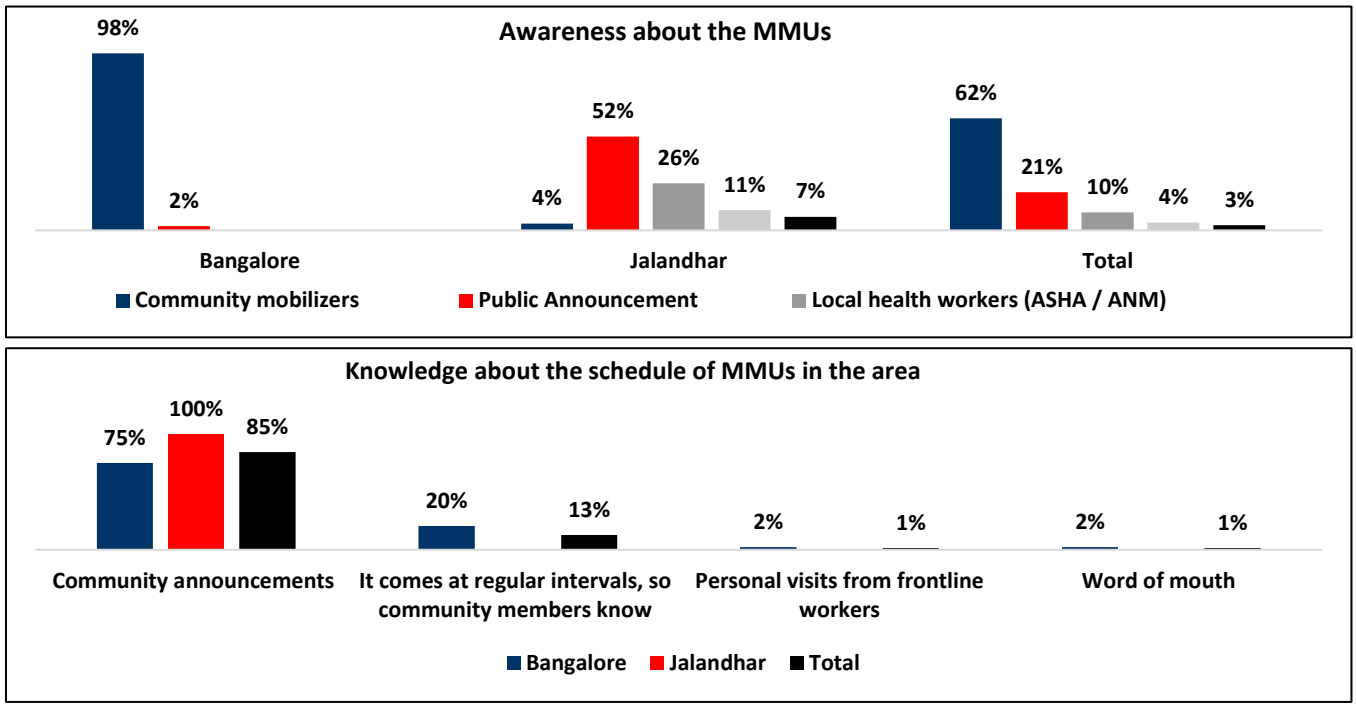


Figure 8: Awareness about the MMV and its schedule

Drivers of Satisfaction

Care & Communication

- Printed Prescription – 100%
- Clear explanations of medications and dosage – 100%

Affordability & Access

- Free services such as medication, consultations and tests -100%
- Convenient location -100%

Service Experience

- Doctors' availability -100%
- Satisfaction with the frequency of visits of the MMVs – 100%

Visit Frequency & Satisfaction

Regularity and continuity of MMV visits are critical for building trust, ensuring follow-up care, and integrating mobile services into routine health-seeking behavior. The findings indicate strong consistency in MMV presence across locations, though the intensity and pattern of service utilization vary by district, reflecting contextual differences in outreach strength and demand.

Consistency of MMV visits remains high across locations. **100% respondents** across **Bangalore and Jalandhar reported bi-weekly MMV visits.** Patterns of service utilization over the last 12 months show clear district variation. In **Jalandhar**, service engagement was concentrated at moderate frequency levels, **with 85% of respondents** availing **MMV services 3–5 times in the last year**, suggesting stable but limited repeat utilization. **In Bangalore**, utilisation was more evenly spread across higher frequency categories**, with 45% of beneficiaries reporting 6–10 visits and 39% reporting 3–5 visits** over the past year, **indicating sustained engagement with MMV services.**

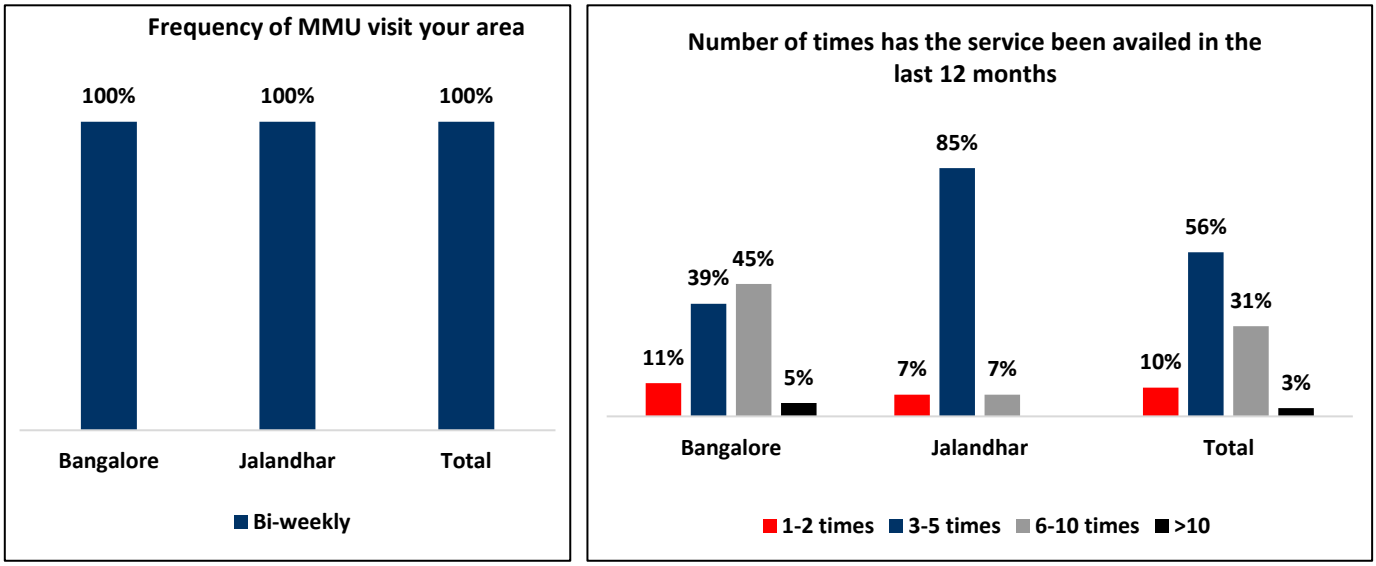


Figure 9: Frequency of visits of the MMUs in the area and number of times service has been availed

Service Awareness & Utilization

Service awareness and utilization patterns indicate that MMVs are well established as a trusted source of primary healthcare across locations. While awareness is strongest for core clinical services, utilization data shows that communities are engaging with a wide range of services based on local health needs and repeated interaction with the MMVs.

Awareness is highest for consultation-based services. **Overall awareness of general consultation services stands at 74%, with particularly high awareness in Bangalore (84%), indicating that MMVs are widely recognized as a point of first contact for basic healthcare.** Awareness of medicine distribution remains comparatively lower at 35% overall, suggesting that medicines are largely perceived as part of consultations rather than a standalone service.

Service readiness supports utilization. Availability of core MMV staff during visits was consistently reported to be high across districts. **Doctors, ANMs/ASHA workers, and community mobilisers were reported as available by 100% of respondents overall, reinforcing confidence in service delivery and enabling repeated utilization of services.**

General healthcare services are universally utilized. **General check-ups and treatment for common illnesses were utilized by 100% of respondents across all locations**, highlighting the MMVs' central role in addressing routine healthcare needs. Preventive and screening services show strong uptake. **Non-communicable disease screening was utilized by 79% overall**, with **Bangalore reporting maximum utilization (80%),** indicating effective integration of preventive care into routine service delivery.

Utilization of specialized services varies by local need. **Maternal and child health services were utilized by 63% overall, driven largely by Bangalore (93%)**, while **adolescent health services show 23% utilization.** These variations reflect contextual health priorities rather than gaps in availability.

Health education and referral services complement care continuity. **Health education services were accessed by 65% of respondents**, and referrals to higher facilities were reported by 63%, with Bangalore (89%) leading in referral uptake—demonstrating effective linkage with the broader health system.

Emergency and minor injury care plays a secondary role. Emergency and minor injury services were utilized by 17% overall, reinforcing that MMVs are primarily accessed for routine, preventive, and follow-up care rather than acute emergencies.

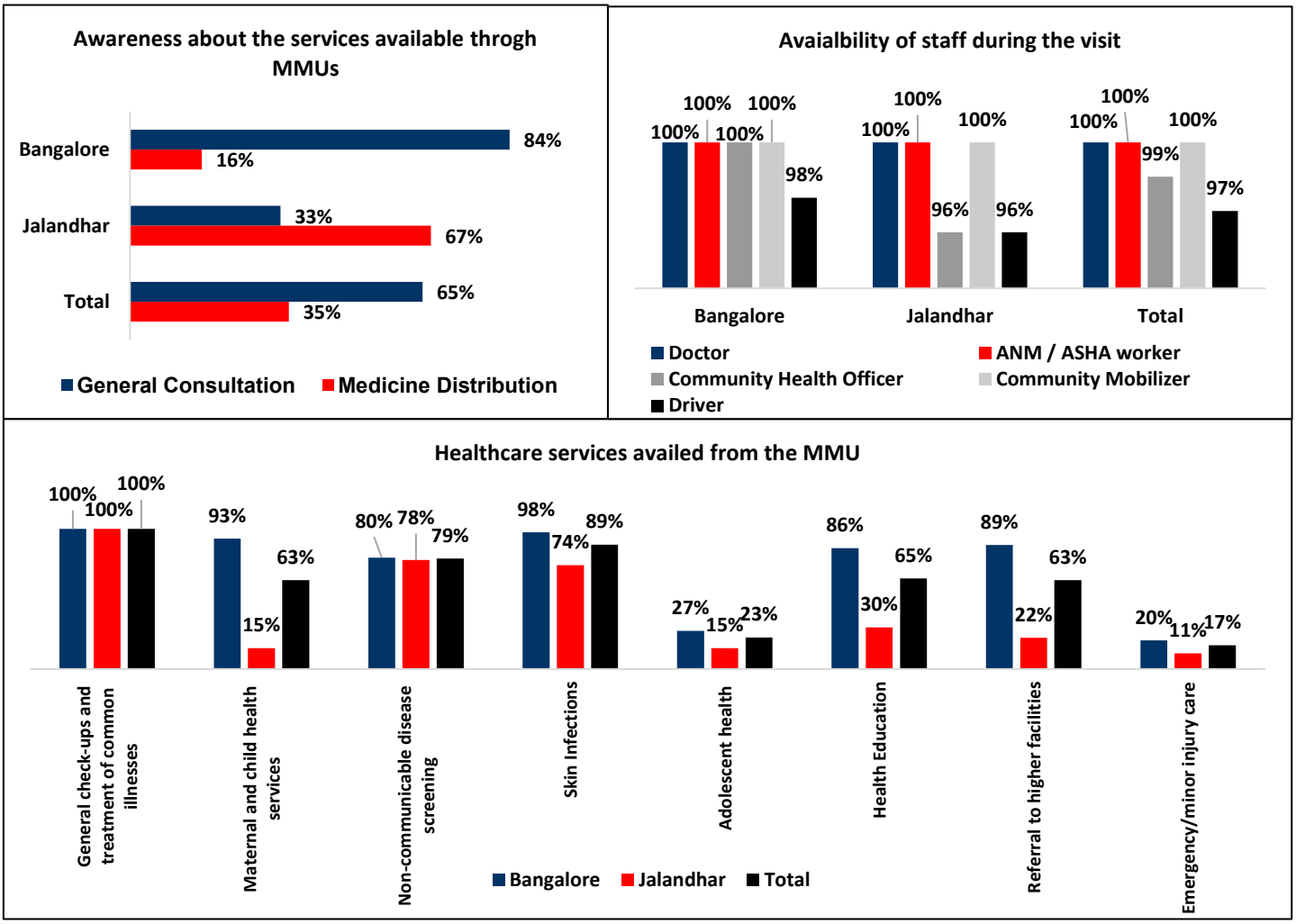


Figure 10: Service awareness and utilization

100% of patients across the two locations expressed complete satisfaction with their care, citing excellent doctor-patient communication, accurate diagnoses, timely referrals, thorough attention to medical history, effective treatment, and compassionate care

Waiting Time & Accessibility

Ease of access and minimal waiting time remain central to the effectiveness of MMV service delivery. Findings indicate that MMVs are largely well-positioned within communities, enabling timely access to care while also maintaining manageable patient flow during visits.

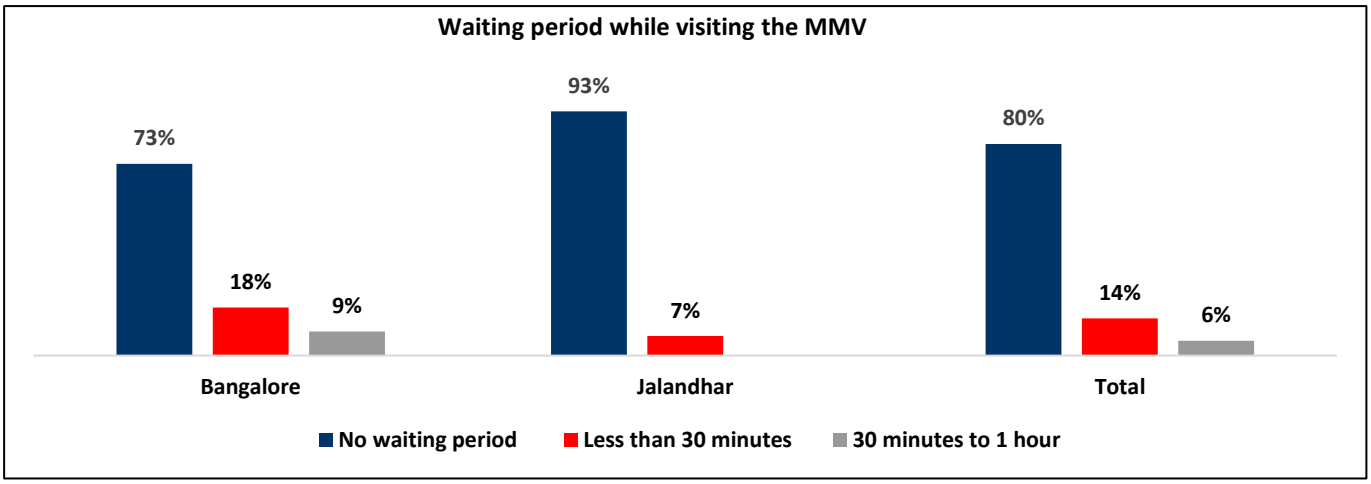


Figure 11: Waiting time for availing the MMV services

MMU services demonstrated high geographical accessibility across both programme locations. In **Jalandhar, 100% of beneficiaries reached the MMV within 30 minutes**, indicating optimal placement of services within communities. **In Bangalore, 82% of beneficiaries reached the MMV in under 30 minutes**, reflecting strong accessibility despite the urban context. Overall, **89% of beneficiaries accessed MMV services within 30 minutes, underscoring effective service positioning.**

Waiting times during MMV visits remained low across locations. In Bangalore, 73% of beneficiaries reported no waiting time, with most others experiencing only short waits. In Jalandhar, 93% of beneficiaries reported no waiting time, reflecting smooth patient flow and efficient service delivery. Overall, **94% of beneficiaries were able to access the MMV services under 30 minutes.**

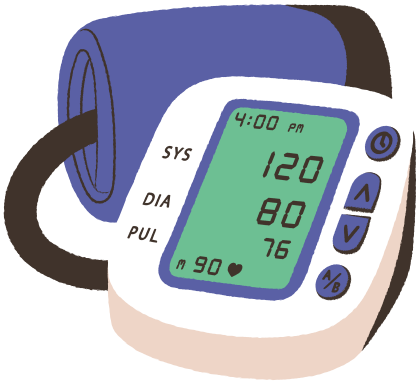
Together, high accessibility and minimal waiting times highlight the efficiency of MMV operations in reducing travel- and time-related barriers to healthcare. These factors support timely service utilisation and contribute positively to beneficiary experience and continuity of care.

Diagnostics and Medicines Utilization

The availability of diagnostics and medicines at the point of care is central to the effectiveness of the MMV model. Findings indicate that MMVs consistently deliver core clinical checks, essential diagnostics, and medicines during visits, enabling early detection, immediate treatment initiation, and reduced dependence on external facilities for routine care.

Medicines are largely provided during MMV visits. Overall, **97% of respondents reported that prescribed medicines are provided directly at the MMV with 100% reported receiving clear directions about the dosage, frequency and duration of the medicines received.**

Core vital parameters were consistently assessed during MMV visits. **Blood pressure, pulse, and temperature were recorded for nearly all beneficiaries, with coverage reaching 100% in Bangalore and remaining above 95% overall**, indicating regular monitoring of basic health indicators. **Height, weight, and BMI measurements were conducted for a majority of beneficiaries**, enabling assessment of nutritional and general health status. Respiratory rate assessment was undertaken for 68% of beneficiaries, suggesting focused measurement in cases where clinical evaluation indicated potential respiratory or systemic concerns. **SpO_2 measurement was reported for a limited proportion** of beneficiaries, highlighting scope to strengthen its integration into routine assessments.

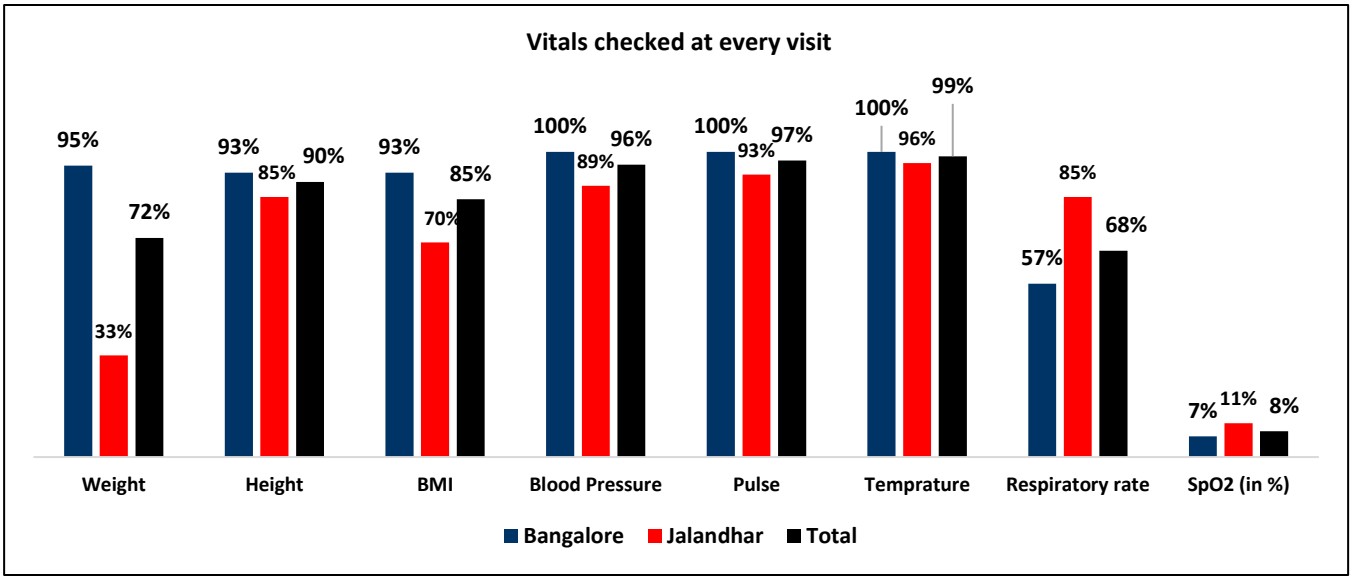


Diagnostic Tests Availed

Diagnostic service utilisation reflected both routine screening priorities and condition-specific assessment. **Hemoglobin testing was conducted for all beneficiaries, supporting systematic screening for anemia, while blood sugar testing covered more than 95% of beneficiaries**, facilitating identification of glycemic risks.

Testing for malaria, dengue, and typhoid was reported among a smaller proportion of beneficiaries, consistent with symptom-based diagnostic practices and local disease prevalence. **Pregnancy testing showed substantial uptake, particularly in Bangalore (86%),** indicating the relevance of MMV services for maternal health screening within community settings.

100% of respondents reported that they did not have to pay for any services including tests, consultations, and medicines



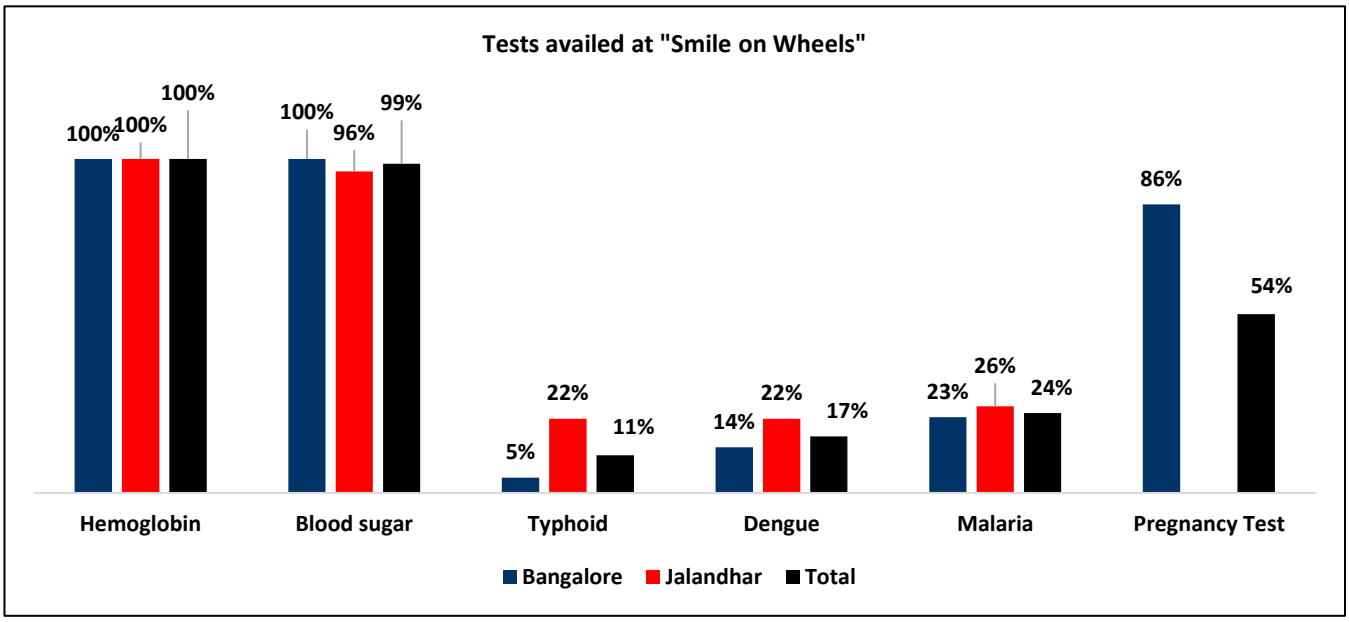


Figure 12: Diagnostics service utilization

Follow up care and Referral Services

Effective referral linkages and follow-up mechanisms are critical for ensuring continuity of care beyond primary services. The findings indicate that MMVs are well integrated with the public health system, with strong adherence to referral advice and active follow-up for chronic conditions. Variations across locations reflect differences in service needs, case complexity, and the extent to which care can be managed at the MMV level.

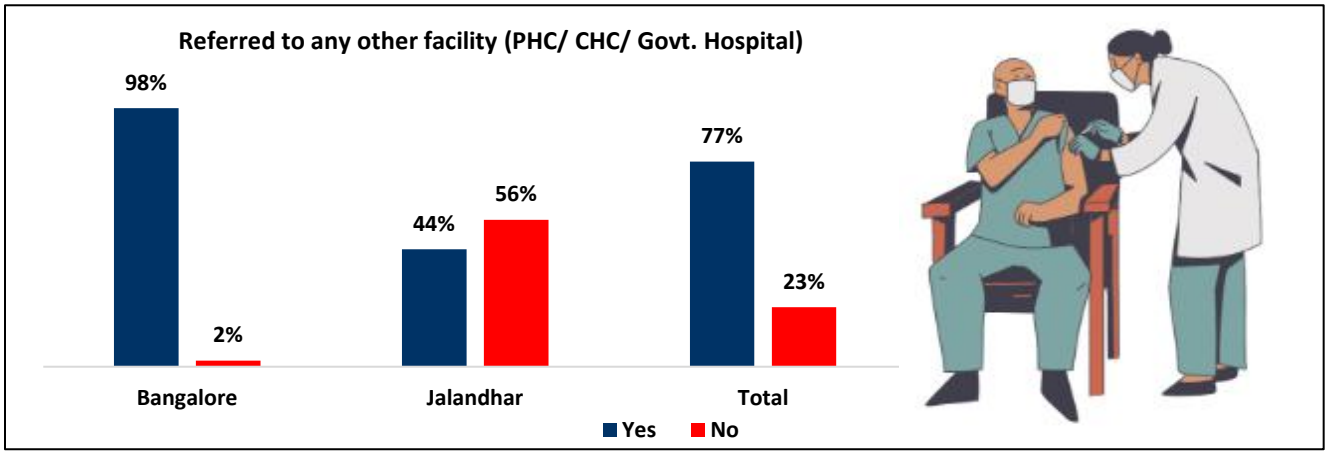


Figure 13: Referral services

Referrals to higher public facilities are functional, with scope for strengthening in specific contexts. Overall, **77% of respondents reported being referred to another facility (PHC/CHC/Government Hospital).** Referrals were **highest in Bangalore (98%)**, reflecting well-established linkages with public health facilities. **In Jalandhar, referrals were reported by 44% of respondents**, suggesting that a substantial proportion of health needs are being addressed directly through MMV services. At the same time, this indicates an opportunity to further strengthen referral pathways for cases requiring specialized or advanced care. Adherence to referral advice is uniformly strong.

Among those who were referred, **100% of respondents across all locations reported following the advice provided.** This highlights high levels of trust in MMV staff and reinforces the effectiveness of referrals initiated through the programme.

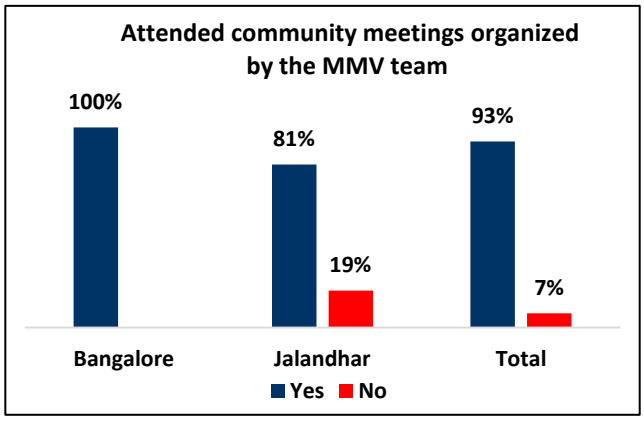
Follow-up for chronic conditions shows strong performance with targeted improvement areas. Overall, **75% of respondents reported that MMV staff (CHOs/ANMs) follow up for chronic diseases.** Follow-up was maximum in Bangalore (100%), indicating robust continuity-of-care mechanisms. **In Jalandhar, 33%**

reported having a chronic disease and further highlighted that all of them received follow-ups, while 67% reported that they did not have a chronic disease.

Information, education and communication (IEC) activities

Information, Education and Communication (IEC) activities formed a core component of the MMV intervention, aimed at improving health awareness, strengthening preventive practices, and encouraging informed health-related behaviour among communities. Through structured community meetings, the MMV teams delivered health messages in a manner that was accessible, relevant, and responsive to local needs.

Participation in IEC meetings was strong across the two districts, reflecting high community engagement with MMV-led outreach efforts. **Bangalore recorded full participation, with 100% of respondents reporting attendance** at IEC meetings organized by the MMV team. **In Jalandhar, 81% of respondents reported attending at least one IEC meeting,** indicating substantial outreach, though with relatively lower penetration compared to Bangalore.



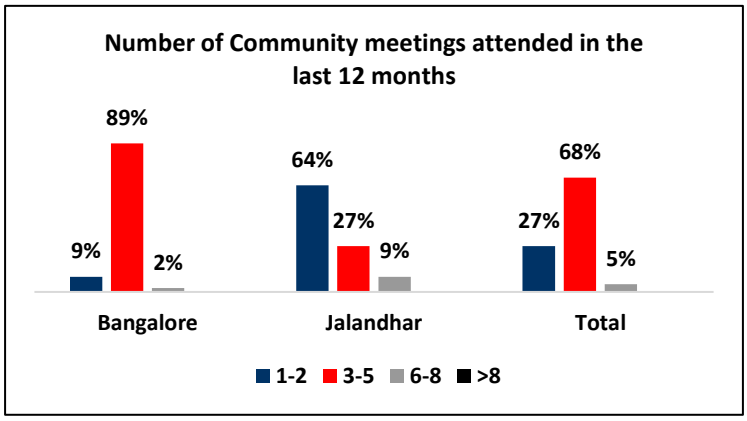


Figure 14: IEC activities awareness and participation

The frequency of participation highlights the extent to which IEC activities took place across the locations:

- **In Bangalore** engagement was particularly **strong,** with **89% attending 3-5 meetings**, indicating consistent reinforcement of key health messages.
- In contrast, **Jalandhar reported low repeated participation, with 64% of respondents attending 1-2 meetings**, suggesting scope for strengthening regular IEC engagement in this district.

The IEC meetings addressed a wide spectrum of health topics, with clear emphasis on preventive and promotive care across all locations**. Disease prevention and nutrition & hygiene** emerged as the **most**

consistently addressed themes, with 98% of respondents overall reporting exposure to these topics, underscoring their central role in community health education.

Maternal and child health was another major focus area, among **92% of respondents**, reflecting the program's strong orientation towards life-cycle health needs. Similarly **chronic disease management featured prominently in IEC discussions, with 94% overall coverage**, aligning with the growing burden of non-communicable diseases in the communities served.

Other important health themes were also addressed. **Family planning (85%) and mental health (82%) was covered among majority of respondents**, indicating increasing attention to psychosocial wellbeing. **Vaccination importance (71%) and emergency care awareness (52%) with highest coverage in Jalandhar (86%)**, reflecting a broad and inclusive approach to community health education.

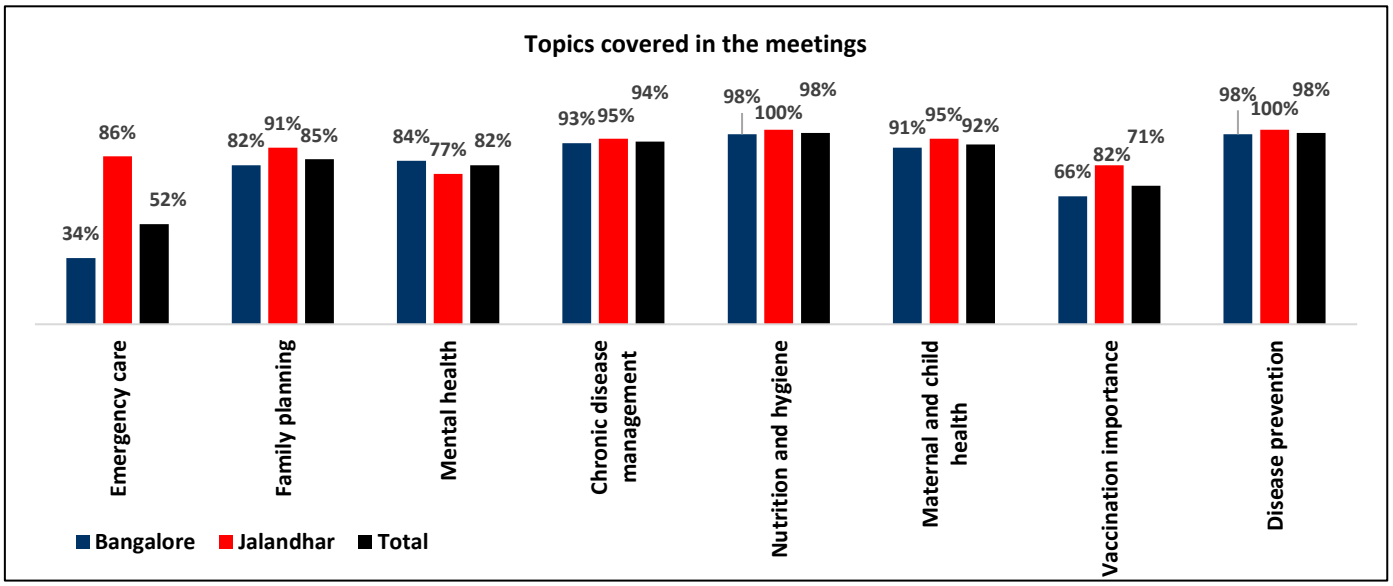


Figure 15: Topics covered in the IEC meetings

Highlights:

Usefulness of sessions: **100%** respondents reported that the IEC sessions were useful indicating strong relevance of the topics covered.

Quality of Information: 86% of the respondents across the locations expressed their satisfaction with the quality of information provided.

Language accessibility: IEC meetings **were conducted in the local language** for all respondents, ensuring effective comprehension and inclusive participation.

Behavioural impact: 100% of the respondents stated that the IEC sessions helped bring about positive changes in the health-related behaviour.

Change in health behaviour and preventive practices

Through this program, KMPL has been able to extend essential healthcare services to nearly 45,000 individuals, demonstrating its wide outreach and contribution towards Across all locations, the MMV intervention demonstrated universal effectiveness in strengthening health awareness. **100% of respondents across Bangalore and Jalandhar reported that MMV services improved their knowledge on illness prevention and led to lifestyle changes based on health education received.**

This uniform response highlights the consistency and quality of IEC and interpersonal counselling delivered through MMVs, irrespective of the geography. While awareness levels were uniform, the type of behavioural changes adopted varied, indicating contextual differences in health priorities.

100% of respondents reported that they made changes to their lifestyle based on the health education received.

Preventive Health Practices Adopted

Adoption of basic preventive practices was notably high following interaction with MMVs.

- **Handwashing with soap was reported by 65% of respondents overall**, with near-universal adherence in Bangalore (98%) indicating effective hygiene messaging.
- **Use of toilets stood at 55% overall, with higher adoption in Bangalore (89%),** while no uptake in Jalandhar suggests persistent access or infrastructure constraints.
- **Safe drinking water practices were followed by 75% of respondents**, driven by **100% adherence in Bangalore**, reflecting strong preventive behavior related to water safety.
- **Balanced diet practices were reported by 75% overall, with Bangalore (98%) leading, while lower adoption in Jalandhar (37%)** points to uneven nutritional behavior change.
- **Wearing footwear** was practiced by **61% of respondents, with Bangalore reporting the highest adherence (95%),** suggesting stronger preventive norms in urban settings.

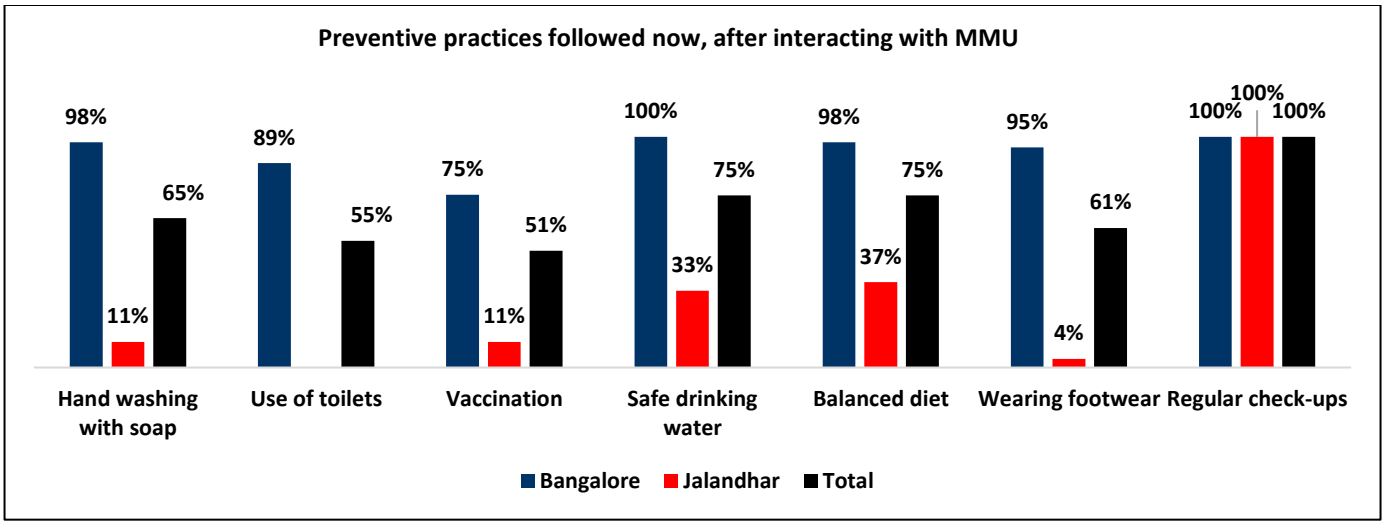


Figure 16: Adoption of preventive practices

Behavioral and Lifestyle Changes

Lifestyle-related changes, which typically require sustained effort, showed more selective adoption. **Regular health check-ups emerged as the most common behavioral change, reported by 73% of respondents overall**, with Bangalore recording the highest uptake (84%), indicating a shift towards preventive health-seeking behavior.

Improved health-related behaviors were reported, with 11% of participants adopting an improved diet (notably in Jalandhar, at 26%) reflecting the effectiveness of dietary counselling and sanitation-focused messaging.

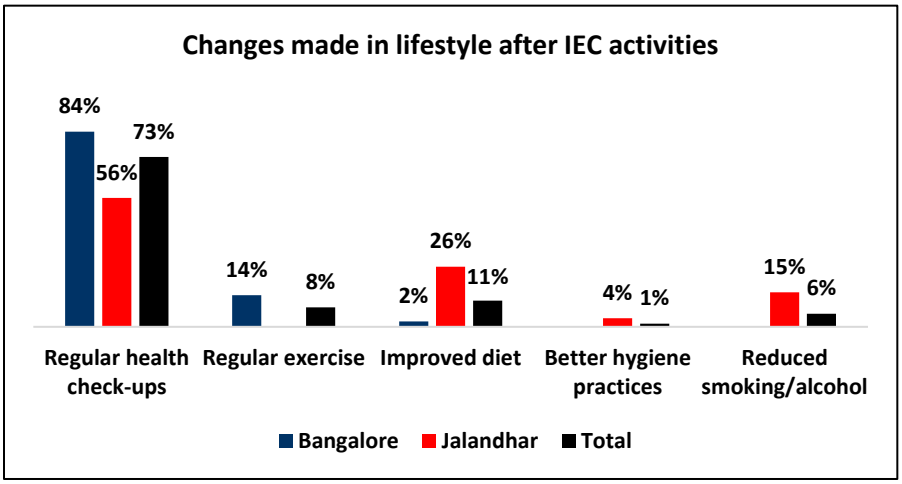


Figure 17: Adoption of lifestyle changes

Regular exercise (8%) and reduction in smoking/alcohol consumption (6%) were reported less frequently, suggesting that deeper lifestyle modifications may require longer-term engagement. Vaccination adherence remained comparatively lower at 51% overall, although Bangalore reported higher uptake (75%), highlighting both areas of success and the need for strengthened immunization outreach in other locations.

Preventive Health Practices among Women, Adolescent Girls, and Children

MMV services have contributed to improved preventive health practices among women, adolescent girls, and children, though the extent of engagement varied across life stages, highlighting areas for further strengthening. **Among women, 59% of households reported support to pregnant or lactating women in the past year, indicating that while maternal health services are being delivered effectively where reached, there remains scope to expand outreach and identification of maternal health needs, particularly to ensure broader coverage.**

Preventive health screening among adolescent girls showed substantial uptake, particularly for anemia detection. **Haemoglobin testing was reported by 52% of households overall**, with marked location-level variation. **Jalandhar** recorded the **highest coverage (56%)**, while **Bangalore reported lower uptake (43%)**, suggesting differences in outreach focus and prioritization. **Notably, 100% of adolescent girls tested were reported to have normal Hb levels, highlighting the role of MMV-led screening in early detection and preventive monitoring.**

Preventive care for children also demonstrated strong engagement. **Newborn and infant check-ups were reported by 93% of households, with Bangalore showing universal coverage (100%) followed by Jalandhar (82%).** In addition, **86% of households reported that children under five were referred to or supported for immunization**, with Bangalore again recording the highest coverage (94%), followed by Jalandhar (73%). These findings indicate that MMVs have been effective in strengthening early-life preventive care and service linkage, particularly in locations with stronger outreach integration.

(The reference graphs for Health practices among Women, Adolescent girls and children has been attached in the Annexure 1 below)

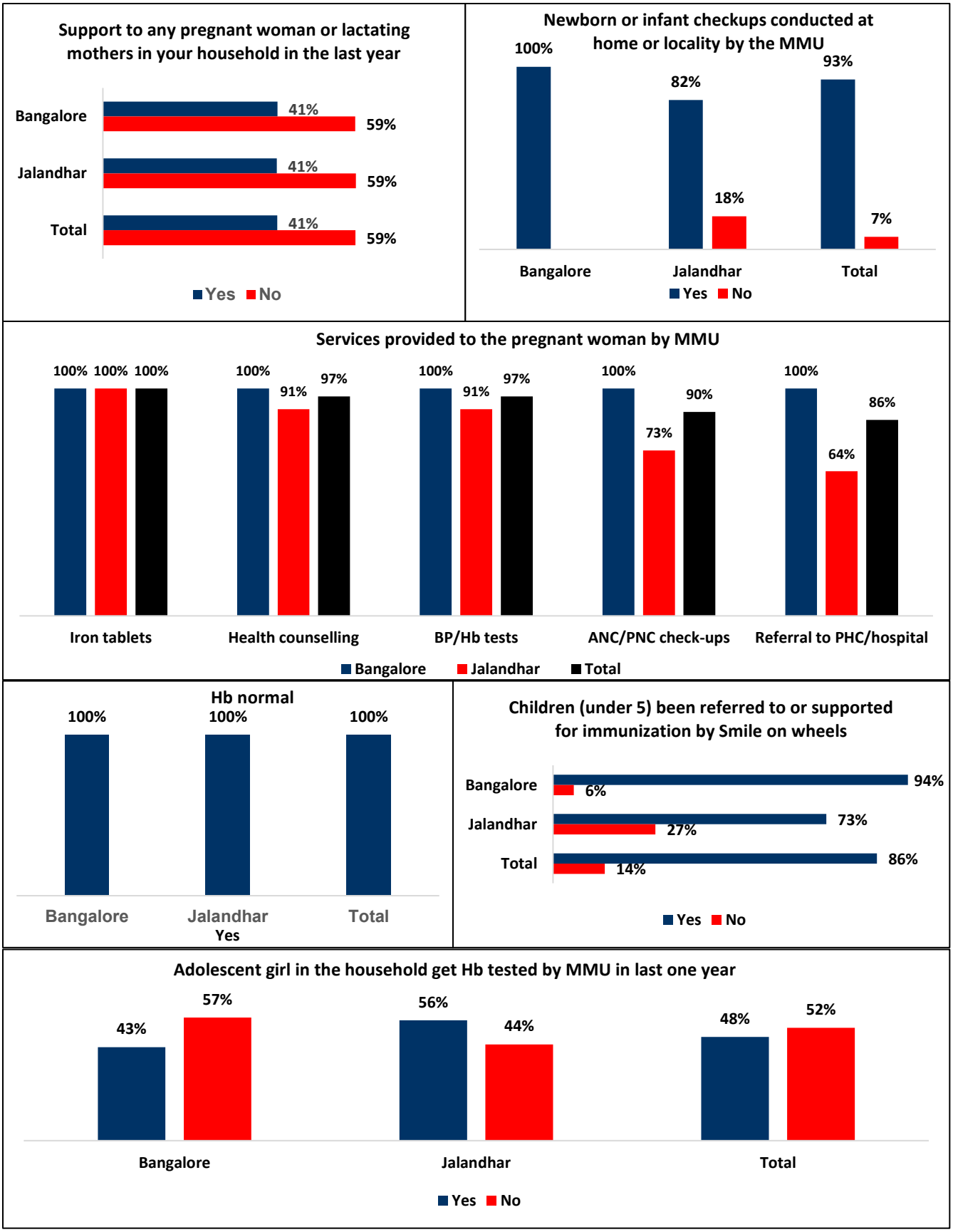


Figure 18: Annexure 1

Perceptions of equity for the MMVs

100% of respondents across Bangalore and Jalandhar reported that everyone in the community has equal access to MMV services, reinforcing the programme's strong positioning as an inclusive and community-oriented healthcare delivery model.

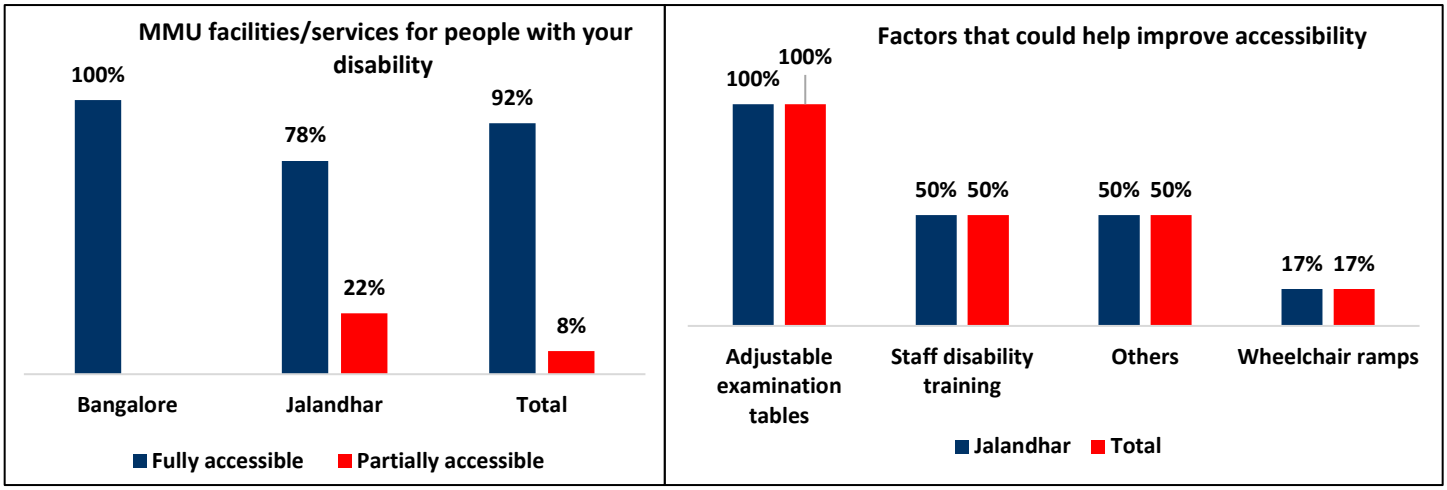


Figure 19: Accessibility of the MMV services for PWD

This uniform perception indicates that MMUs have been effective in minimising location- and income-based disparities in access to primary healthcare.

Perceptions around accessibility for people with disabilities were also largely positive. Overall, **92% of respondents indicated that MMU facilities and services are fully accessible for people with disabilities,** with Bangalore reporting universal accessibility (100%). **In Jalandhar, while a substantial majority (78%) perceived the services as fully accessible, 22% reported partial accessibility.** Notably, this group also identified specific and actionable factors that could further enhance accessibility, including **disability-friendly infrastructure (such as ramps and adjustable examination tables), additional staff training on disability inclusion, and improved communication and outreach mechanisms.** The relatively higher articulation of improvement needs in Jalandhar suggests greater sensitivity to access barriers, reflecting a community that is actively engaging with service design and inclusion.

Home-based support further reinforces equity in service provision. ***92% of respondents reported that home visits are provided to people with disabilities or in emergency situations***, ensuring continuity of care for those with mobility or access constraints**. Among those receiving home-based services, free medicines**

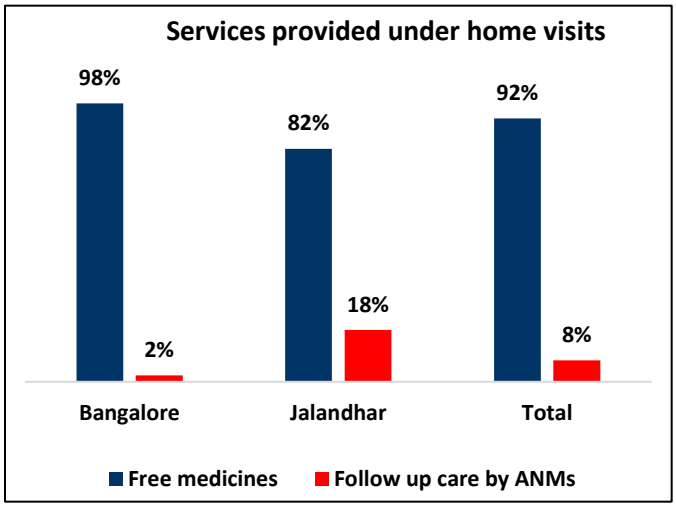


Figure 20: Services provided under Home visits

(92%) were the most commonly reported services followed by follow-up care by ANMs (8%), reflecting a strong emphasis on sustained, doorstep healthcare and reducing dependence on facility-based care alone.

When asked about **measures to further enhance equitable access**, respondents strongly **emphasized more targeted outreach (94%),** particularly for underserved groups. **The recommendations were most pronounced in Jalandhar, aligning closely with the partial accessibility feedback and indicating a demand for deeper penetration.** Additional suggestions included expanding services for marginalized populations, **improving transportation access to MMV locations, strengthening communication around service availability, and enhancing disability-friendly infrastructure.** Collectively, these inputs offer a clear, community-informed roadmap for strengthening equity outcomes, especially through targeted, location-specific refinements.

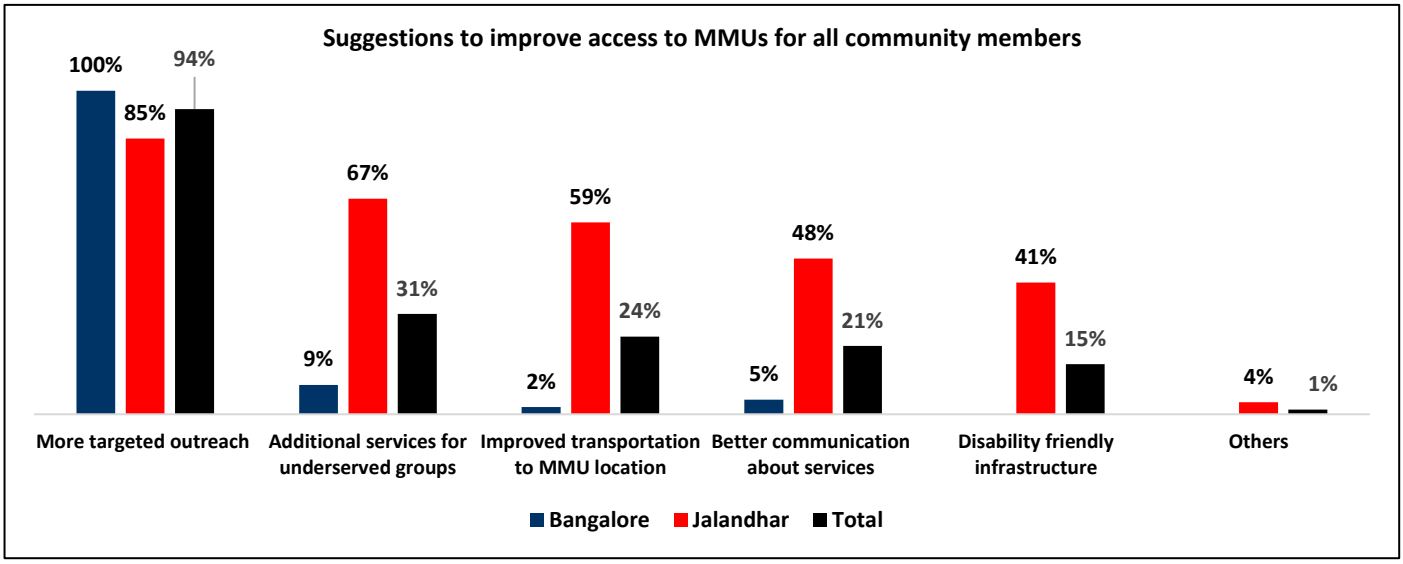


Figure 21: Suggestions to improve access to MMUs for all community members

Collectively, these findings underscore that although the MMUs already play a critical role in bridging healthcare access gaps, targeted enhancements can further strengthen their reach, inclusivity and long-term impact on community health outcomes.

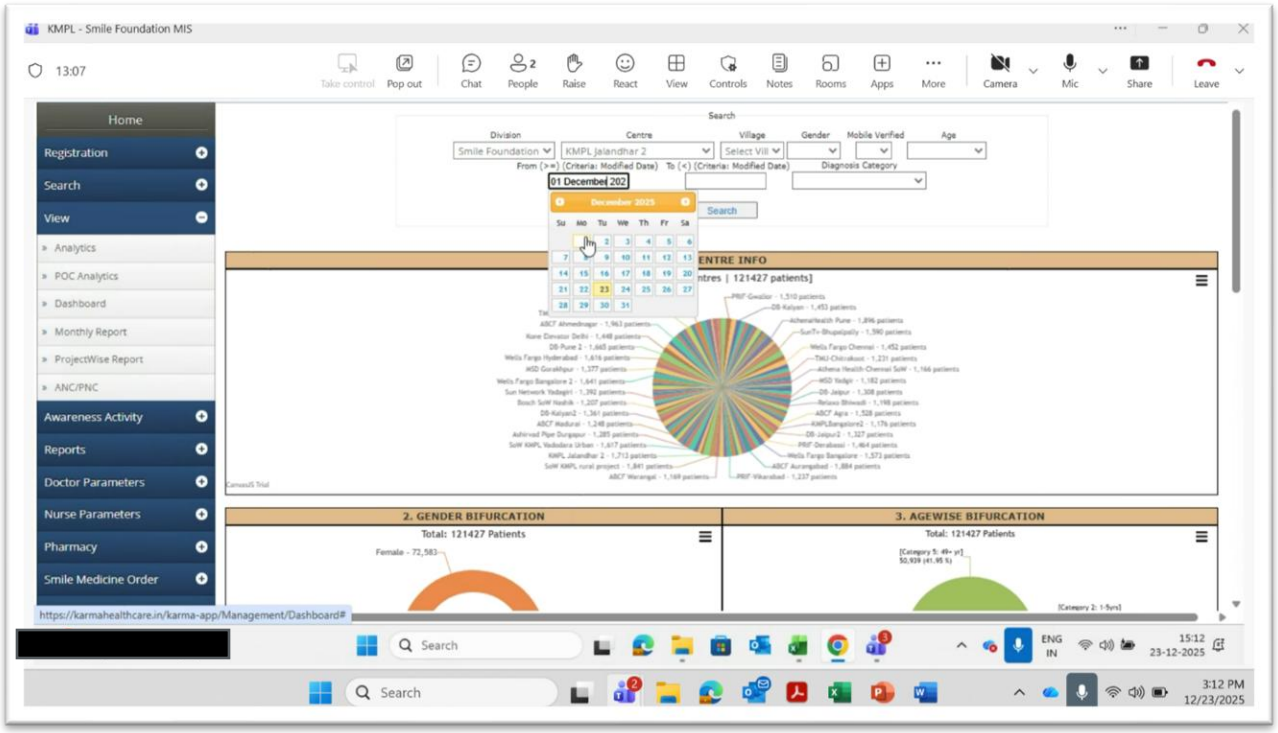
Patient Management System for MMUs

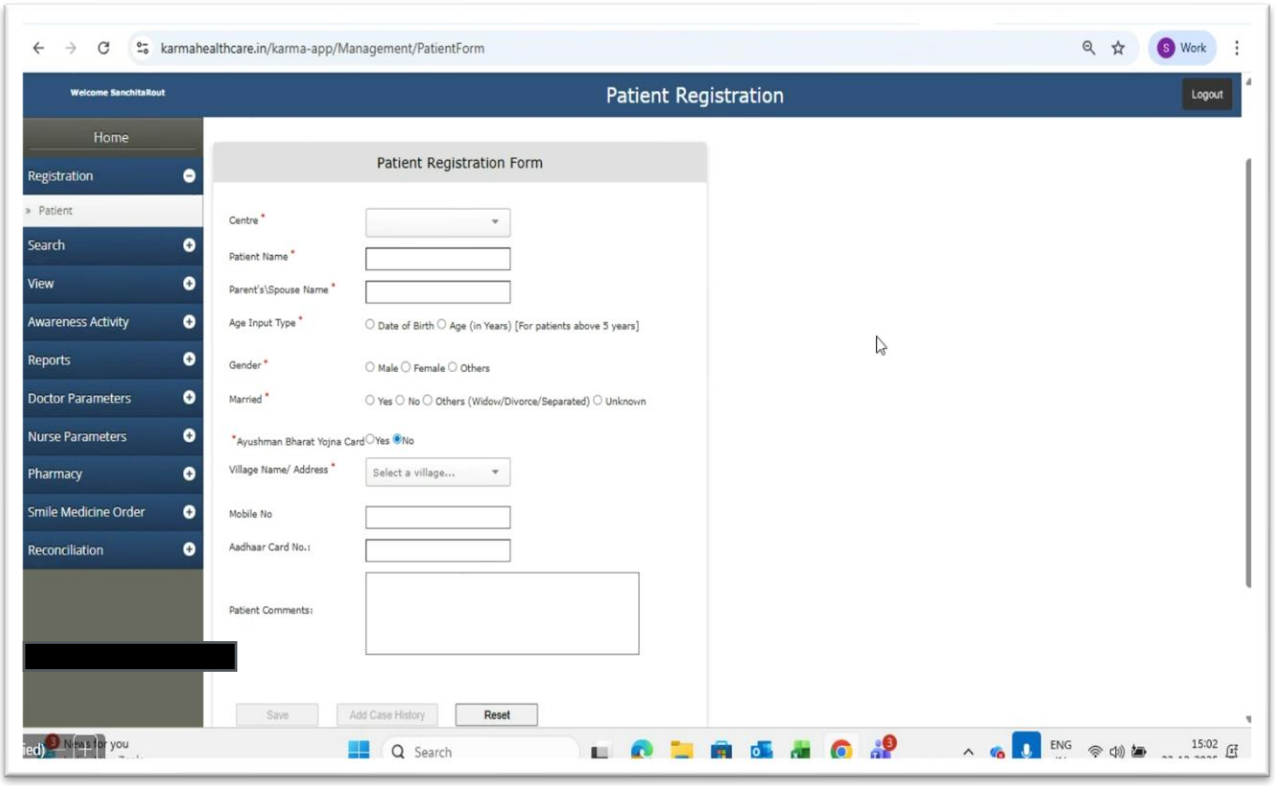
Hospital/Organization Name	Smile Foundation
HIS / Software Used	Karma Healthcare
Primary Users	Community Health Officers (CHOs), ANMs, Doctors, Program team
Unique IDs Generated	Unique Hospital ID (UH ID), IPD Number (when admitted)
Registration Process	Patients' details collected by CHOs/ANMs, contact details mandatory, Unique Patient ID created
Prescription System	Digital Prescriptions, Manual Prescriptions used in rural areas or when high patient load
Diagnostics & Testing	Point of Care Test conducted via medical vans
Data Visibility	90 days (extendable on request)
Dashboard & Analytics	Category wise, location wise, date wise etc. details available of patients
Data Centralization	Yes
Access & Roles	Field staff enters data; doctor analyze the patients and team monitors
Backup & Security	System-based backups, secure access
Reporting & Analytics	Daily/Real-time
Update Frequency	Real-time updates across all departments

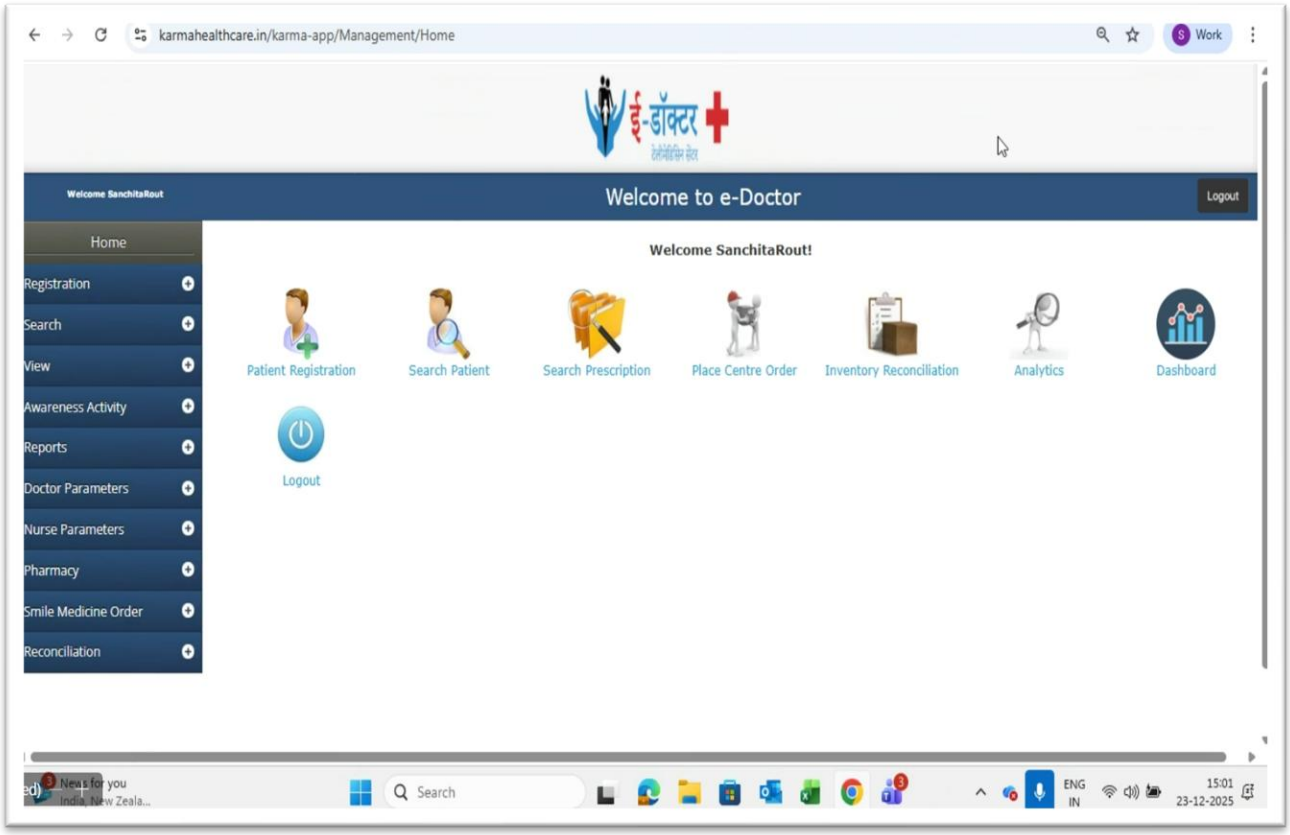
Smile Foundation implements its healthcare interventions through the Karma Healthcare digital platform, which supports end-to-end patient registration, service delivery, and monitoring, particularly in community and rural settings. The process begins with patient registration, where essential demographic details are collected by Community Health Officers (CHOs) or ANMs during visits and medical van operations. A contact number is mandatory, and once captured, a Unique Patient ID is generated for each beneficiary to ensure continuity of care and accurate record tracking.

The platform supports digital prescriptions, enabling doctors to record treatment details electronically. However, in cases involving high patient load or remote rural areas, manual prescriptions are also issued to ensure uninterrupted service delivery. Diagnostic support is provided through Point of Care Test (POCT) analytics, primarily conducted via medical vans. These test results and data of patients are visible on the system for up to 90 days by default, with the option to extend visibility upon request through the Karma team. The Karma platform includes a dashboard-based analytics module, allowing users to view category-wise data, such as disease type, location, or patient segments etc. This supports program monitoring, reporting, and decision-making at the management level. Data collected through the system is centralized, enabling seamless access for authorized users and facilitating real-time monitoring of healthcare activities.

Overall, Karma Healthcare ensures structured data capture, flexibility in service delivery, and analytical visibility, making it suitable for large-scale community health programs. The system balances digital efficiency with operational practicality, especially in underserved and rural areas, while maintaining reliable data records for reporting and follow-up.



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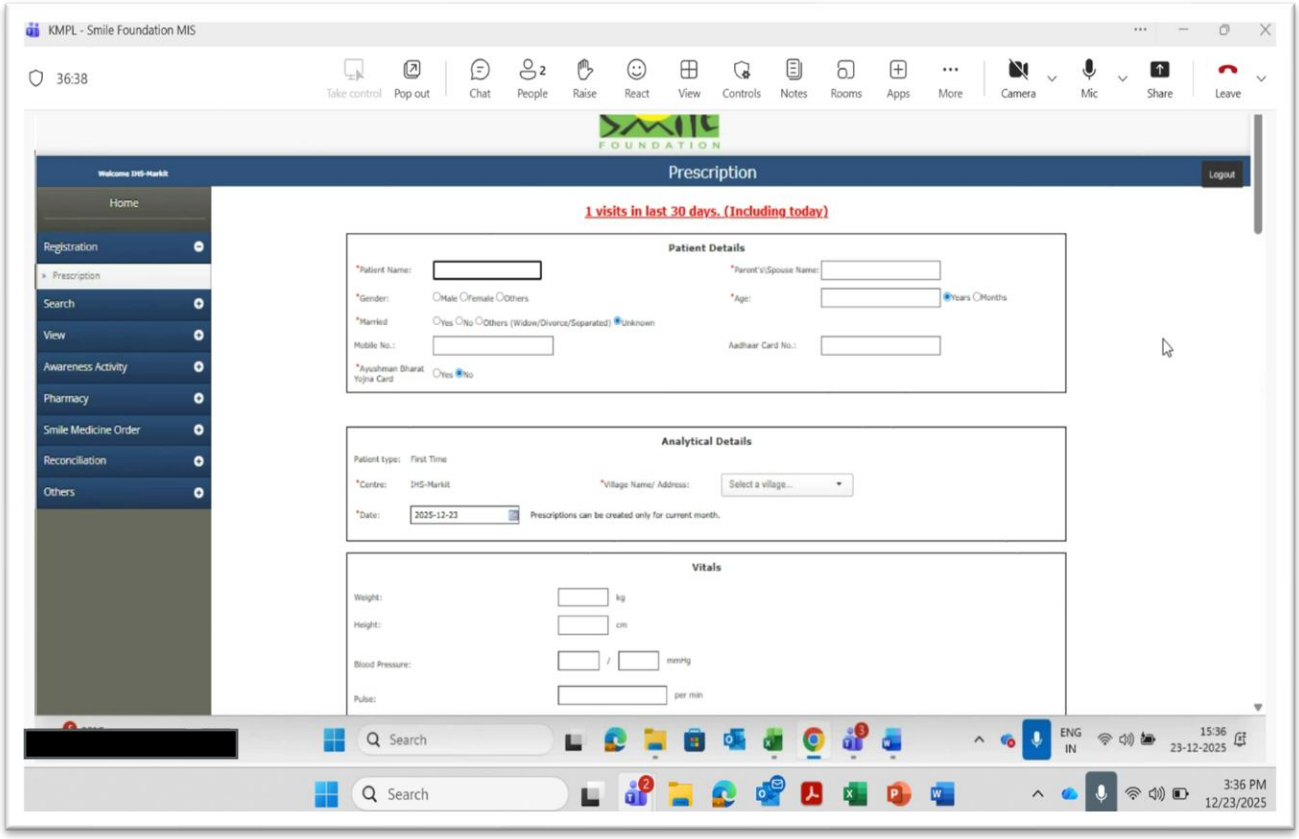
KMPL - Smile Foundation MIS
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1 visits in last 30 days. (Including today)
Patient Details
Analytical Details
Vitals

Sustainability and future needs

The findings indicate that the sustainability of MMU services is closely tied to the core service components that respondents consistently rely on for meeting essential healthcare needs. **Free consultations (99% overall) and free medicines (97%) emerged as the strongest pillars** supporting continued utilisation of MMUs, highlighting their critical role in reducing out-of-pocket expenditure and ensuring uninterrupted access to basic healthcare, particularly for low-income and vulnerable households.

Ease of access (96%) and time savings (90%) further reinforce the sustainability of the MMU model by addressing structural barriers such as distance, long waiting hours, and mobility constraints that commonly limit access to care at fixed facilities. These factors are especially important for individuals requiring regular follow-ups, chronic disease management, maternal health services, and elderly care, where delays can directly affect health outcomes.

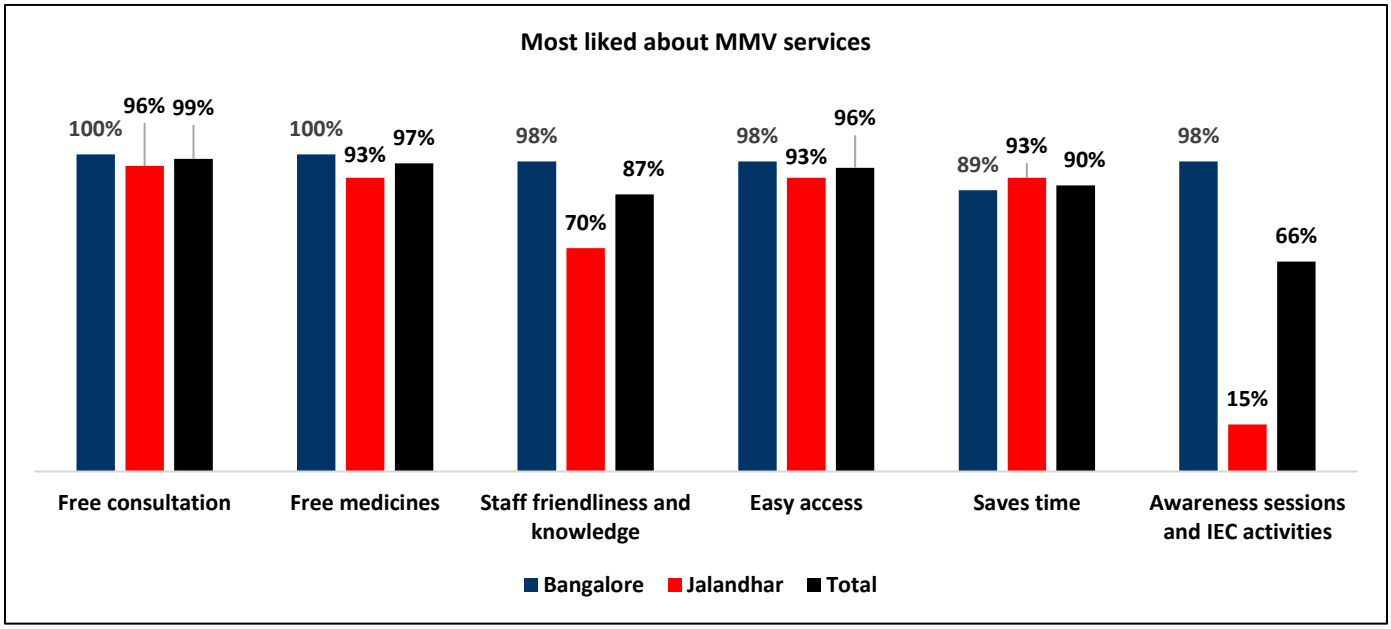

Figure 22: Most liked about MMV Services

The human resource dimension also contributes significantly to long-term sustainability. **Staff friendliness and knowledge were cited by 87% of respondents, underscoring the importance of competent and empathetic frontline healthcare delivery.** Consistent interactions with trained and approachable staff foster trust, improve adherence to treatment, and encourage repeat utilisation of services.

While these service strengths support sustained demand, the data also points to areas requiring further strengthening to ensure long-term impact. **Awareness sessions and IEC activities were reported by 66%**

overall, indicating that preventive health education, though present, has comparatively lower reach and would benefit from targeted expansion to complement curative care.

The high dependence on MMUs for essential services suggests that in their absence, communities particularly pregnant women, elderly individuals, daily wage earners, and patients with chronic conditions would face increased financial burden, longer travel distances, overcrowded facilities, and delayed care. This positions MMUs not merely as an alternative service delivery mechanism, but as a stabilizing component of the local healthcare system.

Overall, the sustainability of MMU services lies in maintaining their strengths **in affordability, accessibility, and dependable frontline care**, while addressing future needs such as expanded diagnostics, specialist linkages, and strengthened preventive health education. Strategic investments in these areas will be essential to ensure that MMUs remain responsive to evolving community health needs and continue to fill critical gaps in the healthcare ecosystem.

Case Studies

Case Study 1

Kiran*; service availed – Haemoglobin, Blood sugar, Malaria and Dengue tests

Kiran, a 55-year-old daily wage laborer from Bangalore, Karnataka, belongs to a minority group family. Her family income is less than INR. 5000 per month, and they reside in a small, makeshift house. Kiran's husband is also a daily wage laborer, and they work hard to make ends meet, but they struggle to provide for their family's needs, especially when it comes to healthcare.

Kiran had been **suffering from fever and skin infections for several years**, but she couldn't afford to take regular medication or visit the hospital frequently due to financial constraints. **She faced several challenges in accessing healthcare services, including the high cost of services and medicines, unavailability of doctors, and long distance to the clinic.** These challenges made it difficult for her to seek medical attention, and she often had to rely on traditional remedies or self-medication.

The Mobile Medical Unit (MMU) services, provided by Smile on Wheels, visited their community, and Kiran's neighbor, who had previously benefited from the MMU services, encouraged her to visit the van. The MMU staff was friendly and knowledgeable, and they took the time to explain her health concerns and provide guidance. As a result of the MMU services, Kiran's health began to improve. She was able to manage her fever and skin infections effectively, and she experienced fewer episodes of severe pain and discomfort.

Kiran's family was also relieved to have saved around INR. 500 per month on healthcare expenses. They no longer had to travel to the hospital, which saved them time and money. Kiran's improved health also enabled her to work more regularly, which increased the family's income.

The MMU services addressed the specific challenges that Kiran faced in accessing healthcare services. The cost of services and medicines was no longer a barrier, as the MMU services were provided free of cost. The MMU staff was also available to provide medical attention, eliminating the issue of unavailability of doctors. Additionally, the MMU van visited their community, reducing the long distance to the clinic.

In terms of suggestions for improvement, Kiran recommended that the MMU services could be more effective if they were more frequently visited by the community. She also suggested that the MMU staff could provide more health education and awareness programs for the community.

Overall, Kiran's experience with the MMU services was very positive, and she found the services to be very useful and helpful in managing her health and well-being. The MMU services provided by Smile on Wheels had a significant impact on Kiran's life, enabling her to access healthcare services without financial burden and addressing the specific challenges she faced in accessing healthcare.

Case Study 2

Gagan*; service availed – Haemoglobin, Typhoid, Blood Sugar

Gagan, a 13-year-old student from Bangalore, Karnataka, belongs to a general category family. His family income is around INR. 5001 - 10,000 per month, and they reside in a small house. Gagan's parents work hard to make ends meet, but they struggle to provide for their children's needs, especially when it comes to healthcare.

Gagan had been suffering from minor health issues, but his family couldn't afford to take him to the hospital due to financial constraints. The **long distance to the clinic** was also a significant barrier, as his family had to travel for over an hour to reach the nearest hospital. Additionally, **the cost of services and medicines was a concern**, as his family had to spend a significant amount on transportation and medication. Furthermore, **the unavailability of doctors in their area** made it difficult for his family to access medical attention.

The Mobile Medical Unit (MMU) services, provided by Smile on Wheels, visited their community, and Gagan's parents took him to the MMU van. The MMU staff was friendly and knowledgeable, and they took the time to explain his health concerns and provide guidance. As a result of the MMU services, Gagan's health began to improve. He was able to manage his minor health issues effectively, and he experienced fewer episodes of severe illness.

Gagan's family was also relieved to have **saved around INR. 650 per month** on healthcare expenses. They no longer had to travel to the hospital, which saved them time and money. Gagan's improved health also enabled him to focus on his studies, which improved his academic performance.

The MMU services addressed the specific challenges that Gagan's family faced in accessing healthcare services. The MMU van visited their community, reducing the long distance to the clinic. The cost of services and medicines was no longer a barrier, as the MMU services were provided free of cost. Additionally, the MMU staff was available to provide medical attention, eliminating the issue of unavailability of doctors.

In terms of suggestions for improvement, Gagan's family recommended that the MMU services could be more effective if they were more frequently visited by the community. They also suggested that the MMU staff could provide more health education and awareness programs for the community.

Overall, Gagan's experience with the MMU services was very positive, and he found the services to be very useful and helpful in managing his health and well-being. The MMU services provided by Smile on Wheels had a significant impact on Gagan's life, enabling him to access healthcare services without financial burden and addressing the specific challenges his family faced in accessing healthcare.

Case Study 3

Alok*; service availed – Hemoglobin, Blood and Sugar tests

Alok, a 32-year-old male from Bangalore, Karnataka, belongs to the Scheduled Caste (SC) community. He has completed his higher secondary education (11th-12th standard) and is currently working in a private

job, earning a monthly income of INR. 10,001 - 20,000 Alok's family consists of six members, and they reside in a small house. His family's monthly expenditure on healthcare is around INR. 2001 - 5000.

Alok had been suffering from fever, malaria, and dengue, but **he couldn't afford to take regular medication or visit the hospital frequently due to financial constraints.** He also had concerns about his child's health, as well as his own health issues with hypertension and diabetes. Despite these challenges, Alok visited the Mobile Medical Unit (MMU) van, which was providing free medical consultations and medicines in his community.

The MMU services had a significant impact on Alok's life. He was able to access healthcare services without having to worry about the financial burden. The MMU staff was friendly and knowledgeable, and they took the time to explain his health concerns and provide guidance. As a result of the MMU services, Alok's health began to improve. He was able to manage his fever, malaria, and dengue effectively, and he experienced fewer episodes of severe illness.

He appreciated the MMU services for several reasons. **He valued the free consultation and medicines provided by the MMU staff. He also appreciated the friendly and knowledgeable staff, who made him feel comfortable and confident in their care**. Additionally, he found the MMU services to be easily accessible and time-saving, as he no longer had to travel long distances to access healthcare services.

In terms of suggestions for improvement, Alok recommended that the MMU services could be more effective if they were more targeted towards specific communities or populations**. He also suggested that the availability of free medicines could be increased in quantity and variety.** Overall, Alok's experience with the MMU services was very positive, and he found the services to be very useful and helpful in managing his health and well-being.

The MMU services provided by Smile on Wheels had a significant impact on Alok's life, enabling him to access healthcare services without financial burden. The services also empowered him to take control of his health and well-being, and he was able to manage his health issues effectively. The MMU services are a valuable resource for communities like Alok's, providing essential healthcare services and promoting health and well-being.

(*The names of the patients in the case studies have been changed to protect their identities)

Stakeholders Speak

Nitesh Sinha, Community Health Officer (CHO), Jalandhar

Experience: 2years

Nitesh Sinha, a 45-year-old Community Health Officer (CHO), has been working with Smile on Wheels for 2 years. He provides valuable insights into the program's operations, challenges, and impact. In this interview, Nitesh shares his experiences and perspectives on the Smile on Wheels program, highlighting its strengths and areas for improvement.

Understanding of Van Operations

Smile on Wheels is a national-level mobile hospital program that brings "doorstep" primary healthcare to underserved communities. According to Nitesh, the program's goal is to provide free and accessible healthcare services to vulnerable populations, including women, children, and poor families. The mobile medical units (MMUs) are well-equipped with a medical officer, paramedics, medicines, and basic diagnostic facilities. Nitesh explains that the MMUs visit rural villages, urban slums, and remote areas, providing a range of services, including basic OPD, maternal and child health, and common communicable and non-communicable diseases.

Role and Responsibilities

As a CHO, Nitesh's responsibilities are multifaceted. He provides outpatient medical services, including diagnosis, basic treatment, and prescribing medicines. He also performs basic diagnostics and point-of-care tests, maintains patient records, and dispenses free medicines. Additionally, Nitesh educates patients on health, preventive practices, and maternal-child health, and coordinates referrals for patients needing advanced care. He emphasizes that his role is crucial in ensuring that patients receive comprehensive care and follow-up.

Day-to-Day Experiences on the Mobile Medical Unit

Nitesh's day-to-day experiences on the mobile medical unit are varied and dynamic. He begins by coordinating with community leaders to inform residents about the van's visit. Once the van arrives at the designated location, he sets up the reception and registration area, ensuring that patients are registered and triaged efficiently. Nitesh then conducts consultations, provides treatment, and dispenses medicines to patients. He also maintains patient records and stock of medicines and supplies, ensuring that the van is well-equipped to meet the needs of the community.

Challenges and Recommendations

Despite the successes of the Smile on Wheels program, Nitesh identifies several challenges. He notes that limited resources, including medicines and diagnostic facilities, can hinder the program's effectiveness.

Additionally, he suggests that maintaining patient records and tracking follow-ups can be difficult, particularly in rural areas with limited access to technology. Nitesh recommends that stronger referral linkages with nearby hospitals and PHCs would improve patient care and outcomes. He also emphasizes the importance of community awareness and coordination to publicize van schedules and encourage participation.

Impact on Communities

Nitesh believes that Smile on Wheels has had a significant impact on the communities it serves. He notes that the program has increased access to primary healthcare, particularly for vulnerable populations. Patients are more willing to visit for check-ups and preventive care, and there has been a reduction in reliance on unregistered or informal health providers. Nitesh also observes that the program has lowered out-of-pocket expenditure for poor families, who can now access essential healthcare services without incurring significant costs.

Conclusion

In conclusion, Nitesh's experience with Smile on Wheels highlights the importance of mobile medical units in addressing the healthcare needs of underserved communities. While challenges exist, the program has made a positive impact on the lives of thousands of people. With continued support and resources, Smile on Wheels can continue to provide essential healthcare services to those who need it most.

Seema Rani, Community Mobilizer, Jalandhar

Experience: 2 years with “Smile on Wheels”

Seema Rani, a 31-year-old Community Mobilizer, has been working with Smile on Wheels, a mobile medical unit (MMU) program by Smile Foundation, for 2 years. Her role involves ensuring accessible healthcare services reach underserved communities. With a strong passion for social development and community engagement, Seema has been instrumental in raising awareness, encouraging community participation, and facilitating smooth implementation of mobile medical services.

Background and Role

As a Community Mobilizer, Seema's primary responsibility is to conduct community outreach and awareness campaigns regarding health services offered by Smile on Wheels. She identifies target locations and supports medical van scheduling in consultation with community leaders. Seema also mobilizes beneficiaries for regular check-ups, immunizations, and health camps, and maintains beneficiary records to assist in data collection for program reporting. Her excellent communication and interpersonal skills have enabled her to build strong relationships with community leaders, health workers, and partner organizations.

Challenges Faced

During her tenure, Seema faced several challenges, including limited access to remote areas due to poor infrastructure and transportation issues. She also encountered difficulty in mobilizing beneficiaries due to lack of awareness and mistrust in the community. Additionally, managing and coordinating with multiple stakeholders, including community leaders, health workers, and partner organizations, proved to be a significant challenge. Despite these obstacles, Seema persevered and developed innovative solutions to overcome them.

Achievements and Impact

Seema's hard work and dedication have yielded significant results. She has successfully mobilized over 1,000 beneficiaries for health camps and check-ups, and established strong relationships with community leaders and health workers. Her efforts have increased access to healthcare services for vulnerable populations, improved health outcomes through regular check-ups, immunizations, and health camps, and enhanced community awareness and participation in health-related activities. Seema's work has had a positive impact on the communities served by Smile on Wheels, and her achievements serve as a testament to the importance of community mobilization and outreach in healthcare programs.

Conclusion and Recommendations

In conclusion, Seema Rani's experience as a Community Mobilizer with Smile on Wheels demonstrates her commitment to ensuring accessible healthcare services reach underserved communities. Her achievements and impact highlight the importance of community mobilization and outreach in healthcare programs. Based on Seema's experience, it is recommended that community mobilization and outreach efforts be strengthened to increase awareness and participation in health-related activities. Additionally, stakeholder engagement and coordination should be improved to ensure smooth implementation of MMU services. With continued support and resources, Seema and other Community Mobilizers can continue to make a positive impact on the lives of thousands of people.

Amandeep kaur, ANM, Jalandhar

Experience: 2 years

Amandeep Kaur, a 37-year-old Auxiliary Nurse Midwife (ANM), has been working with the Smile on Wheels Mobile Medical Unit (MMU) program for 21 months. As an ANM, she plays a vital role in providing primary healthcare services to underserved communities. Her role involves conducting basic clinical assessments, supporting the medical officer, and providing immunization and health counseling.

Responsibilities and Duration of Involvement

As an ANM with the Smile on Wheels MMU program, Amandeep's responsibilities include conducting basic clinical assessments and supporting the medical officer, assisting with antenatal and postnatal care, providing immunization and health counseling, supporting community awareness activities on hygiene,

nutrition, and disease prevention, and maintaining patient records and assisting in reporting. She has been working with the Smile on Wheels program since February 2021.

Key Tasks and Typical Workday

Amandeep's key tasks include checking vital signs, helping in registration of patients, ensuring proper medicine distribution as per the doctor's prescription, maintaining MMU stock of basic medical supplies, coordinating with ASHA workers and community leaders, and providing health education on maternal health, anemia, sanitation, chronic diseases, etc. Her typical workday starts with preparations before the MMU visit, including informing the community in advance, creating a list of pregnant women, elderly, and chronic patients needing follow-up, preparing vaccination schedules, and ensuring space arrangement for smooth clinic operations.

Managing Patient Flow and Common Health Problems

To manage patient flow, Amandeep and her team set up registration counters first, conduct screening, and then patients meet the doctor in orderly sequence. At the end, they collect medicines and receive counseling or referral guidance. The most common health problems she observes in the community include frequent illnesses such as common cold, viral fever, cough & respiratory infections, gastric issues, body pain, skin infections, and women's health issues such as anemia, menstrual disorders, and antenatal care needs.

Seasonal Variations and Non-Communicable Diseases

Amandeep notices clear patterns in seasonal variations, with monsoon bringing dengue, malaria, and diarrhea, winter bringing cough, asthma & respiratory infections, and summer bringing dehydration, heat stroke, and waterborne diseases. She also sees a noticeable rise in non-communicable diseases such as diabetes, hypertension (BP), and anemia, especially among women and adolescent girls.

Recommendations for Improvement

Based on her experience, Amandeep recommends expanding access through strategic scheduling and location planning, strengthening community partnerships, enhancing continuity of care, increasing services based on community health needs, boosting awareness and community engagement, improving patient experience, and evaluating and adapting using performance metrics. By addressing these challenges and implementing recommendations, mobile medical unit programs can be improved to provide better healthcare services to underserved communities.

Conclusion

In conclusion, Amandeep's experience as an ANM with the Smile on Wheels MMU program has been rewarding. She has seen firsthand the impact of mobile medical units on underserved communities. By working together to address the challenges and implement recommendations, mobile medical unit programs can continue to provide essential healthcare services to those who need it most.

SWOT Analysis

SWOT analysis is a strategic planning technique used to identify and evaluate the strengths, weaknesses, opportunities and threats of an initiative. It is a framework that helps assess the internal and external factors that can affect the impact and sustainability of a programme. It also helps identify potential risks and develop effective strategies for informed decision-making to enhance the impact and sustainability of the programme. It also supports in streamlining the monitoring and evaluation process and improving accountabil

STRENGTHS

- High awareness, trust, and consistent utilization across communities
- Relief in financial burden, as services are provided free of cost
- Regular visit schedules, short waiting times and convenient access
- Availability of core staff (Doctors, ANMs, CHOs) during visits

WEAKNESSES

- Referral uptake and chronic disease follow up low in Jalandhar
- Partial accessibility for people with disabilities in Jalandhar
- Support to pregnant women and infant checkups are quite low in Vadodara

OPPORTUNITIES

- Strengthen referral linkages and follow-up systems with PHCs/CHCs
- Expand disability-friendly infrastructure and staff sensitization
- Deepen outreach for maternal, adolescent and preventive health services
- Expanding chronic disease follow-up protocols and tracking systems

THREATS

- Operational strain from high service demand across locations
- Supply and logistics disruptions affecting service continuity
- Seasonal disease surges stretching MMU capacity

Alignment with OECD DAC Framework

Evaluation dimension	Focus areas
Relevance	The MMU model directly addresses critical gaps in rural and peri-urban healthcare, where distance, cost and poor facility availability limit access. The programme is highly relevant as beneficiaries—especially elderly, daily wage earners, pregnant women and chronic patients—depend on the MMU for regular, affordable care. Free consultations, medicines and diagnostics significantly reduce out-of-pocket expenditure, aligning with India's Universal Health Coverage goals.
Coherence	The initiative aligns well with national health priorities, digital health systems, and SDGs focused on equity and last-mile access. It complements rather than duplicates public facilities, with effective referrals to PHCs and government hospitals. The use of digital medical records and structured follow-ups reflects strong coherence with India's evolving health-tech ecosystem.
Effectiveness	The MMU is effective in delivering accessible, affordable and trusted primary care. The assessment shows high utilisation, strong awareness, reliable doctor presence, and high satisfaction with staff behaviour and free medicines. Significant improvements in chronic disease monitoring, maternal health access and preventive behaviours demonstrate strong on-ground outcomes.
Efficiency	One of the biggest advantages of the MMU is its operational and cost efficiency in delivering healthcare to remote and underserved populations. The model reduces travel time, cost and waiting periods, resulting in fewer missed workdays and lower financial burden. Route planning, digital records, free essential diagnostics and consolidated service delivery enhance operational efficiency. One MMU serves multiple communities at low infrastructure cost.
Impact	The programme has contributed to early detection of NCDs, improved maternal and child health practices, and higher adoption of preventive behaviours, such as hygiene, nutrition, vaccination and regular check-ups. The MMU has become a dependable primary care source, reducing reliance on informal providers and improving long-term health outcomes.
Sustainability	Sustainability is thoughtfully embedded in the programme, which promotes long-term sustainability, both programmatically and financially. CSR partnerships provide stable funding, while community trust, engagement of local health workers, and strong utilisation support social sustainability. Preventive care integration reduces long-term health burdens. Strengthening specialist services, diagnostics and referral systems, especially in Jalandhar will further enhance long-term sustainability.

Alignment with SDGs

SDG 1: No Poverty

The Smile on Wheels program aligns with SDG 1, particularly Target 1.4, which seeks to ensure equal access to basic services for all. By providing free or highly subsidized healthcare services, including consultations, diagnostics, medicines, and follow-up care, through Mobile Medical Units (MMUs), the program substantially reduces out-of-pocket healthcare expenditure for vulnerable households preventing health-related financial shocks that often push low-income families further into poverty.

SDG 3: Good Health and Well-being

The Smile on Wheels program is strongly aligned with SDG 3, particularly Targets 3.8 and 3.d, by providing accessible primary healthcare services, including preventive care, diagnostics, treatment, chronic disease management, and referral support, the program improves healthcare access for underserved populations.

SDG 4: Quality Education

The program aligns with SDG 4, especially Target 4.7, by enhancing health literacy and informed decision-making among communities. Clear explanations of medical conditions, treatment plans, and preventive practices empower beneficiaries with knowledge essential for long-term health management, contributing to inclusive and equitable learning in the context of healthcare.

SDG 5: Gender Equality

The Smile on Wheels program supports SDG 5, particularly Target 5.6, which focuses on universal access to sexual and reproductive healthcare services. By offering maternal and child health services, family planning support, nutrition counselling, and routine screenings through MMUs, the program reduces gender-based barriers to healthcare access.

SDG 10: Reduced Inequalities

The program contributes to SDG 10, specifically Target 10.2, by promoting social inclusion through equitable healthcare access. By standardizing service delivery across locations in underserved, peri-urban, and marginalized areas, the program reduces geographic and socio-economic disparities in access to essential health services.

SDG 17: Partnerships for the Goals

The Smile on Wheels program demonstrates alignment with SDG 17, particularly Target 17.17, by leveraging multi-stakeholder partnerships. Collaboration between implementing agencies, healthcare professionals, community stakeholders, and supporting organizations enables effective service delivery and scalability. enhancing the overall impact of the program in line with national and global development priorities.

Recommendations and Way forward

The Smile on Wheels Mobile Medical Unit (MMU) initiative has profoundly impacted the lives of people in Bangalore and Jalandhar, providing accessible and affordable healthcare services to underserved communities. **By delivering healthcare services directly to people's doorsteps, the MMU has alleviated long-standing burdens of travel, income loss, and long waiting hours at overcrowded hospitals. The initiative has also promoted better understanding of health and encouraged conscious lifestyle changes through community meetings, health education sessions, and regular interactions with approachable and empathetic medical staff.**

The MMU has become an essential part of the local health system, and its dependence underscores the importance of sustaining and strengthening the model for the long term. The initiative has earned deep trust and gratitude from the communities it serves, making healthcare feel within reach for those who previously struggled to access it.

The findings also make clear that the MMU has become an essential part of the local health system. Many respondents shared that without it, they would struggle to access care, facing higher travel costs, delays in treatment and increased financial strain. This dependence underscores the importance of sustaining and strengthening the model for the long term.

❖ Strengthening the Capacity of Local Health Workers

Invest in capacity-building initiatives for Local Health Workers, including training on clinical skills, communication, and counseling. Ensure that they are equipped with the necessary resources, and support to deliver high-quality services to enable them effectively address the health needs and provide comprehensive care.

❖ Enhance Maternal and Child Follow-ups

Conduct a need assessment to identify areas with inadequate maternal and child healthcare services, develop and implement a plan to strengthen the delivery of these services, and engage with local communities to raise awareness about the importance of maternal and child healthcare services.

❖ Enhance Referral Linkages and Follow-up Care

Strengthen referral pathways and linkages with public health facilities, particularly in Jalandhar. Implement a robust follow-up system to track patients with chronic conditions.

❖ Ensure robust maintenance and asset management

Establish a structured maintenance schedule and asset management system for the MMVs to minimize downtime, ensure vehicle safety, and sustain uninterrupted healthcare delivery throughout the operational period.

Annexure

List of Figures

Abbreviations

KMPL	Kotak Mahindra Prime Limited
MMV	Mobile medical Vans
CSR	Corporate social responsibility
SDGs	Sustainable development goals
ANM	Auxiliary Nurse Midwife
ASHA	Accredited Social Health Activist
CHO	Community Health Officer
PwDs	Person with Disabilities
NCDs	Non-Communicable Diseases

IEC	Information, Education and Communication

About ‘Smile on Wheels’ initiative

About Smile Foundation

Smile Foundation, established in 2002, is a leading Indian development organisation that impacts the lives of over 2 million children and their families every year. With a strong presence across 27 states, they have implemented more than 400 projects in education, healthcare, livelihood and women's empowerment, reaching out to over 2,000 remote villages and urban slums.

As a catalyst for change, Smile Foundation complements and supplements government efforts to achieve the Sustainable Development Goals. By collaborating with like-minded institutions and individuals, it tries to design and implement high-impact programmes that improve access, enhance quality and drive long-term behavioural change at the grassroots level. The foundation aims to create a lasting impact and bring about positive transformation in the lives of the marginalised.

Mission: The mission is to empower underprivileged children, youth and women through relevant education, innovative healthcare and market-focused livelihood programmes. By harnessing the power of technology and innovative approaches, the organisation aims to achieve the greatest possible social impact while maintaining the highest standards of governance and transparency. It aims to link business competitiveness of a corporation with social development initiatives such as sensitising privileged children, youth and citizens to promote civic-driven changes.

About Smile on Wheels

The Smile on Wheels (SoW) program is a mobile primary healthcare intervention implemented by Smile Foundation in partnership with Kotak Mahindra Prime Limited across Jalandhar (Punjab), and Bengaluru (Karnataka). While program reporting timelines varied across locations, the intervention followed a uniform design, operational framework, and service delivery approach across the two geographies.

The program was designed to respond to persistent gaps in access to primary healthcare among underserved populations, particularly those residing in urban slums, peri-urban settlements, and migrant habitations. Key barriers addressed by the intervention include distance from healthcare facilities, opportunity costs related to wage loss, limited availability of diagnostics at the primary level, and low awareness of preventive health practices. The Smile on Wheels model addresses these challenges through a doorstep healthcare delivery mechanism, ensuring that essential services are available within communities on a regular and predictable basis.

Communities covered under the program include daily wage earners, migrant populations, and low-income households who face barriers such as distance from healthcare facilities, wage loss, limited awareness, and delayed care-seeking. These challenges contribute to late diagnosis, incomplete treatment, and poor continuity of care, particularly affecting women and children.

The SoW model responds to these gaps by decentralising primary healthcare delivery and integrating diagnostics, treatment, health education, and referrals within a single mobile platform.

Program Design and Service Model

The program operates through fully equipped Mobile Medical Units that provide structured primary healthcare services at fixed community locations. Each MMV follows a predefined service roster and delivers services through regular OPDs, complemented by preventive and promotive health activities.
The design emphasizes:

- Early identification of health conditions
- Same-day diagnosis and treatment wherever feasible
- Continuity of care through follow-ups and referrals
- Strengthened linkages with the public healthcare system

Program Implementation Process

The implementation of Smile on Wheels follows a structured operational process that transitions from preparatory activities to field-level service delivery. This process remained consistent across all program locations.

Pre-operational preparation forms the foundation of implementation. This phase includes identification of service locations based on population needs, disease patterns, and accessibility to existing health facilities. Mobile Medical Units are refurbished and converted into functional clinics through electrical work, installation of medical and non-medical equipment, internal and external modifications, and branding. Simultaneously, essential medicines, diagnostic tools, and consumables required for routine OPD services are procured. Administrative arrangements such as project office setup, documentation, and operational planning are also completed during this phase.

Human resource deployment follows infrastructure readiness. Each MMV is staffed with a multidisciplinary team comprising a Medical Officer, ANM, lab technician, community mobiliser, and driver. Roles and responsibilities are defined to ensure coordinated clinical care, diagnostics, outreach, and documentation. In addition, frontline health workers such as ASHAs, ANMs, and Anganwadi Workers are engaged through training and sensitization activities to strengthen community mobilization and referral linkages.

Location finalization and roster planning are undertaken prior to service delivery. Field visits and consultations with local stakeholders support final selection of service points. A predefined roster ensures regular and predictable visits to communities, enabling follow-up care and sustained engagement.

Operational deployment begins once preparatory activities are completed. Mobile Medical Units are deployed to identified locations to deliver healthcare services through OPDs. On non-clinic days, teams undertake documentation, stock management, review of services, and coordination with referral facilities to ensure continuity and operational efficiency.

Key Service Components

Curative Healthcare Services (OPDs): OPDs are the primary mode of service delivery. Beneficiaries receive medical consultations for common illnesses and health concerns. Clinical assessments are supported by symptom-based evaluation and on-site diagnostics. Essential medicines are dispensed free of cost, and treatment is initiated during the same visit wherever possible.

Point-of-Care Diagnostics: Point-of-care tests are conducted as advised by the Medical Officer to support accurate diagnosis. These include haemoglobin estimation, random blood sugar, blood pressure measurement, weight assessment, and urine pregnancy tests. Diagnostic findings are documented and guide treatment and referral decisions.

Maternal and Child Health Services: Maternal and child health services are integrated into routine OPDs. Antenatal and postnatal check-ups are conducted for pregnant and lactating women, including clinical assessments and essential diagnostics. Counselling on nutrition, medication adherence, and follow-up care supports continuity across critical stages of care.

Preventive and Promotive Health (IEC Activities): Information, Education, and Communication (IEC) activities complement clinical services. Community meetings, school-based sessions, and group interactions address topics such as hand hygiene, menstrual hygiene, anaemia and nutrition, adolescent health, sanitation, and general health awareness. IEC activities are aligned with locally observed health needs.

Referral Services and Health System Linkages: Cases requiring specialised care beyond primary healthcare are referred to government or charitable health facilities. The program facilitates referrals by guiding beneficiaries and strengthening coordination with public health institutions, thereby acting as a bridge between communities and higher-level care.

Community Engagement and Coordination

Community engagement underpins effective implementation. The SoW team coordinates with Anganwadi centres, ASHAs, PHCs, CHCs, schools, and community leaders to mobilise beneficiaries, disseminate

information, and strengthen referral pathways. Training frontline workers further enhances service uptake and continuity of care.

Through its integrated service delivery model, Smile on Wheels reached underserved populations across Jalandhar and Bengaluru, with specific focus on women, children, and economically vulnerable households. The program ensured consistent delivery of primary healthcare services across diverse geographic contexts.

As part of its exit and sustainability strategy, the programme conducts school-based awareness activities, community meetings and training sessions. These sessions focus on health literacy, disease prevention, nutrition, and the importance of hygiene, while also marking key national health days to promote long-term awareness. A major component of these sessions helps community members access relevant government schemes. The team provides hands-on support with documentation and helps individuals navigate application processes to ensure they can continue receiving benefits even after the programme ends.

The overall programme highlights a holistic and scalable model of primary healthcare deliveries tailored for under-resourced areas. Its strength lies in its community-centred approach, digital recordkeeping, referral integration with government systems, and robust monitoring and follow-up mechanisms. By focussing equally on service delivery, awareness and system linkages, it addresses both immediate medical needs and long-term health empowerment in rural and marginalised urban communities.

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