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PERFORMANCE ASSESSMENT AND CHALLENGES ENCOUNTERED BY MID-LEVEL HEALTH PROVIDERS RELATED TO TARGETS OF PRIMARY HEALTH CARE AT HEALTH AND WELLNESS CENTRES

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Abstract: This mixed method study has been undertaken to assess the performance and explore the challenges encountered by mid-level health providers related to targets of primary health care and to find association of the performance of mid-level health providers with their selected socio-demographic variables. Data was collected at 2 districts of Punjab i.e. Tarntaran and Sri Amritsar; by Consecutive Sampling under quantitative part; while under qualitative part of study, Purposive sampling was used. A semi-structured tool based on 15 Questionnaire was for quantitative data collection, while qualitative tool was having 15 rough open-ended questions. Data was analyzed by Descriptive statistics and Chi-square test under quantitative part, but thematic framework approach was used under the qualitative part.

Index Terms **– Performance, Challenge, Mid-level Health Provider, Target.**

INTRODUCTION

WHO defined Health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (World Health Organization, n.d.). Primary health care provides a first level of contact of individuals, families and communities with the health care delivery system of the nation by bringing health care services as close as possible to the places where people live and work as also serves as the basic elements of continuity of health care process. In 2017, NHP recommended the strengthening of PHC by establishment of "Health and Wellness Centers" (HWCs) as a key to deliver comprehensive PHC services (National Health Mission, 2018). At the rural level, the HWCs are equipped and staffed by appropriately trained PHC team, that comprises of multipurpose health workers (male and female) and ASHAs and led by Mid-level Health Provider (MLHP) i.e. Community Health Officer (CHO). The expanded range of services delivered by HWCs are: care in pregnancy and child birth; neonatal and infant health care services; childhood and adolescent health care services; family planning, contraceptive services and reproductive health care services; management of

communicable diseases including National Health Programmes; out-patient care for acute simple illnesses and minor ailments; screening, prevention, control and management of non-communicable diseases; care for common ophthalmic and ENT problems; basic oral health care; elderly and palliative health care services; emergency medical services; screening and basic management of mental health ailments (National Health Mission, 2018). CHOs are accountable to realize multiple roles for the achievement of 15 targets provided to them at HWCs level. These 15 targets are as described in *Appendix* (*Institutionalizing Performance Linked Payments (PLP) for Community Health Officers (CHO) and Frontline Workers (FLW): A Guidance Note*, n.d.). Knowledge gaps: A study conducted on "Are our sub-centers equipped enough to provide primary health care to the community: A study to explore the gaps in workforce and infrastructure in the sub-centers from North India"; concluded that the physical infrastructure and manpower availability at the SCs needs considerable improvement as per the Indian Public Health Standard (IPHS) and poor availability of essential drugs and equipment needs to be addressed at the earliest(Bashar &Goel, 2017). A study on "'A poverty in understanding': Assessing the structural challenges experienced by community health workers and their clients"; concluded that the key barriers encountered by CHWs include difficulty in accessing resources for clients, lack of effective public transportation, barriers within the professional workforce, and the overarching negative impact of structural violence on client motivation (Logan, 2019). Presently there is lack of literature regarding the performance and challenges of mid-level health providers related to targets of primary health care.

I. RESEARCH METHODOOGY

Population and Sample

Study setting: The present study was conducted at HWCs of selected districts (i.e. Tarntaran and Sri Amritsar) of Punjab.

Type of study: In order to accomplish the main objectives of the study, a *mixed method approach* is adopted; with a *Sequential Explanatory Design* for performance assessment and challenges encountered by mid-level health providers related to targets of primary health care implementation at HWCs in Punjab, India. A Sequential Explanatory Design consists of two distinct phases: quantitative followed by qualitative; in which the qualitative data are collected and analysed second in sequence and help to explain or elaborate on, the quantitative results obtained in the first phase.

Study subjects: The study subjects in present study were MLHPs working at HWCs of selected districts (i.e. Tarntaran [118] and Sri Amritsar [202]) of Punjab.

Sample size: For quantitative aspect, the sample size of present study was 299. While for the qualitative aspect, sample size was 10 till the point of saturation.

Total population of MLHPs was 320 (i.e. Tarn Taran [118] and Sri Amritsar [202]). But only 299 MLHPs were available (under quantitative part), meeting the inclusion and exclusion criteria and willing to participate in the study (9 MLHPs were on leave and 12 MLHPs refused to participate in the study); whereas the sample size for Qualitative research part was 10 MLHPs (till saturation point).

Data and Sources of Data

In present study, 2 districts (i.e. Tarntaran and Sri Amritsar) are selected based on convenience, as the researcher has familiarity with these districts. Consecutive Sampling (also known as total enumerative sampling) was used to select sample for the present study. So, every subject (i.e. MLHP) meeting the inclusion criteria was chosen from the selected districts. For quantitative aspect (Performance assessment), semi-structured interviews were conducted and for qualitative aspect (understanding of challenges), a series of semi-structured, in-depth interviews were carried out. Semi-structured Questionnaire (based on 15-Targets) were used to collect data for quantitative aspect of performance assessment. Based upon quantitative data, a flexible

rough plan was outlined for in-depth interviews (qualitative aspect) to understand the challenges. A written consent was obtained from the study participants.

Name and location of experiment

(Semi-structured interviews and a series of semi-structured, in-depth interviews)

Under quantitative aspect, semi-structured interviews were conducted; including the deployment of demographic questionnaire followed by self-structured Questionnaire (based on 15-Targets) to assess the performance of MLHPs related to targets of primary health care implementation. The questionnaire was filled by the MLHPs of respective HWCs, while the researcher validated the responses by observing the specific manual as well as online records. The location (most probably the block level i.e. CHCs) and timing was selected based on the convenience of the MLHPs. In each selected district, MLHPs were selected (by consecutive sampling) in semi-structured interviews with 30-60 minutes of duration.

For qualitative aspect (understanding of challenges), 10 in-depth interviews were carried out. Open-ended questions were used to gather data regarding the challenges faced by MLHPs in achieving the Primary Health Care targets. Each in-depth interview was conducted telephonically after ensuring prior contact with specific MLHPs purposively along with prior informed consent and duration of individual interviews was ranging from 30 to 60 minutes. Timing of each interview was according to the convenience of the participants. All interviews were digitally recorded, translated from local language to English by the researcher and checked by research assistant (Union Leader) for the quality.

Under qualitative aspect, for a series of semi-structured, in-depth interviews, a clear rough plan of 15 open ended questions was used to explore and understand the challenges encountered by the MLHPs related to targets of primary health care implementation. Under qualitative data collection procedure, Purposive sampling was used by the researcher with special focus on confidence of MLHPs to speak and explore the challenges associated with achieving the primary health care targets. The in-depth interviews were conducted telephonically. Researcher was the moderator of in-depth interviews. Timing of in-depth interviews was planned based on the feasibility of the MLHPs. A smart phone audio recorder was used during the in-depth interviews. In-depth interviews were conducted till the point of saturation.

PROCEDURE FOR DATA COLLECTION

The data collection for final study was done from 10 May 2022 to 30 September 2023 (quantitative data and sideways followed by qualitative data) at the selected HWCs of 2 districts (i.e. Tarn Taran and Sri Amritsar). The formal permission was obtained from the Civil Surgeons of selected districts.

The data collection was done by the researcher with the help of a local union leader of MLHP cadre, which was recruited as research assistant to help in data collection as well as to motivate the MLHPs for active participation in the research study.

The study participants i.e. MLHPs were explained about the objectives and usefulness of the study along with the maintenance of confidentiality regarding the personal identification of them. Also, a written informed consent was obtained from the MLHPs indicating their willingness to participation in the study [NOTE: Separate written consents were obtained for quantitative as well as qualitative part of the study] and confidentiality as well as anonymity was maintained.

Total population of MLHPs was 320 (i.e. Tarn Taran [118] and Sri Amritsar [202]). But only 299 MLHPs were available (under quantitative part), meeting the inclusion and exclusion criteria and willing to participate in the study (9 MLHPs were on leave and 12 MLHPs refused to participate in the study); whereas the sample size for Qualitative research part was 10 MLHPs (till saturation point).

Under quantitative data collection procedure, data was collected by Consecutive Sampling (also known as total enumerative sampling); while under qualitative data collection procedure, Purposive sampling was used by the researcher with special focus on confidence of MLHPs to speak and explore the challenges associated with achieving the primary health care targets. The MLHP union leaders at district and block levels assisted the researcher in data collection.

Under the quantitative aspect, semi-structured interviews were conducted for demographic profile and target-based performance assessment. Last 3 months data was collected regarding the target-based performance assessment and data was sideways verified by researcher through online records as well as manual records to ensure the reliability of the data.

The research was led by a female researcher and MLHP from the region with the experience of MLHP cadre. As researcher anticipated that MLHPs may lack interest to actively participate in research study because of overburden of work, a local union leader was recruited and trained to assist in both qualitative as well as quantitative data collection for the study. The quantitative interviews were jointly conducted by researcher as well as research assistant, while qualitative interviews were conducted by researcher herself with prior assistance of local union leader in arranging and motivating the MLHPs to actively participate in the interviews. The team ensured a good rapport prior to and during the interviews.

For qualitative aspect (understanding of challenges), 10 in-depth interviews were carried out. Open-ended questions were used to gather data regarding the challenges faced by MLHPs in achieving the Primary Health Care targets. Each in-depth interview was conducted telephonically after ensuring prior contact with specific MLHPs purposively along with prior informed consent and duration of individual interviews was ranging from 30 to 60 minutes. Timing of each interview was according to the convenience of the participants. All interviews were digitally recorded, translated from local language to English by the researcher and checked by research assistant (Union Leader) for the quality.

Statistical Tools

RESEARCH TOOL

The research tool was selected and developed by keeping in mind the objectives of study, reviewing theory sources, previous studies, surfing internet and through discussion with experts of related field.

Quantitative tool was having 2 sections i.e. A and B. Section A consisting of 7 socio-demographic variables and 5 professional attributes, while Section B containing semi structured questionnaire based on 15 targets of Primary Health Care (for MLHPs) provided by NHM (National Health Mission), Punjab at HWC level (year 2022).

The Qualitative tool consisted of a rough plan of 15 open ended questions based on 15 targets of Primary Health Care.

SECTION A: Demographic Questionnaire and professional attributes

- Socio-demographic data includes age, gender, qualification, marital status, monthly family income, own monthly income and area of residence.
- Professional attributes include experience as MLHP, number of trainings undergone, distance of working place from residence, means of transport used for official duties and population coverage.

SECTION B: 15 Targets of Primary Health Care (Provided by NHM Punjab)

It is based on 15 targets of Primary Health Care (for MLHPs) provided by NHM (National Health Mission), Punjab at HWC level (year 2022).

Sr. no.	Targets	Definition	Benchmark	Source of Verification	Target physical	Achievement (Physical)
1	Proportion of Pregnant Women registered who are identified as High Risk	**Numerator -** No. of pregnant women who are identified as High Risk **Denominator -** Total no. of pregnant women who received ANC service (as per schedule) in a month	Should be minimum of 10% of ANC case	RCH register/ RCH portal/ANMOL		
2	Proportion of High-risk pregnant women who received follow-up care	**Numerator -** No. of high-risk pregnant women who received follow up care (as per schedule) in a month **Denominator** – Total no. of high-risk pregnant women identified	100% of high-risk pregnant women who received follow up care	RCH register/ RCH portal/ANMOL		
3	Proportion of cases referred for TB screening	**Numerator-** Number of suspected TB cases referred for diagnosis **Denominator-** Total number of patients attended in OPD	Minimum 3% cases identified from OPD should have been referred for screening of TB at a higher facility	Nikshay/ SHC – HWC Register		
4	Number of footfalls in the month	No. of OPD cases including new and old cases	300-400 per month for 5000 population (Estimated @60 cases per 1000 population)	HWC portal/ Register at the public health facility		

5	Proportion of individuals 30 years and above, screened for NCDs are registered on CPHC – NCD application	**Numerator** – No. of individuals screened for NCDs are registered on CPHC –NCD app **Denominator** – Total no. of Individuals 30 years and above screened for NCDs in a month	120 individuals over 30 years of age per 5000 population and 74 individuals over 30 years of age per 3000 population has to be screened for NCDs & registered on CPHC-NCD app Once all the targeted population is registered on CPHC – NCD app, the HWC would be awarded full points in all the subsequent months.	CPHC-NCD App		
6	Proportion of individual 30 years or above screened for Hypertension (including repeat yearly screenings for Hypertension)	**Numerator** – No. of individuals screened for Hypertension **Denominator-** Total population of 30 years and above of age	120 individuals over 30 years of age per 5000 population and 74 individuals over 30 years of age per 3000 population screened for Hypertension every month. Once hypertension screening of all the targeted population is done, the HWC would be awarded full points in all the subsequent months	NCD /HWC Portal		
7	Proportion of HTN patients on treatment	**Numerator** – No. of HTN patients who received treatment including follow up treatment **Denominator** – Total no. of diagnosed patients for HTN	70%	NCD /HWC Portal		

8	Proportion of individual 30 years or above screened for Diabetes (including repeat yearly screenings for Diabetes)	**Numerator** – No. of individuals screened for Diabetes **Denominator-** Total population of 30 years and above of age	120 individuals over 30 years of per 5000 population and 74 individuals over 30 years of age per 3000 population screened for DM every month. Once DM screening of all the targeted population is done, the HWC would be awarded full points in all the subsequent months.	NCD /HWC Portal		
9	Proportion of patients with Diabetes on treatment	**Numerator** – No. of DM patients on treatment who received follow up care **Denominator** – Total no. of diagnosed patients for DM	70%	NCD /HWC Portal		
10	Teleconsultation services	Teleconsultation services provided to the patients by CHO	At least 15 teleconsultations to be done in the reporting month	e-Sanjeevani	**15**	
11	Wellness session organized at HWCs	Number of Wellness sessions organized at HWC in the reporting month	At least 10 sessions/month	HWC Portal	**10**	
12	Wellness activities held as per annual calendar	**Numerator-** No. of Wellness activities held **Denominator** - Total no.of Wellness activities to be held in the month as per annual health calendar	100%	HWC Portal		
13	Monthly JAS meeting held with minimum 60% of the members	**Numerator** - No. of meetings held with 60% members present **Denominator** - Total no.of meetings planned	100%	Self-reported/ HWC Register		

14	VHSND held against planned (CHO/ MO to monitor a minimum of two per month)	**Numerator -** No. of VHSND held **Denominator -** Total no.of VHSND planned (1VHSND/village/ month)	90%	Self-reported/ CPHC-NCD application		
15	a. Monitoring of Referral cases – Upward	**Numerator:** Number of cases seen at the receiving higher Centre **Denominator:** Total cases referred to higher centres	80%	CPHC-NCD App		
	b. Monitoring of Referral cases - Downward	**Numerator**: Number of patients seen at home/SHC after being referred downwards by the higher centre **Denominator:** Number of SHC referred patients seen at higher centre	80%	CPHC-NCD App		

Descriptive Statistics

The data was collected, organized, tabulated and analysed by descriptive and inferential statistics (for quantitative data) and thematic framework approach was used for the analysis of qualitative data.

Under the quantitative analysis, the findings of the analysed data were presented in form of tables and figures.

- The target-based performance of MLHPs was assessed by mean
- For better understanding of the performance of MLHPs, the performance was classified into satisfactory performance (i.e. less than or equal to 75%) and unsatisfactory performance (i.e. more than 75%) based on predetermined criteria.
- The association between performance and selected demographic and professional attributes was assessed by using chi-square test.

Under the qualitative analysis; the researcher has firstly listened to each recording several times to write the verbatim. Verbatim was translated in English by the researcher and checked by research assistant for quality. Transcripts were read several times to achieve the adequate understanding. During and after transcription of data, researcher became familiar with the data by reading the transcripts.

Bracketing, the self-reflection performed by the researcher to examine her personal beliefs regarding the challenges experienced by MLHPs in achieving Primary Health Care targets at HWCs. Their opinions on

various types of challenges on their duties were listened and recorded. These recordings were heard and re-heard many times and 10 recordings were finally selected as **Saturation Point**.

Data has been interpreted using Tables and detailed descriptions to the themes.

During the initial content analysis, hand coding was used by making notations in the transcript margins. Each coding or statement reflected a particular sentence or section of the transcript. Theme clusters were then identified after identifying broad meanings from the significant statements. The data analysis resulted in emergence of 6 distinct but inter-related themes with several subthemes in the study. Total 6 themes, 23 sub-themes and 62 codes were emerged from in-depth interviews which were clustered in tables as described under Qualitative Analysis section.

RESULTS AND DISCUSSION

The data was classified and analysed on the basis of the objectives of study.

Study objectives

1. To assess the performance of mid-level health providers related to targets of primary health care.
2. To find association of the performance of mid-level health providers with their selected socio-demographic variables.
3. To understand the challenges encountered by mid-level health providers related to targets of primary health care.

Quantitative Analysis

The quantitative part analysis is as described ahead:

Organization of quantitative findings of the study

Section I: Frequency and percentage distribution of demographic variables of mid- level health providers

Section II: Average percentage of 3 months target based performance of MLHPs

Section III: Unsatisfactory versus satisfactory average percentage of 3 months target based performance of MLHPs

Section IV: Association between demographic variables and 3 months target based performance of MLHPs

SECTION I

Table 1: Frequency and percentage distribution of demographic variables of mid- level health providers

N=299

S. No	Demographic Variables	Frequency (f)	Percentage (%)
1	Age (in years)		
	a. <26	63	21.1
	b. 26-30	**120**	**40.1**
	c. 30-35	95	31.8
	d. >35	21	7.0
	Mean ± SD 29.26 ± 4.094		
2	Gender		
	a. Female	**275**	**92.0**

	b. Male	24	8.0
3	Qualification		
	a. BSc (Nursing)	**240**	**80.3**
	b. BAMS	31	10.4
	c. MSc Nursing	22	7.4
	d. GNM*	6	2.0
4	Marital status		
	a. Married	**186**	**62.2**
	b. Unmarried	98	32.8
	c. Divorced/Separated	15	5.0
5	Monthly family income in INR		
	a. ≤10,001	19	6.4
	b. 10,002-29,972	60	20.1
	c. 29,973-49,961	**82**	**27.4**
	d. 49,962-74,755	55	18.4
	e. 74,755-99,930	18	6.0
	f. 99,931-199.861	22	7.4
	g. ≥ 199,862	43	14.4
6	Your monthly earning in INR		
	a. 20,000 - 30,000	**182**	**60.9**
	b. 30,001 - 40,000	95	31.8
	c. 40,001-50,000	9	3.0
	d. More than 50,000	13	4.3
7	Area of residence		
	a. Urban	**151**	**50.5**
	b. Rural	148	49.5

***GNM-** only first batch of MLHPs were having GNM qualified candidates.

Table 1 shows the frequency and percentage distribution of demographic variables of Mid-Level Health Providers. Based on age, 63 (21.1%) MLHPs were having age less than 26 years, 120 (40.1%) MLHPs were in 26-30 years of age, 95 (31.8%) MLHPs were having age of 30-35 years; while only 21 (7%) MLHPs were belonging to more than 35 years of age.

According to Gender, majority of the MLHPs were females i.e. 275 (92%) and only 24 (8%) MLHPs were males.

While Qualification showed that majority i.e. 240(80.3%) MLHPs were BSc nurses, also 31(10.4%) MLHPs were BAMS, whereas 22(7.4) MLHPs were MSc nurses and only 6 (2%) MLHPs were GNM nurses.

Based on the Marital status, majority of the MLHPs i.e. 186(62.2%) were married, while 98 (32.8%) MLHPs were unmarried and 15(5%) MLHPs were divorced/separated. The monthly family income of MLHPs showed that the majority of MLHPs i.e. 82 (27.4%) were having the monthly family earning between 29,973-49,961 INR, while 19(6.4%), 60(20.1%), 55(18.4%), 18(6%), 22(7.4%) and 43(14.4%) MLHPs were having the monthly family income of ≤10,001, 10,002-29,972, 49,962-74,755, 74,755-99,930, 99,931-199.861 and ≥ 199,862 INR respectively. While the monthly earning of MLHPs showed the results as 182(60.9%) i.e. the majority of MLHPs having monthly

earning of 20,000-30,000; while 95(31.8%), 9 (3%), 13(4.3%) MLHPs having the 30,001 - 40,000, 40,001-50,000 and more than 50,000 INR respectively of monthly earning.

The residence status of MLHPs does not show much variation as results showed that 151(50.5%) MLHPs were belonging to the urban areas and 148(49.5%) MLHPs were from the rural areas.

Table 2: Frequency and percentage distribution of Professional Attributes of mid- level health providers

N=299

Sr. No	Professional attributes	Frequency (f)	Percentage (%)	Mean	SD
1	Experience as MLHP (in years)				
	a. 1-2	141	47.2	1.83	0.69
	b. 2-3	**152**	**50.8**		
	c. >3	6	2		
2	Number of trainings undergone				
	a. 1-3	**139**	**46.5**		
	b. 4-6	115	38.5		
	c. More than 6	45	15.1		
3	Distance of working place from your residence (in KM)				
	a. <50	**224**	**74.9**	44.33	57.17
	b. 50-100	46	15.4		
	c. 101-150	11	3.6		
	d. 151-200	7	2.3		
	e. >201	11	3.6		
4	Means of transport used for official duties				
	a. Personal vehicle	**165**	**55.2**		
	b. Public/Private transport	128	42.8		
	c. By walk	3	1.0		
	d. Multiple	3	1.0		
5.	Population coverage				
	a. <5000	39	13		
	b. 5000-5500	71	23.7		
	c. >5500	**189**	**63.3**		

Table-2 illustrates that based on the experience of working, study showed 152(50.8%) MLHPs were having 2 to 3 years of experience, also, 141(47.2%) were having 1-2 years of experience and only 6(2%) were having experience of more than 3 years.

Study results specified that majority of MLHPs i.e. 139(46.5%) were underwent only 1-3 trainings only, while 115(38.5%) and 45(15.1%) MLHPs underwent 4-6 and more than 6 trainings respectively.

Also, the study explored out the distance of working place from the residence of MLHPs as; the majority of the MLHPs i.e. 224(74.9%) were coming from less than 50 KM of distance, while 46(15.4%), 11(3.6%), 7(2.3%) and 11(3.6%) of the MLHPs were travelling the 50-100, 101-150, 151-200 and more than 201 KM of distance.

The results of the study specified that the majority of MLHPs i.e. 165(55.2%) were using the personal vehicle as their means of transport for official duties, while 128(42.8%) were using public/ transport means, 3(1%) were coming to duty by walk and 3(1%) were using the multiple means of transport for their official duties.

Study results also showed the population coverage under the HWCs as 189(63.3%) MLHPs were having population coverage of more than 5500, while 39(13%) MLHPs were having the population coverage of less than 5000 and 71(23.7%) MLHPs were having the population coverage between 5000-5500.

SECTION II

Table-3: Monthly average percentage of target-based performance of MLHPs based upon rank of accomplishment

N=299

Rank	Target No.	Primary Health Care Target	1st month Performance	2nd month Performance	3rd month Performance	Average Performance of Collective 3 months (%)
1.	11.	Monthly 10 Wellness sessions organized at HWC*s	98.6	98.4	96.9	98
2.	12.	Wellness activities held as per annual calendar	95.7	94.2	94.0	95
3.	4.	Number of footfalls in the month	93.8	90.4	93.4	93
4.	13.	Monthly 1 JAS* meeting held with minimum 60% of members	85.2	93.6	93.9	91
5.	2.	Proportion of high-risk pregnant women who received follow-up care	82.8	86.2	85.4	85
6.	1.	Proportion of pregnant women registered who are identified as high risk	78.4	79.8	77.6	79
7.	14.	VHSND* held against planned (CHO*/MO to monitor a minimum of 2 per month)	78.1	78.1	77.7	78

8.	6.	Proportion of individuals 30 years and above, screened for Hypertension (including repeat yearly screenings for Hypertension)	79.0	74.5	78.7	77
9.	8.	Proportion of individuals 30 years and above, screened for Diabetes (including repeat yearly screenings for Diabetes)	73.7	70.0	70.2	71
10.	7.	Proportion of Hypertension patients on treatment	70.8	69.3	71.4	71
11.	9.	Proportion of diabetes patients on treatment	76	69.8	63.9	70
12.	10.	Tele-consultation services (monthly 15)	50.5	50.8	59.6	54
13.	3.	Proportion of cases referred for TB screening (10% of the monthly OPD)	47.7	56.6	54.8	53
14.	5.	Proportion of individuals 30 years and above, screened for NCDs are registered on CPHC-NCD (Comprehensive Primary Health Care- Non-Communicable Disease) application	31.1	41.8	39.5	37
15.	15.(a)	Monitoring of Referral cases upward	33.4	33.1	32.6	33
16.	15.(b)	Monitoring of Referral cases-downward	29.9	30.9	29.8	30

HWC* Health Wellness Centre

JAS* Jan Arogya Samiti

VHSND* Village Health Sanitation & Nutrition Day

CHO* Community Health Officer (also named as MLHP)

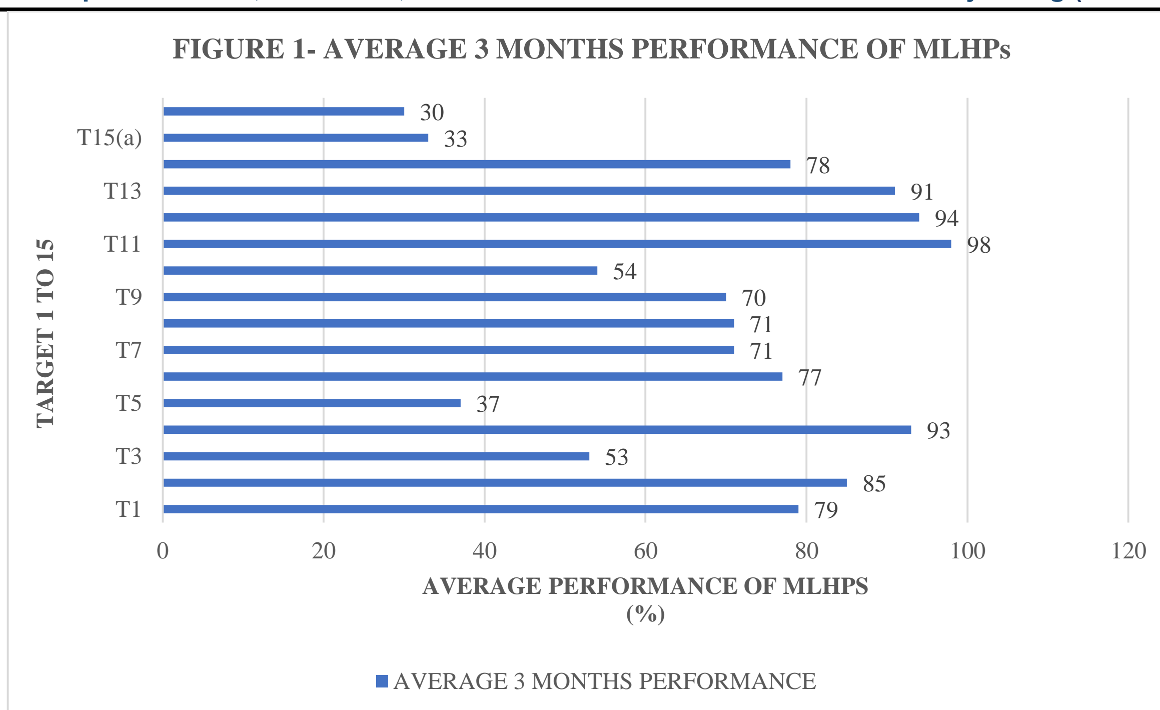


Table 3 and Figure 1 shows the average percentage of 3 months target based performance of MLHPs. As depicted by the table, the 11th primary health care target i.e. wellness sessions organized at HWC; is having the highest average percentage performance by the MLHPs i.e. 98% collective 3 months performance; 98.6%, 98.4% and 96.9% average percentage performance of 1st, 2nd and 3rd month respectively.

The target having the second highest performance by MLHPs is 12th target of wellness activities held as per annual calendar i.e. 95% of collective 3 months; 95.7%, 94.2% and 94% of 1st, 2nd and 3rd month respectively.

The 3rd highest performance achieved by MLHPs is under the 4th target of number of footfalls in the month i.e. 93% of collective 3 months; 93.8%, 90.4% and 93.4% of 1st, 2nd and 3rd month respectively.

The 4th highest performance is under the 13th target of monthly JAS meeting held with minimum 60% of members i.e. 91% of collective 3 months, while 85.2%, 93.6% and 93.9% of 1st, 2nd and 3rd month respectively.

The 5th highest performance is of 2nd target i.e. proportion of high-risk pregnant women who received follow up care i.e. 85% collective, while 82.8%, 86.2% and 85.4% of 1st, 2nd and 3rd month respectively.

The 6th highest performance is of 1st target of proportion of pregnant women registered who are identified as high risk i.e. 79% of collective 3 months, while 78.4%, 79.8% and 77.6% of 1st, 2nd and 3rd month respectively.

The 7th highest performance is of 14th target of monthly 2 VHSNDs held against planned i.e. 78% of collective 3 months, 78.1%, 78.1%, 77.7% of 1st, 2nd and 3rd month respectively.

Next the 8th, 9th, 10th, 11th, 12th, 13th and 14th highest performance by MLHPs is of 6th, 8th, 7th, 9th, 10th, 3rd and 5th target respectively which are of hypertension screening of 30 years and above, diabetes screening of 30 years and above, proportion of hypertension patients on treatment, proportion of diabetes patients on treatment, teleconsultation services, proportion of TB patients referred for screening and 30 years & above individuals NCD screening on CPHC-NCD portal; having collective 3 months performances as 77%, 71%, 71%, 70%, 54%, 53% and 37% respectively; 1st month respective performances as 79%, 73.7%, 70.8%, 76%, 50.5%, 47.7% and 31.1%; while 2nd month respective performances as 74.5%, 70%, 69.3%, 69.8%, 50.8%, 56.6% and 41.8% and 3rd month respective performances as 78.7%, 70.2%, 71.4%, 63.9%, 59.6%, 54.8% and 39.5%.

The least performances i.e. 15th and 16th is of 15(a) and 15(b) targets respectively; having 33% and 30% collective performances of 3 months; while 33.4% and 29.9% of 1st month respectively, 33.1% and 30.9% of 2nd month respectively and 32.6 & 29.8% of 3rd month respectively.

SECTION-3

Table-4: Satisfactory versus unsatisfactory target-based performance of MLHPs

N=299

Sr. No.	Target No.	Primary Health Care Target	Satisfactory performance of MLHPs f(%)				Unsatisfactory performance of MLHPs f(%)			
			1st month	2nd month	3rd month	Average 3 months	1st month	2nd month	3rd month	Average 3 months
1.	11.	Wellness sessions organized at HWCs	292 (97.6)	290 (96.9)	282 (94.3)	288 (96.3)	7 (2.3)	9 (3.0)	17 (5.6)	11 (3.7)
2.	13.	Monthly JAS meeting held with minimum 60% of members	255 (85.2)	280 (93.6)	281 (93.9)	272 (90.9)	44 (14.7)	19 (6.3)	18 (6.0)	27 (9.1)
3.	12.	Wellness activities held as per annual calendar	278 (92.9)	270 (90.3)	268 (89.6)	272 (90.9)	21 (7.0)	29 (9.6)	31 (10.3)	27 (9.1)
4.	4.	Number of footfalls in the month	262 (87.6)	243 (81.2)	259 (86.6)	255 (85.2)	37 (12.3)	56 (18.7)	40 (13.3)	44 (14.8)
5.	14.	VHSND held against planned (CHO/MO to monitor a minimum of 2 per month)	228 (76.2)	227 (75.9)	226 (75.5)	227 (75.8)	71 (23.7)	72 (24.0)	73 (24.4)	72 (24.2)
6.	2.	Proportion of high risk pregnant women who received follow-up care	210 (70.2)	221 (73.9)	211 (70.5)	214 (71.5)	89 (29.7)	78 (26.0)	88 (29.4)	85 (28.5)
7.	1.	Proportion of pregnant women registered who are identified as high risk	191 (63.8)	192 (64.2)	182 (60.8)	188 (63)	108 (36.1)	107 (35.7)	117 (39.1)	111 (37)
8.	6.	Proportion of individuals 30 years and above, screened for Hypertensio n (including	185 (61.8)	154 (51.5)	179 (59.8)	173 (57.7)	114 (38.1)	145 (48.4)	120 (40.1)	126 (42.3)

		repeat yearly screenings for Hypertension)								
9.	9.	Proportion of diabetes patients on treatment	197 (65.8)	168 (56.1)	151 (50.5)	172 (57.5)	102 (34.1)	131 (43.8)	148 (49.4)	127 (42.5)
10.	7.	Proportion of Hypertension patients on treatment	160 (53.5)	147 (49.1)	163 (54.5)	157 (52.4)	139 (46.4)	152 (50.8)	136 (45.4)	142 (47.6)
11.	8.	Proportion of individuals 30 years and above, screened for Diabetes (including repeat yearly screenings for Diabetes)	160 (53.5)	142 (47.4)	142 (47.4)	148 (49.4)	139 (46.4)	157 (52.5)	157 (52.5)	151 (50.6)
12.	10.	Tele-consulta-tion services	121 (40.4)	124 (41.4)	140 (46.8)	128 (43)	178 (59.5)	175 (58.5)	159 (53.1)	171 (57)
13.	3.	Proportion of cases referred for TB screening	101 (33.7)	112 (37.4)	113 (37.7)	108 (36.4)	198 (66.2)	188 (62.5)	186 (62.2)	191 (63.6)
14.	15(a).	a. Monitoring of Referral cases upward	90 (30.1)	89 (29.7)	86 (28.7)	88 (29.5)	209 (69.8)	210 (70.2)	213 (71.2)	211 (70.5)
15.	15(b).	b. Monitoring of Referral cases-downward	84 (28.1)	84 (28.1)	80 (26.7)	83 (27.6)	215 (71.9)	215 (71.9)	219 (73.2)	216 (72.4)
16.	5.	Proportion of individuals 30 years and above, screened for NCDs are registered on CPHC-NCD (Comprehensive Primary Health Care-Non Communicable Disease) application	61 (20.4)	60 (20)	77 (25.7)	66 (22)	238 (79.5)	239 (79.9)	222 (74.2)	233 (78)

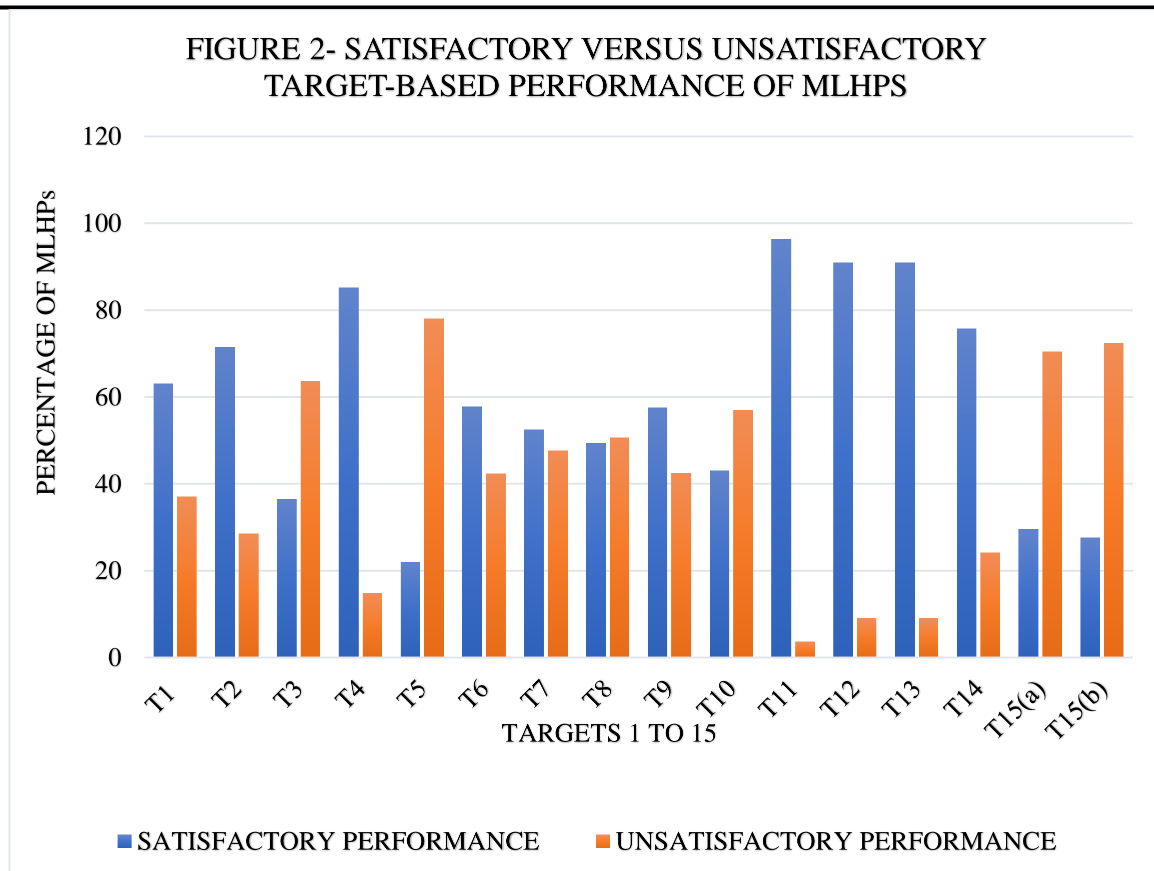


Table 4 and Figure 2 shows the Satisfactory versus Unsatisfactory performance of MLHPs, where satisfactory performance means the performance more than 75%; while unsatisfactory performance stands for the performance less than or equal to 75%.

The 11th target of wellness sessions organized at HWCs is having number of MLHPs who obtained the highest satisfactory performance i.e. out of 299 MLHPs, 288(96.3%) MLHPs obtained satisfactory performance of average 3 months, while 11(3.7%) MLHPs obtained unsatisfactory performance in 11th target; also, 11th target has 1st,2nd and 3rd month satisfactory performance by 292(97.6%), 290(96.9%) and 282(94.3%) MLHPs respectively; while the 1st, 2nd and 3rd month unsatisfactory performance obtained by 7(2.3%), 9(3%) and 17(5.6%) MLHPs respectively.

Next, the table also shows that the 13th target of monthly JAS meeting held with minimum 60% members is having 272(90.9%) MLHPs who obtained satisfactory performance of collective 3 months, along with 255(85.2%), 280(93.6%) and 281(93.9%) MLHPs having satisfactory performances of respective 1st, 2nd and 3rd month; while the unsatisfactory performance of collective 3 months is obtained by 27(9.1%) MLHPs and 44(14.7%), 19(6.3%) and 18(6%) MLHPs were having unsatisfactory performances of respective 1st , 2nd and 3rd month.

Similarly, The 12th target of wellness activities as per annual calendar is also having the second highest number of MLHPs who obtained the satisfactory performance as 272(91%) MLHPs obtained satisfactory performance in average 3 months with 278(92.9%), 270(90.3%) and 268(89.6%) MLHPs having respective 1st, 2nd and 3rd month satisfactory performance; while opposite to that; in 12th target, unsatisfactory 3 months average performance was obtained by 27(9%) MLHPs and unsatisfactory 1st, 2nd and 3rd month performance obtained by 21(7%), 29(9.6%) and 31(10.3%) MLHPs respectively.

Also, the 3rd highest number of MLHPs who obtained the maximum satisfactory performance is under the 4th target of number of footfalls in the month i.e. 255(85.2%) MLHPs have collective 3 months satisfactory performance with 1st, 2nd and 3rd month satisfactory performances obtained by 262(87.6%), 243(81.2%) and 259(86.6%) MLHPs respectively; but opposite to that the collective 3 months unsatisfactory performance is obtained by 44(14.8%) MLHPs, with 1st, 2nd and 3rd month unsatisfactory performances by 37(12.3%), 56(18.7%) and 40(13.3%) MLHPs respectively.

Further, 227(75.8%) MLHPs obtained satisfactory performance in collective 3 months, in 14th target of VHSND held against planned; with 228(76.2%), 227(75.9%) and 226(75.5%) MLHPs having 1st, 2nd and 3rd month satisfactory performances respectively; similarly, 72(24.2%) MLHPs obtained unsatisfactory performance in collective 3 months,

with 1st, 2nd and 3rd month unsatisfactory performance obtained by 71(23.7%), 72(24%) and 73(24.4%) MLHPs respectively.

Also, it is clear from the table that the 2nd target of proportion of high risk pregnant women who received follow-up care is having 214(71.5%) MLHPs who obtained satisfactory performance in collective 3 months along with 210(70.2%), 221(73.9%) and 211(70.5%) MLHPs having 1st, 2nd and 3rd month satisfactory performances respectively; whereas 85(28.5%) MLHPs obtained unsatisfactory performance in collective 3 months under this target, also with 89(29.7%), 78(26%) and 88(29.4%) MLHPs who showed unsatisfactory performance during 1st, 2nd and 3rd month respectively.

Under 1st target of proportion of pregnant women registered who are identified as high risk; out of 299 MLHPs, 188(63%) MLHPs were having satisfied performance in collective 3 months, whereas 111(37%) MLHPs were having unsatisfied performance; similarly, under this target, the satisfied performance in 1st, 2nd and 3rd month was obtained by 191(63.8%), 192(64.2%) and 182(60.8%) MLHPs respectively; but opposite to that, 108(36.1%), 107(35.7%) and 117(39.1%) MLHPs obtained unsatisfied performance in 1st, 2nd and 3rd month respectively.

Also, the 6th target i.e. proportion of above 30 years individuals screened for hypertension was having the 3 months average of satisfied performance obtained by 173(57.7%) MLHPs; whereas 126(42.3%) MLHPs obtained unsatisfied performance; also the 1st, 2nd and 3rd month satisfied performance was obtained by 185(61.8%), 154(51.5%) and 179(59.8%) MLHPs respectively; opposite to that, 114(38.1%), 145(48.4%) and 120(40.1%) MLHPs obtained unsatisfactory performance in respective 1st, 2nd and 3rd month.

Furthermore, the 9th target of proportion of diabetes patients on treatment showed 172(57.5%) MLHPs who obtained satisfactory performance in collective 3 months, 197(65.8%), 168(56.1%) and 151(50.5%) MLHPs having satisfactory performances of respective 1st, 2nd and 3rd month; while, 127(42.5%) MLHPs obtained unsatisfactory performance in collective 3 months along with 102(34.1%), 131(43.8%) and 148(49.4%) MLHPs who obtained unsatisfactory performance in 1st, 2nd and 3rd month respectively.

The 7th target i.e. proportion of hypertension patients on treatment showed the satisfactory performance obtained by 157(52.4%) MLHPs in average 3 months, while 142(47.6%) MLHPs obtained unsatisfactory performance in average 6 months; the satisfactory performance in 1st, 2nd and 3rd month was obtained by 160(53.5%), 147(49.1%) and 163(54.5%) MLHPs respectively, whereas 139(46.4%), 152(50.8%) and 136(45.4%) MLHPs obtained unsatisfactory performance in respective 1st, 2nd and 3rd month.

Also, under the 8th target of proportion of individuals above 30 years screened for diabetes, the average 3 months satisfactory performance was obtained by 148(49.4%) MLHPs, but 151(50.6%) MLHPs obtained unsatisfactory performance; the 1st, 2nd and 3rd month satisfactory performance were obtained by 160(53.5%), 142(47.4) and 142(47.4) MLHPs respectively, while 139(46.4%), 157(52.5%) and 157(52.5%) MLHPs obtained unsatisfactory performance in respective 1st, 2nd and 3rd month.

Under the 10th target of teleconsultation services, 128(43%) MLHPs obtained satisfactory performance in average 3 months, while 171(57%) MLHPs were having unsatisfactory performance, similarly, the 1st, 2nd and 3rd month satisfactory performance was obtained by 121(40.4%), 124(41.4%) and 140(46.8%) MLHPs respectively; whereas 178(59.5%), 175(58.5%) and 159(53.1%) MLHPs obtained unsatisfactory performance in respective 1st, 2nd and 3rd months.

As shown in table, under the 3rd target i.e. proportion of cases referred for TB screening, only 108(36.4%) MLHPs were having satisfactory performance, but 191(63.6%) MLHPs were having unsatisfactory performance; also under this target, only 101(33.7%), 112(37.4%) and 113(37.7%) MLHPs were having satisfactory performance in respective 1st, 2nd and 3rd months, whereas, 198(66.2%), 188(62.5%) and 186(62.2%) MLHPs obtained unsatisfactory performance.

As shown under the 15(a) target of monitoring referral cases upward; only 88(29.5%) MLHPs obtained satisfactory performance, but 211 (70.5%) MLHPs obtained unsatisfactory performance in average 3 months; the satisfactory performance in 1st, 2nd and 3rd month was obtained by only 90(30.1%), 89(29.7%) and 86(28.7%) MLHPs respectively, whereas 209(69.8%), 210(70.2%) and 213(71.2%) MLHPs were having unsatisfied performance.

Also, under the 15(b) target of monitoring referral cases downward, only 83(27.6%) MLHPs obtained satisfactory performance in average 3 months, while 216(72.4%) MLHPs obtained unsatisfactory performance; similarly, only 84(28.1%), 84(28.1%) and 80(26.7%) MLHPs obtained satisfactory performance in respective 1st, 2nd and 3rd month; whereas 215(71.9%), 215(71.9) and 219(73.2%) MLHPs obtained unsatisfactory performance.

At last, under the 5th target of proportion of individuals 30 years and above screened and registered on CPHC-NCD portal, least MLHPs i.e. only 66(22%) MLHPs obtained satisfactory performance, whereas 233(78%) MLHPs obtained unsatisfactory performance in average 3 months; similarly only 61(20.4%), 60(20%) and 77(25.7%) MLHPs were having satisfactory performance in respective 1st, 2nd and 3rd month; whereas majority of MLHPs i.e. 238(79.5%), 239(79.9%) and 222(74.2%) MLHPs were having unsatisfactory performances in respective 1st, 2nd and 3rd months.

Table 5: Target-Wise versus Overall Performance of MLHPs

N=299

Performance	Target Wise Performance		Overall Performance	
	f	%	f	%
Satisfactory	177	59	89	30
Unsatisfactory	122	41	210	70
Mean	69.6		69.6	
SD	21.75		8.46	

SECTION IV

Table 5: Association between demographic variables and 3 months target based performance of MLHPs

N=299

Sr. No.	Demographic variables	Unsatisfactory performance	Satisfactory performance	"χ^2 value" "df" "p value"
1	Age (in years)			
	a. <26	39	24	10.9 (10.7)
	b. 26-30	94	26	3
	c. 30-35	67	28	0.01 S
	d. >35	10	11	
2	Sex			
	a. Female	193	82	0.004 (0.004)
	b. Male	17	7	1
				0.95 NS
3	Qualification			
	a. B.Sc (Nursing)	169	71	2.11 (2.24)
	b. BAMS	24	7	3
	c. MSc Nursing	13	9	0.55 NS
	d. GNM*	4	2	
4	Marital status			
	a. Married	126	60	1.72 (1.48)
	b. Unmarried	72	26	3
	c. Divorced/Separated	12	3	0.70 NS

5	Monthly family income in INR a. ≤10,001 b. 10,002-29,972 c. 29,973-49,961 d. 49,962-74,755 e. 74,755-99,930 f. 99,931-199.861 g. ≥ 199,862	12 45 50 40 14 15 34	7 15 32 15 4 7 9	6.77 (6.59) 6 0.34 NS
6	Your monthly earning in INR a. 20,000 - 30,000 b. 30,001 - 40,000 c. 40,001-50,000 d. More than 50,000	131 62 7 10	51 33 2 3	1.91 (1.75) 3 0.59 NS
7	Area of residence a. Urban b. Rural	108 102	43 46	0.24 (0.24) 1 0.62 NS
8	Experience as MLHP (in years) a. 1-2 b. 2-3 c. >3	98 107 5	43 45 1	0.53 (0.36) 2 0.87 NS
9	Number of trainings undergone a. 1-3 b. 4-6 c. More than 6	100 79 31	39 36 14	0.36 (0.40) 2 0.83 NS
10	Distance of working place from your residence (in KM) a. <50 b. 50-100 c. 101-150 d. 151-200 e. >201	156 33 10 5 6	68 13 1 2 5	5.52 (5.54) 6 0.48 NS
11	Means of transport used for official duties			

	a. Personal vehicle	115	50	8.21 (7.01)
	b. Public/Private transport	91	37	6
				0.27 NS
	c. By walk	1	2	
	d. Multiple	3	0	
12	Population coverage			
	a. <5000	15	24	5.12 (5.05)
	b. 5000-5500	35	36	1
	c. >5500	142	47	0.02 S

$^*P<0.05$ level of significance   NS-Non significance   S-significance

Table 5 shows the association between demographic variables and 3 months target based performance of MLHPs, which was calculated by using chi-square test. The test reveals that the two demographic variables i.e. Age and Population coverage shows significant association with performance of MLHPs at 0.05 level of significance. While, there was no association of performance of MLHPs with other demographic variables i.e. sex, qualification, marital status, monthly family income, own monthly earning, area of residence, experience as MLHP, number of trainings undergone, distance of working place from area of residence and means of transport used for official duties etc.

Qualitative Analysis

This section deals with the analysis of data collected through in-depth telephonic interviews from 10 Participants (till the saturation point). The data was recorded by audio-recordings with prior intimation to study participants. The data was repeated back to them verbally during interviews to establish credibility/validity.

The terms used by the participants to describe the challenges faced by them in achieving the Primary Health Care targets were analyzed through Qualitative analysis.

The researcher identified every item/word expressed by participants to formulate themes which could further explain the challenges under various titles, which have been represented diagrammatically as well as in Table form.

The theme generated from data explored the challenges faced by MLHPs including how they view their current situation. Each theme was analyzed into smaller subjects to get a better understanding in form of Sub-themes as represented ahead in Table 8.

Table- 6: Approach to Qualitative Analysis

The approach to qualitative analysis is attempted to present in a simple manner in following table:

Common Action	**Action in Detail**
• Prepare Transcript	1. Prepare a verbatim transcription of the content of each individual based on her audio recording.
• Read single transcript	2. Note initial comments and ideas in the margin
• Generate initial themes	3. Transform comments into themes
• Create initial list of themes	4. Listing of themes
• Cluster themes	5. Order the list of themes into connected Ideas
• Create a list or table with super ordinate themes and sub-themes	6. Tabulate data at one place
• Go to the new transcript	7. Repeat above process and refine list of themes
	8. Create a final table with super ordinate themes and sub-themes

The above same approach is rewritten in scientific language and presented in a separate table given below:

Table 7: Stepwise Approach to Qualitative Analysis

Step-1 Generate Transcription	Verbatim transcription of the content of each individual was made based on her audio recording.
Step-2 Read and Re-read	Transcribed text of the verbatim data was read and re-read several times to understand the contents of the interview.
Step-3 Make initial notes	Anything of interest, identified in specific ways in participants' interviews (about an issue) were noted.
Step-4 Develop Codes	Based on step-3, volume of data was reduced but capturing complexity as it is. Codes were identified as per the meaning units.
Step-5 Seach for connections across emergent themes	Mapping how the codes appear to fit together and related to research questions. Grouping codes together to develop super-ordinate subthemes and themes.
Step-6 Move to the next sample	Move to next case; try to set aside assumptions and knowledge of previous text.
Step -7 Look for patterns across samples	1. Connections between/across interviews, of most likely/consistent themes, identify individual and shared meaning. 2. Contents of subtheme were translated into English from original words in local language (Punjabi) and are then presented in the table.

Challenges faced by MLHPs in achieving the Primary Health Care Targets

The data analysis of 10 participants resulted in emergence of 6 distinct but interrelated themes with several subthemes in the study.

The main themes emerged from the discussions were challenges experienced by MLHPs in achieving the Primary Health Care targets. These broad themes and their inter-related sub-themes and codes along with related verbatims are summarized in Table no.___. Total 6 Themes, 23 Sub-themes, 62 Codes were emerged from in depth interviews which were represented diagrammatically and clustered in tables as follows:

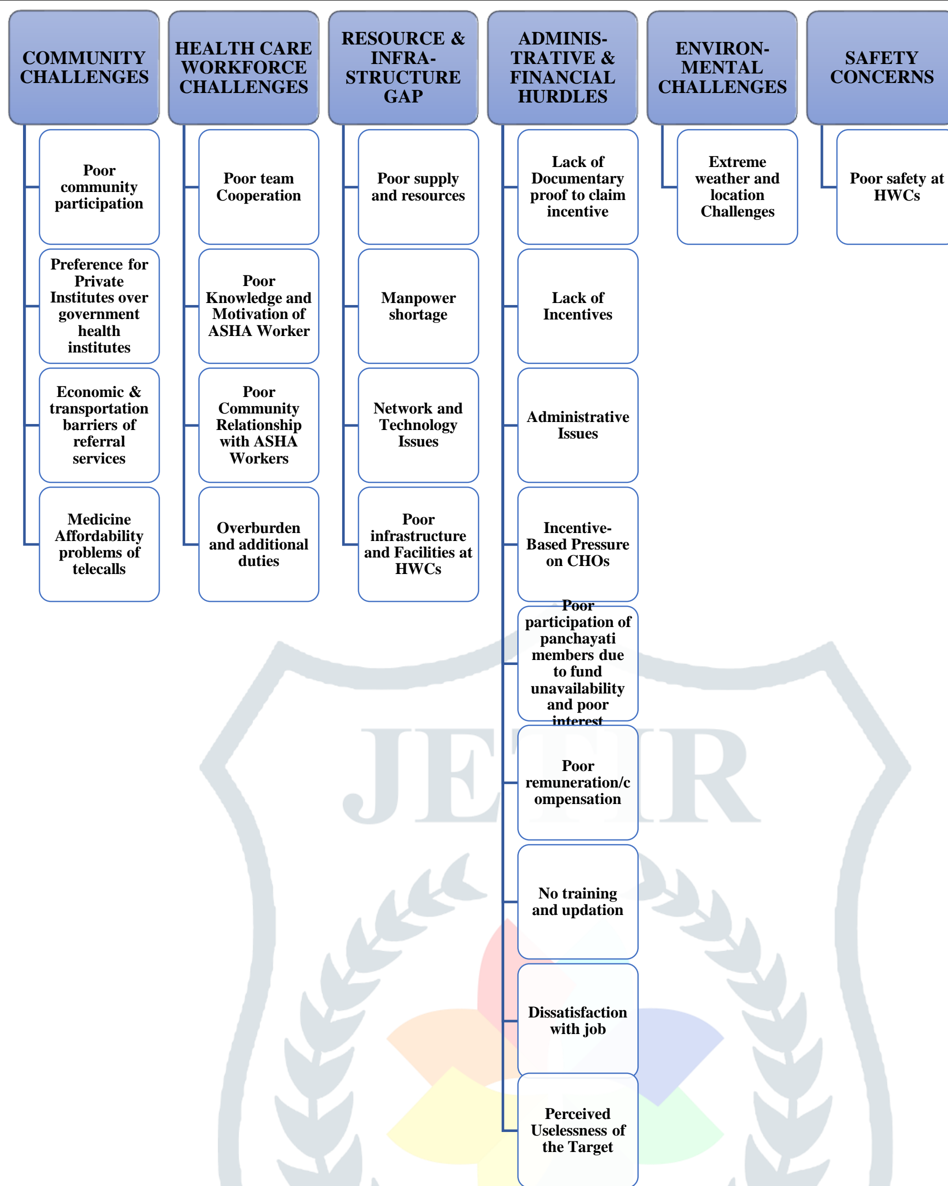


FIGURE 3- Challenges faced by MLHPs in achieving the Primary Health Care Targets

Table 9- Description of Theme- **Community Challenges**

N=10

Subtheme	Code	Verbatim
1.1 Poor community participation	• Poor pregnancy reporting • Patients' non-compliance with referrals • Community resistance to ASHAs • Lack of regular ANC attendance by high-risk pregnant women • Stigma and confidentiality concerns • Lack of follow up compliance	• Pregnant women avoid reporting & register the pregnancy too late • Even we refer patients, but they don't go for testing • People ignores ASHAs & don't cooperate • High risk pregnant women don't visit for regular follow up • Some people avoid to tell, like some patients having HCV or HIV, they don't want to tell, as you also know that there are so many drug abusers in the community • Patients are asked for follow up, but they don't come back."

1.2 Preference for Private Institutes over government health institutes	• Private health care preference by pregnant women • Poor image of government health facilities • Poor patient attendance by government health care staff • Financially rich families distrust government health care • Perceived better quality health care at private health institutes • Patients experiencing lack of resources at government health institutes	• Pregnant women prefer to have TT injection in private institutes • People avoid the government institutes because of the previous images of government medical institutes • People complains to have repetitive rounds for govt. health services so they prefer private institutes • High standard/rich families don't believe in government institutions • Patients prefer private healthcare institutions because of perception of better quality of care • Patients complain that government institutes even don't have medicines, so why they go there…
1.3 Economic & transportation barriers of referral services	• Financial barriers in referral services • Social isolation inhibits follow up compliance • Distance and transportation barrier in referral services	• Lack of money inhibit their visit for testing • Some abandoned at homes (especially elderly), can't visit for NCD follow up • Patients from distant villages don't visit referral institutes because of poor transportation and distance
1.4 Medicine Affordability problems of telecalls	• Tele-hub doctors prescribing medicines other than available medicines	• Even tele-hub doctors prescribe medicines, which we don't have; so, people think better to go to nearby private clinics if they have to spend for diagnostics and medicines

1.1 Poor community participation

MLHPs complained regarding poor community participation in delivery of Primary Health Care services at HWC level; thus, creating a major challenge in achieving many targets of Primary Health Care. As we know that community participation and acceptance is must in delivering the Primary Health Care services, but MLHPs complained that community people often do late registration of pregnancies thus leading to delay reporting of high-risk pregnancies and even sometimes, high risk pregnancies remain hidden because of the miscommunication by the community people; MLHPs commented as:

- "We (CHOs) come to know regarding their high risk (pregnancy) registration later because they (pregnant women) avoid reporting."
- "Yes, people sometimes don't want to register the pregnancy; sometimes, they don't even register in private institutes."
- "People also ignore as some register the pregnancy too late even up to 24 weeks, so high-risk pregnancy comes in detection too late."

Some MLHPs also revealed that people hesitate to visit the higher government health facilities i.e. PHC/CHC/DH (leading to failure of referral services) and even don't co-operate with ASHA workers.

- "People avoid going to CHC, as they become afraid to be diagnosed as TB patients."
- "Even we refer patients, but they don't go for testing or don't visit."
- "Even ASHAs sometimes hesitate as if they compel patients for TB testing, they ignore, sometimes misbehave or show poor co-operation to them."

MLHPs deliberated that people simply demand the medicine from us at HWC only and don't visit to higher referral facilities for screening/diagnosis or treatment services; if people are referred to higher referral facilities, they simply prefer to visit the nearby RMPs in place of going to the referral health facilities.

- "Mam, TB cases, honestly I refer surely, like if someone having old cough, as this season most people are suffering from cough, we refer surely, but according to me, this target should not be there because what people do, they say that give us medicine, give cough syrup, but if we advise them for diagnostic, they will say that mam you are simply putting us to be tensed, simply give us the medicine, if you can't give us the medicine, we can take from private nearby RMP."
- "No mam, patient don't go, agree to me mam, people say that just give us medicine if you can, otherwise we take from somewhere else."
- "All patients don't go, some patients who are interested, go to referred place, but most of the patients don't go, they simply asks for the medicine and say that if you don't give, we will take medicine from some nearby RMP."
- "There should be some another target on this place as people don't go, what we can do."
- "The target of referral upward and downward is sometimes achieved and sometimes not, depending on the patients' wishes."
- "This target of referral upward and downward is difficult to achieve as people don't go to the referral place especially the female patients which say that how we will go alone, you simply give the medicine to us as we don't have someone to accompany and we can't go alone."
- "Patients often prefer nearby RMPs in place of going to the referral health facility."

People also avoid going to the higher referral place because if they are already taking treatment of chronic health problem from somewhere else, they feel it useless to go to the higher referral for prescription of medicine & MLHPs are also compelled to refer the new HTN or DM patients as new patients firstly have to be referred to higher government health facility for prescription; after that only they can continue treatment from HWCs.

- "If new HTN patient is coming, we have to refer the patient firstly to PHC/CHC, but if the patient is already taking HTN medicine, patient don't go to the referral place and simply demand the medicine."

Also people don't co-operate as the high risk pregnant women don't visit for regular follow up; even after continue efforts of MLHPs.

- "Also people don't visit for regular follow up of high risk pregnancy."
- "ASHA workers make efforts to encourage follow-up, but some patients neglect it."
- "We call again and again on EPIs and even sometimes ASHA workers make home visits to call, but they even then don't visit because of negligence and personal excuses."

Some MLHPs reported that people don't share the medical history properly & so don't undergo the diagnostics because of stigma and confidentiality concerns; knowingly hiding; may be because of fear of society (what others will think about them) even after continue efforts of the HWC team.

- "Yes, some hide surely, some people avoid to tell, like some patients having HCV or HIV, they don't want to tell, as you also know that there are so many drug abusers in the community, especially there are too much in my area."
- "People even if they are having knowledge regarding their problem like being having HIV or HCV, they hide, they don't want to tell and because of this fear only, sometimes they avoid undergoing and diagnostics also."
- "People have phobia from the TB name itself, when we advise them for TB testing, they see strangely to us."
- "People fears of being TB positive and even lack of money inhibits their visit for testing."
- "Patients have phobia regarding being told for TB testing."
- "They have a great fear of TB (as they think that people will avoid us or say bad to us) even after so much guidance and education, so they avoid going for screening."
- "Even people are having phobia from TB; as one time I referred a patient for TB screening who was having severe weight loss and old severe cough; but he did not go for screening and the person died after some months;

don't know if because of TB or heart attack, so people have a phobia from the term TB itself and they simply want the medicine from HWC and don't go for the screening."

MLHPs reported the poor compliance by patients for follow up at HWCs which becomes a challenge in achieving the upward referral services Target. MLHPs said that pregnant women come to government health facilities just for the money-based schemes only; families of pregnant women also don't co-operate and bring the pregnant for regular follow up & also pregnant sometimes avoids visiting alone.

- "There are so many reasons mam, listen, pregnant even don't talk about their pregnancy even up to 3 months; they seek medical help from other sources in the village and just for the money purpose only, they come for registration on 5th or 6th month, just for money purpose."
- "Even some don't register up to 6th or 7th month, they don't tell us, even some family members are also like that they don't bring the pregnant for registration and pregnant avoid to come alone, you also know."

It has been reported by the MLHPs that even after outreach camps too; pregnant don't visit for the regular follow up and always come with excuses to avoid visiting for follow up; even some MLHPs do home visits to achieve the high risk follow up target.

- "Even if we go to their village for outreach camp or EPI, still they don't come for check up and make excuses like they are outside, having some urgent work; even if we call them telephonically, they don't attend the phone calls."
- "Yes, this target if high risk follow up is being achieved, but mostly the pregnant don't visit every month for check up so, we have to make the home visits only to achieve this target."
- "But mostly people ignore and don't come for high risk pregnancy follow up check up; mostly I myself go to the homes of high risk pregnant and do the monthly follow-up check up, otherwise they don't come by self."
- "There is a high risk pregnant case of anemia who is at a nearby walking distance only, but still she don't come for the monthly check-up; even her mother in law say her to go, but don't know why she don't come for check up, I also go to her home for check up and motivate her for check up, but she don't reply back and simply listens."

1.2 Preference for Private Institutes over government health institutes

According to MLHPs, community people (especially the pregnant women) prefer the private health institutes over the government health facilities either because of quality care concerns (as people think that there is better quality care at private health institutes than the government health facilities) or the poor beliefs of people regarding government health institutes from past times itself; also sometimes unavailability of staff or poor medicine stock at government health facilities or over-crowdedness of patients at government health facilities lead to much preference of private health institutes by the community people.

- "Even sometimes they (pregnant women) used to have TT injection in private institutes."
- "Slowly we are making bond with community but still they (people) avoid the government institutes because of the previous images of government medical institutes in their mind."
- "One reason for this can be this also as they (people) have to make too many rounds to district hospitals for blood transfusions, check-ups or even for their diagnostics; so they prefer private medical institutes."
- "Yes, this target of introducing new high risk pregnancies is being achieved upto 98%, still some families don't register like some high standard families don't believe in government institutions; still we ask ASHA workers to motivate such families."

- "Patients often prefer private healthcare institutions over government facilities because they think that there is better quality of care at private institutes."
- "Another issue is poor medicine supply, as people say why we go to the government institutes as they even don't have medicines."

- "Some pregnant women prefer private healthcare due to concerns about the quality of government institutes."
- "Sometimes people know the reason of being high risk e.g. LSCS case surely will undergo LSCS only and they lack believe in quality of government institutes and prefer the private institutes for LSCS because of safety issues."

- "If we advise the client to undergo some diagnostics by saying that you need to undergo, but patient comes back to us only again and again, but don't go there as we know that at DH, if suppose he go today to DH, first thing is that he will not get doctor there, if getting the doctor after much time, doctor will give the diagnostics in written, until that the lab closes; like this only mam, her 3 to 4 days get wasted simply."
- "Sometimes people visit (the government health facility), but come back complaining that staff was on leave."

MLHPs also reported that people with good financial conditions mostly prefer the private health institutes over the government health care institutes.

- "People have the psychological concept that the private medicines are better than the government medicines."
- "Some families with higher financial condition mostly prefer private health institutions."
- "The only issue faced is that some families with higher financial condition mostly prefer the private health institutions."

1.3 Economic & transportation barriers of referral services

MLHPs reported that patients avoid to visit the referral institutes especially because of distance and transportation problems; monetary issues and dependency of elder patients also inhibit their visit to the referral places.

- "Mam, we send the patients for TB screening but they don't go, as they want to get the medical facility near to home only."
- "Distance factor also affects the follow-up of NCD patients as the patients from other distant villages (under the HWC) don't visit because of poor transportation and distance."
- "People don't come back or even don't visit to referral institute, because of distance factor."
- "People fears of being TB positive and even lack of money inhibits their visit for testing."
- "Some of the HWCs are located in abandoned areas and people avoid visiting due to distance."
- "Some people, especially elderly, who are abandoned at homes, can't visit for tests."
- "They (patients) prefer to go to nearby RMPs in place of going to distant referral institutes like PHC/CHC/DH."
- "Distant people avoid visiting the HWC."

1.4 Medicine Affordability problems of telecalls

MLHPs noticed that some of the medicines prescribed during the telecalls are unavailable at dispensaries; but all the patients can't afford those medicines because of financial factors. Even because of telecalls; sometimes people also think that they have simply wasted their time at dispensary as the medicine/ diagnostic services are not available at dispensary; so next time they directly go to the nearby private health facilities as they have finally to spend on medicines or diagnostics.

- "Some patients cannot afford the medicines prescribed during tele-consultations."
- "Even telecall doctors prescribe medicines, which we don't have; so, people think better to go to nearby private clinics as they think if they have to spend for diagnostics and medicines, so why to waste time in coming to dispensaries."

2. Table10- Description of Theme - **Health care workforce challenges**

N=10

Subtheme	Code	Verbatim
2.1 Poor team Cooperation	• Lack of team support in target related health care activities • No active participation by team members • ANMs role dominance being an inhibitory factor towards target achievement • CHOs being a new cadre-leading to poor acceptance by other cadres • CHOs alone being accountable for NCD work, not the whole HWC team • Data falsification by ASHA workers • Underreporting of high-risk pregnant cases by ANMs and ASHA workers	• ANM, MPHW-male and ASHA workers don't participate much in target achieving activities • Team participates, but after saying many times, otherwise, no one takes the responsibility by self • ANMs want that the ASHA workers should follow us only as we are preparing the reports for them • All cadres are having a problem with CHOs, may be because of a new cadre or even because of our incentive • Only the CHOs are being pressurized for the NCD work, other team members don't help at all. • Sometimes, ASHA workers use fake data • ANMs and ASHA workers hide the high-risk pregnant women to reduce their work burden
2.2 Poor Knowledge and Motivation of ASHA Worker	• Lack of knowledge and active participation by ASHA workers	• ASHA workers having lack of knowledge regarding high-risk pregnancy and don't show much interest, always trying to reduce the work burden
2.3 Poor Community Relationship with ASHA Workers	• People distrust ASHA workers	• People avoid registering the pregnancy to ASHA workers
2.4 Overburden and additional duties	• Overburden as inhibitory factor in follow up compliance • Providence of new tasks on daily basis • Poor job description of CHOs • Overburden of online work as well as physical records • Demand of reports by higher authority during unofficial timings	• We have to personally call again and again for regular follow up, but more work burden sometimes doesn't permit • Often, we are provided with new tasks frequently on daily basis which affects our targets • We get works of another cadres, which is refused by them; enhancing our burden • We maintain online as well as offline records for 15 targets and many other records too leading to over burden • We are asked to give reports anytime even after the duty hours!

2.1 Poor team Cooperation

MLHPs reported that the HWC team members i.e. ANM, MPHW-male and ASHA workers don't participate or show co-operation in target achieving activities especially in wellness sessions, calendar day activities and outreach NCD camps; sometimes show a little co-operation after taking many efforts.

- "There is lack of team cooperation mam; ANM or male worker doesn't participate at all in wellness sessions or health awareness activities."
- "Team also participates, but after saying many times, otherwise, no one takes the responsibility by self."
- "There is poor cooperation of staff, including ASHA workers, in wellness sessions or calendar day health activities; they don't come."
- "My staff ANM and male worker don't accompany me in the area for the wellness session."
- "What about the male workers? No, male workers don't participate at all in this."
- "Even our own team members don't show much interest (in VHNSND/JAS meeting)."

Also, MLHPs having complaint regarding the ANMs that they demotivate ASHA workers to co-operate with the MLHPs as ANMs only make monthly report for the ASHA workers and they want that ASHA workers do all according to them only.

- "ANMs try to refuse the ASHA workers to come as ANMs want that the ASHA workers should follow us only as we are preparing the reports for them."

MLHPs noticed that all other health cadres are having issues because of them either because of the new cadre (being new in the health department, other cadres are not accepting easily) and also having incentive payment along with the salary makes other cadres being resistant to them.

- "All cadres are having a problem with CHOs, may be because of a new cadre or even because of our incentive."

According to MLHPs, Even the HWC team members sometimes refuse the work provided by higher authorities that create a problem in achievement of targets.

- "Poor team efforts also inhibit this target achievement, e.g. when ASHAs were asked for TB survey by the higher authority, but they didn't show much interest."

Also, MLHPs pointed out that the ASHA workers lack interest in TB related activities because of no any special incentive is provided to them for TB related activities; e.g. if ASHAs are transferring sputum samples from HWC to PHC/CHC, they don't get any travelling expenses or incentives.

- "ASHA workers lack interest in TB related activities as they say that we don't get any incentive for this."
- "ASHA workers also participate too less and their participation is mostly negligible."
- "The major problem is the transportation of sample, so solution only is possible if ASHA workers are being paid a special incentive for the transportation of sample."
- "This target achievement depends upon the team efforts only, because we can just refer the suspected cases from the OPD for TB screening, but people don't go to PHC or CHC; so here ASHA worker should take the sample to the referred place for screening test, but ASHA workers mostly hesitate and say that why we take the sputum sample, we don't get anything for this work."

MLHPs complained that ASHA workers and ANMs don't do monthly high risk pregnancy follow-up honestly; ASHAs don't take much efforts for high risk pregnancy follow up; even ANMs also do 4 ANCs only for the high risk pregnancy, avoid to do monthly follow up of high risk pregnancies; even administration also don't take any action or motivate to ANMs for monthly follow up of high risk pregnancies.

- "ASHA workers sometimes lack interest in follow up of high-risk cases."
- "ANMs also don't cooperate in high risk pregnant follow up monthly as ANMs do only 4 check up as usual irrespective of high-risk pregnancy, also ANMs say to the high risk pregnant to come for overall 4 check ups and don't motivate them to visit every month for check up."
- "Even our administration also doesn't say ANMs to do monthly follow up of high risk pregnant, so there is fault of administration also."

- "So, it's not the fault of ANMs if they are doing only 4 check up for high risk pregnancies as they do 4 check up only from the starting of their job, so it's the responsibility of administration to say the ANMs, but administration only compels and pressurize the CHOs only to do each and every work and nobody say to the ANMs."

MLHPs even don't get team co-operation in NCD work related activities; there are 5 targets related to NCD work itself, stills MLHPs reported poor participation of team members in NCD work as ANMs don't do CBACs online on the NCD portal which creates a barrier in doing NCD screening online, even team members don't accompany in outreach NCD camps.

- "Team members even don't help during the NCD camps."
- "A state letter was come with proper duties of each team member in NCD screening, but only the CHOs are being pressurized for the NCD work, other team members don't help at all."
- "The success of NCD screening mostly depends on teamwork, but ANMs and other team members are not actively participating."
- "ANMs don't do the CBAC forms online and even male workers also don't help at all."
- "ANMs don't enroll or fill the CBAC forms on the NCD portal which make it impossible for us to do the screening online on the NCD portal; even CBAC forms supply is not coming for the ASHA workers, so they don't fill the CBAC forms."
- "ANMs not filling CBAC forms online, this makes the CHOs' unable to perform online screening on NCD portal."
- "CHO can't do screening online on NCD portal until CBAC forms are not filled online; ANMs are not doing CBAC online, so our whole work being vanished."
- "No any issue is there in achieving this target of screening hypertension patients expect the online screening issue because the ANMs are not doing the CBAC forms online."

Also, MLHPs noticed that sometimes ASHA workers report the fake data to them, about which they come to know about later.

- "Still sometimes, ASHA workers use fake data; Sometimes ASHA workers tell us the LMP of new pregnant, but later we come to know that they were giving us the fake data."

MLHPs also say that some ANMs and ASHA workers avoid reporting new high risk pregnancy cases to them as they have to take extra efforts for high risk pregnancies.

- Sometimes even ASHA workers hide the high risk pregnant women as they have the concern that up to the end of pregnancy they have to take efforts and be with them.
- "Listen to me mam, saying honestly that firstly ANMs don't register any high risk pregnant easily, but as we know that it's our target and we have to achieve this, as our part of salary is based on those targets."
- "According to me, ANMs don't send much high risk pregnant as according to me, it seems difficult for them to follow up the high risk and also they have to do the line listing of high risk pregnant also."
- "ANMs mostly ignores some common problems like leucorrhea in pregnancy; If a pregnant is complaining to have leucorrhea along with abdominal pain, ANMs simply ignore and says that it is normal, no need to do anything, it will subside slowly; ANMs also avoid introducing the new high risk pregnant as they think that they have to see them till the end and take extra efforts."
- "ANMs sometimes avoid reporting the new high risk pregnant; mostly ANMs try to avoid the new registration of high risk pregnant so as to reduce their burden."
- "Yes, in the starting, it was the existing problem that CHOs have more high risk pregnant, but ANMs registered less high risk pregnant, because obviously they fear from having more home visits and work burden; But, now as we are reporting the high risk pregnancies, now the reports mostly matches with the ANMs as ANMs also have to note because of our report."
- "But ANMs mostly avoids introducing the new high risk pregnancies; if I have 3 high risk pregnant in a month, ANM will have 1, don't know why they ignore to report the new high risk pregnant."

2.2 Poor Knowledge and Motivation of ASHA Worker:

MLHPs said that the ASHAs are having poor motivation and knowledge regarding high risk pregnant irrespective of many meetings and trainings of ASHAs at HWC as well as at higher institutes.

- "ASHA workers sometimes lack motivation or proper knowledge regarding high-risk pregnancy identification and reporting."
- "Also, there is lack of knowledge in ASHA workers regarding high-risk pregnancy; Even they are introduced with the basic reasons of high risk, many trainings and meetings have been arranged for ASHA workers time to time at HWCs, PHCs and even at CHC level to enhance their knowledge; still, they lack motivation in reporting the high risk (pregnancy)."

2.3 Poor Community Relationship with ASHA Workers:

MLHPs also reported the poor relation of ASHAs with the community people.

- "Yes, one reason is the relation of ASHA workers with the community, if there is poor relation, some people avoid even registering the pregnancy to ASHA workers or they register late; they register when they face some problem."

2.4 Overburden and additional duties

MLHPs complained the overburden of work on their duties, because of which they are sometimes become unable to call repeatedly to the pregnant for asking them to come for check-up or follow up. Overburden also inhibit their visit to every pregnant's home for check-up.

- "Because of burden also, it becomes difficult for CHOs to specially call again and again to pregnant and ask them for regular follow up or checkups."
- "We have to personally call again and again for regular follow up, but more work burden sometimes doesn't permit so, because of other many burdens like NCD work, vaccination or COVID sampling burden, also we have 15 targets to look upon, so overburden also inhibits regular follow up."
- "Sometimes, it is not practically possible to go to each and every home for ANCs because of overburden."

The extra duties and addition of new works on daily basis of also affect the OPD of MLHPs at HWC as mentioned:

- "COVID vaccination inhibits OPD as there's poor presence of CHOs at HWC because of vaccination duties in areas."
- "Also, CHOs are provided with new works every few days later, e.g., TB survey door to door, door-to-door COVID vaccination, so it's really difficult to achieve OPD target."
- "Still, COVID work has not finished, and it's affecting our OPD."
- "On a daily basis, we are provided with some new tasks that hinder our OPD target, especially because of our absence at HWCs."
- "The extra tasks and duties provided to us also affect our OPD."

- "Also, these days, we are being asked for OAT duties at different places, even there is no consideration of the distance factor."
- "Whenever any new task comes, mostly CHOs are said to do which affects our OPD badly and we become unanswerable when people ask us regarding our much absence at HWCs."
- "During COVID time, approximately the full year, we did only COVID work and HWCs were closed, which affected our OPD too badly."

MLHPs are having consideration regarding the overburden of duties and poor clarification of duties of MLHPs, because of which they are being provided with many more new duties day by day; finally affecting their primary health care targets.

- "There is too much overburden of responsibilities."
- "There is poor job description of CHOs and so there is no boundary of responsibilities."
- "Every day's extra duties such as Oat clinic and Mohalla clinic duties are affecting our targets."

MLHPs introduced regarding the overburden because of the extra duties of other cadres, which they are asked to perform when other cadres avoid their duties; which is being felt as harassment by the MLHPs.

- "We always get works of another cadres too which enhances our burden and overall, sometimes leads to harassment."

Also, MLHPs have complaint of overburden because of double work of online as well as manual records maintenance as mentioned ahead.

- “The only major issue is the online work burden and records maintenance; at least physical records should be reduced if online work is also there.”
- “Over burden is there, we can’t say that if we have come back from our duty and we are free; See firstly we maintain manual records, then do them online.”

MLHPs said that they are being asked for reports by seniors irrespective of the official duty hours, even sometimes during the night time.

- “We are asked to give reports anytime even after the duty hours”
- “Onetime during night, our MO put the message in the official group to provide a report immediately, when a CHO replied back that this is not the time for official work and to put a message, then the MO changed the group settings so that nobody can message in the group and speak.”

3. Table 11- Description of Theme - **Resource & infrastructure gaps**

N=10

Subtheme	Code	Verbatim
3.1 Poor supply and resources	• Own expenditure to buy supply • Inadequate diagnostic facilities • Inadequate NCD medicines inhibit NCD follow up • Shortage of medicines because of Mohalla clinics • Poor availability of IEC materials	• CHOs sometimes have to buy their own iron-calcium supply • Inadequate diagnostic facilities affect the quality of care • Frequent shortages of essential medicines and equipment affect follow-up care of NCD patients • They provide most of the medicine supply to Mohalla clinics and we always have shortage of medicine supply • IEC material is not being provided mam
3.2 Manpower shortage	• Shortage of HWC staff • Shortage of telecall hub doctors	• We are not having a proper manpower • Mostly 2 to 3 doctors only deal with whole Punjab CHOs
3.3 Network and Technology Issues	• No internet connections • Poor internet services in rural areas	• we don’t have been provided with internet facility • Telecall don’t proceed and stuck because of network issues
3.4 Poor infrastructure and Facilities at HWCs	• No class four workers at HWCs • No washrooms • No water resources • No transportation for supplies at HWCs • Poor building & space of HWCs	• There is no Class Four workers at HWCs • No washrooms are there at HWCs • No drinking water is there, even no hand washing water facility • There is no transportation facility of BMW/medicine or another supply • My whole staff of HWC is sitting in a single room

3.1 Poor supply and resources

MLHPs complained regarding the poor medicine supply as well as lack of some basic diagnostic equipment especially glucose strips; which leads to poor primary health care services as well as demotivation of patients. MLHPs reported that they have to spend their own money for medicines as well as basic diagnostics to ensure the continuity of health care services.

- “CHOs sometimes have to buy their own iron-calcium supply to ensure continuity of care.”
- “Also, there is poor stock of glucose strips and even sometimes poor Iron-calcium supply demotivate people to come for follow up.”
- “Sometimes we have to buy our own iron-calcium supply to avoid demotivation of people, so government should ensure the continuity of supply and care.”
- “Inadequate diagnostic facilities in some areas affect the quality of care and follow-up.”
- “Problem of diagnostics also exist, when we go to areas for check-ups, we cannot have all the diagnostics there like weighing machine and many more as we have to carry registers, medicines for NCD camps and even laptops and many more.”

- “ASHA workers having the diagnostics in their areas, but they are not in working conditions, so this also inhibits the checkups.”

- “There is lack of glucose strips for regular follow up and checkup of diabetic patients.”
- “Because of lack of medicines, when we say patients that medicine has finished, that leads to demotivation of patients.”

- “Sometimes HWCs don’t have that specific medicine as being prescribed by doctors of higher institutes; leading to failure in downward referral services.”
- “For downward referral also, medicine should be available, which is a major issue.”

- “People also speak to us because of lack of medicine, now see, I got only 10 salbutamol syrups, do you know mam, how I have distributed that! By using small plastic bottles and dividing each syrup into smaller quantities.”

- “From the years, we are putting demands for glucose strips, but still, we are not having the glucose strips.”
- “Yes, this target of DM screening I am achieving easily expect the glucose strips supply issue.”
- “Here, glucose strips issue is there mam, sometimes if we are having strips, we do check, but if not having, we say them to do from outside.”
- “If we buy glucose strips, then only target will be achieved, otherwise not mam.”

- “Even sometimes, medicine supply is provided after 4 to 6 months later.”
- “Main issue in achieving the OPD target is the poor medicine supply.”
- “Another problem is insufficient diagnostics like pregnancy kits, glucose strips etc. are not being provided.”

- “CHOs are sometimes forced to spend their own money to continue NCD screening and treatment because of insufficient supply of essential items like glucose strips and CBAC forms.”
- “Non-availability of glucose strips is a major issue in DM screening.”
- “The major issue faced in DM screening is the lack of availability of glucose strips.”
- “Some people mainly come for sugar check-up and when we say that we don’t have glucose strips, then people say that we came for the sugar testing only, if it is not available then why we have to come here?”
- “There is no supply of glucose strips mam; we are buying the glucose strips and also sometimes anti-hypertensive and anti-diabetic medicines.”

- “Because of lack of medicines, when we say patients that medicine has finished, that leads to demotivation of patients and next time before visiting, they think that if the medicine will be available or not; so, in place of visiting, because of the distance problem, they visit nearby RMPs and avoid coming back in future.”
- “Some medicines have much demand in the community, e.g., cough syrups, analgesics, etc., but we get in less quantity that vanishes in 2-3 NCD camps itself.”

MLHPs pointed towards their inability for follow up of NCD patients because of less quantity of NCD medicine.

- “Because of medicine supply; really, we are too much disturbed, now see, we are getting orders to give NCD medicines, 20 to 30 tablets, like metformin or amlodipine; but now listen mam, how to give 30 tablets to each patient if we are not getting medicine in that much quantity; If 500 tablets or 200 tablets is sufficient! If suppose, we are having 300 population in a village under HWC, but what medicine quantity we are getting, is negligible.”
- “Frequent shortages of essential medicines and equipment affect follow-up care of NCD patients.”

- “If DM or hypertensive patient is coming from a distant village, will demand the whole month medicine, but our available stock of medicine allow us to give only 5 to 10 tablets.”
- “The major issue in HTN and DM treatment is insufficient medicine supply.”
- “There is increasing number of hypertension and DM patients as the year passes, but there is limited medicine supply which makes it impossible to follow up all the NCD patients.”
- “If one-time people are taking medicine, if they come for NCD follow up again, we don’t have sufficient stock to provide them every month.”
- “Our target of HTN and DM treatment achieve easily if the medicine supply is being provided continuously.”
- “The non-availability of anti-hypertensive and anti-diabetic medicine affects the follow up of NCD patients as patients don’t visit back if they don’t get medicine.”

MLHPs specify the lack of furniture and mats for outreach NCD camps as well as yoga sessions.

- “Mam, there is furniture problems in outreach camps, no mats for yoga sessions, etc.”

Also, MLHPs faced the issue of unavailability of relevant supply required for the celebration of specific health calendar days.

- “There is mostly unavailability of relevant supply according to specific calendar day activity, e.g., non-availability of anti-diarrhea medicine or zinc supply on IDCF program.”

MLHPs also pointed towards the Mohalla clinics being a major reason of shortage of medicine supply at HWCs as major parts of the medicine supply is being provided at Mohalla clinics only.

- “Mam, the Mohalla clinics which the government has started recently, they provide most of the medicine supply to Mohalla clinics and we always have shortage of medicine supply.”

(IEC Material Supply Issues)

MLHPs explored out the lack of specific IEC materials for health talks, wellness sessions and health calendar days which makes the output ineffective.

- “Mam, there is only one major issue of poor IEC material supply; when we do a wellness session or calendar health activity.”
- "Sometimes we are asked to get IEC material from CHC on a specific day as that of calendar day activity itself, which is not possible always."
- "Even if we are using the printers for IEC material printouts, the ink is our self-purchase only. Papers also are self-purchase only."
- "IEC material is not being provided mam; I take printouts on my own behalf and distribute them to the people."
- "There is no availability of IEC material."
- "We always have to spend personal funds on IEC materials and supplies."
- "Supply of IEC material is not provided mam, see as it was AIDS days today and administration has put the message today itself to bring the IEC material from CHC, so it was impossible to get."
- "Yes, this target I achieve but is full of stupidity because of poor IEC material and we have to Make the posters by self or take the print outs by spending own money."

3.2 Manpower shortage

MLHPs are being affected with manpower shortage at HWCs as well as on the tele-hub; thus, affecting their primary health care targets.

- "This target (of CBAC filling) is going blank only because I am not having ANM at my HWC, because if where there is no ANM, work can't be done properly; Additional ANM you know that come weekly on one day only and finishes the whole work in one day only and go; so, this is also a big challenge for us as where we are not having a proper manpower."

- "Doctors are often remaining busy & less in no., leading to delays in tele-consultations, but patients don't wait up to that time."
- "There is poor availability of doctors on tele-consultation hubs; mostly 2 to 3 doctors only deal with whole Punjab CHOs."
- "Doctors' availability issue is also there; Only 10 to 12 doctors are there; and all over Punjab, nearby 2800 CHOs are there; Suppose if OPD is more, then while doing OPD, telecalls are not practically possible."
- "There are only 4 to 5 doctors available for whole Punjab state CHOs."
- "Sometimes only 1 to 2 doctors are only there for whole Punjab CHOs that make it a cumbersome task to connect a single telecall in full day."

3.3 Network and Technology Issues

MLHPs explained regarding not having the government provided internet facility at HWCs, also they told regarding the poor network at HWCs which is becoming a major issue in target of telecalls as well as uploading OPD and wellness sessions on AB-HWC portal as mentioned ahead.

- "And still we don't have been provided with internet facility, we don't have good network facility."
- "Sometimes doctors deny the telecalls and even sometimes, after connecting the telecall, telecall don't proceed and stuck in between (even for hours) because of network issues."
- "Mam, telecall don't connect, but we do forcefully only; Because where we are sitting, no network is there."
- "Up to the time, the telecall connects, patient don't wait… yes… mam, patient don't wait, telecall even don't connects full day."
- "Network issues are there and no connectivity is provided to us."
- "At least 1 hour is required for a single telecall, even sometimes continue we use our fingers on phone and patient thinks that they are simply using the phone and not giving the medicine."
- "Patients sometimes have to wait for a long time for a telecall to connect."
- "Yes, some CHOs of my district complaints that they have been unable to connect a single telecall for 2 to 3 days; may be because of poor internet connection in their areas."
- "There are always technical problems with uploading wellness session photos on the AB-HWC portal."

3.4 Poor infrastructure and Facilities at HWCs:

MLHPs are facing many issues regarding infrastructure and other facilities at HWCs as they reported that they are not having class four employee at their HWCs; also, some MLHPs complained regarding no washrooms and no water source for hand washing or drinking purpose and even the barren building of HWC.

- There are no Class Four workers at HWCs.
- "Cleaning issue is also there at our HWCs, exactly, nobody does the cleanliness work as no class four employee has been provided by the government."
- There is poor infrastructure at HWCs.
- No washrooms are there at HWCs, also no hand-washing water, or drinking water.
- "No drinking water is there, even no hand washing water facility, no washroom facility, also there is barren building to sit."

MLHPs are facing the problem of transporting BMW waste from HWC to PHC or CHC and they are being compelled to transport the BMW by themselves; because of which they are feeling the sense of harassment and disrespect. Also, there is no facility of transporting the medicine supply or any other supplies form CHC to HWC; that too they are bringing by themselves only.

- There is no transportation facility of BMW or medicine supply, it's totally the harassment when CHOs (having the charge of HWCs) are said to transport the BMW to PHC and CHC.
- Also, there is no facility of transportation of medicinal or other supply, we (CHOs) are bringing the supply by spending own money and with so much difficulty, this is really a biggest harassment.

MLHPs are having the problem of sitting space as because of single room at HWC, so, the whole staff and patients are being sitting in single room leading to the crowded area; also some MLHPs having complaint regarding the slow process of new building construction as work of construction is under process from many years.

- "Another issue is of sitting space for the OPD patients as my whole staff of HWC is sitting in a single room."
- "The HWC building is under construction from many years as government process is too much slow, which affects the overall performance of HWC."

4. Table 12- Description of Theme - **Administrative & financial hurdles**

N=10

Subtheme	Code	Verbatim
4.1 Lack of Documentary proof to claim incentive	• Unavailability of OPD slips	• This target mostly remains unachieved because of no referral slip or proof availability
4.2 Lack of Incentives	• No special incentive for specific tasks leading to demotivation of HWC staff	• ANMs are not doing CBAC online, as they don't get incentives for CBAC
4.3 Administrative Issues	• Only CHOs being pressurized by higher authority • Dismissal of employee grievances	• Administration doesn't say the ANMs to fill the CBAC forms online and simply forces the CHOs to work • Nobody sees these ground level problems which CHOs are being getting and suffering a lot
4.4 Incentive-Based Pressure on CHOs	• Incentive being a push to work irrespective of need	• Sometimes we are compelled to work just for incentive, irrespective of need
4.5 Poor participation of panchayati members due to fund unavailability and poor interest	• Poor interest of Panchayati members in meetings • Poor co-operation by Panchayati members • Lack of funds lead to demotivation	• Panchayati members don't show much interest, some even don't come • All the Panchayati members don't come on the same timing and also don't wait for each other • VHSND members mostly complain that fund is not coming, what we have to do
4.6 Poor remuneration/ compensation	• Delayed reimbursement of salaries and incentives	• There are always delayed salary and incentive payments
4.7 No training and updation	• No training of latest health activities • Irrelevant mode and timings of trainings	• No initial training was provided regarding JAS meeting when it was added newly • If any training is being arranged, that too they always keep online and on inappropriate timings
4.8 Dissatisfaction with job	• No promotion • Demoralization • Perceived insecurity on job	• Not even our promotion is there • There is demoralization of us is there in each and every work • Some progress should be there, but on this job, nothing is there
4.9 Perceived Uselessness of the Target	• Practical incompatibility of some targets	• I think that this target of TB referral is totally useless

4.1 Lack of Documentary proof to claim incentive

MLHPs pointed towards incompletion of some targets especially the last target of referral services as well as the TB screening target because they have to show the documentary proof for claiming the incentive for those specific targets; but in actual obtaining the referral OPD slips from patients are not always possible as all the patients don't visit back to the HWC after visiting the referral institute.

- "Even if we achieve the target, we are asked for the proof if the patient truly has visited for testing; it's not practically possible sometimes to provide proofs like patient OPD slips as patients sometimes miss or don't bring with."
- "Yes, even if some patients are going for testing, but it's not sure that if he/ she will come back to us as we also need proof to claim for the incentive of this target as we need the OPD slip no."
- "Even if they go for TB testing, they don't come back to us; so, we don't get the CR no. or downward follow up proof for that."
- "This target mostly remains blank or unachieved because of no referral slip or proof availability."

4.2 Lack of Incentives

MLHPs explored out that ANMs avoid the work of filling CBACs online as previously they were getting special incentive payment for CBAC filling; but currently government has stopped that special incentive payment; so, ANM cadre unitedly avoiding the online work of CBAC filling; because of which MLHP's target of NCD screening online is going blank.

- "ANMs are not doing CBAC online, as they don't get incentives for CBAC."
- "Mostly ANMs say that they have done CBACs online in previous years when they were getting special incentives for that work, but now they are not getting any incentive for CBACs online work, so they can't do."
- "ANMs used to do CBACs online when incentives were available, but they have stopped doing so now."

Even some MLHPs told that they are not receiving the incentive for 3 to 4 months and sometimes cutting of incentive without any reason; which leads to demotivation of work for them.

- "Even we don't get incentives for 3 to 4 months, being a demotivation factor for us."
- "Sometimes, incentives are being cut without any reasons, after achieving the targets with so many struggles."

MLHPs also told regarding the issue of ASHA workers incentive as ASHAs don't get any special incentive of TB related activities like transporting the sample to PHC or CHC; being a resistant towards TB screening work.

- "ASHA workers lack interest in TB related activities as they say that we don't get any incentive for this."
- "ASHA workers think that they will do the specific work only if we are being paid a special payment for that."
- "This target achievement depends upon the team efforts only, because we can just refer the suspected cases from the OPD for TB screening, but people don't go to PHC or CHC; so here ASHA worker should take the sample to the referred place for screening test, but ASHA workers mostly hesitate and say that why we take the sputum sample, we don't get anything for this work."
- "The major problem is the transportation of sample, so solution only is possible if ASHA workers are being paid a special incentive for the transportation of sample."

4.3 Administrative Issues

MLHPs are having complaint regarding the administration as the administration simply forces for the work without listening the issues of their cadre; administration simply want the work completion without having any concern regarding the ground problems; also, no proper division of work among the team members (only MLHPs usually being forced to work); and even no proper communication channels used by the administration.

- "Administration doesn't say the ANMs to fill the CBAC forms online and simply forces the CHOs to work."
- "There is a lack of clear communication and understanding from higher authorities regarding the challenges of CHOs which they are facing."

- "Administration thinks that CHOs are having 10 to 12 hands and can do all the works."
- "Our administration if listens to our problems, simply says that what if medicine is not there, it can be adjusted, what if telecall is not connected during official hour, that you can do while going on the Activa too."
- "Nobody sees these ground level problems which CHOs are being getting and suffering a lot."
- "No network connection or government sim card or dongle has been provided to us, simply we are provided with the IDs of tele-consultations and we are asked to do telecall in any condition."

4.4 Incentive-Based Pressure on CHOs

MLHPs told about the incentive related pressure to work in some targets especially in the target of telecalls as if not having the need for telecall, then too they have to complete the target just for the incentive payment purpose; even if sometimes a telecall is taking whole day because of network issue, then too they are compelled to complete the target because of incentive related pressure.

- "Sometimes we are compelled to work just for incentive, irrespective of need"
- "CHOs are under pressure to achieve telecall targets for incentives."
- "In order to achieve the telecall target of 15 calls, we sometimes have to make calls for simple problems, thus just wasting the time."
- "It's very difficult to achieve this target as sometimes, I have to wait for whole day to connect a single telecall, even patients don't wait much until the telecall connects, but what can be done; we have to achieve this target if want to get the incentive."

4.5 Poor participation of Panchayati members due to fund unavailability and poor interest:

MLHPs pointed out the issues of poor participation and co-operation of Panchayati members in specific targets of primary health care like JAS meeting and VHND meetings because of poor interest, busy schedule and mainly because of the financial factors as there is unavailability of funds; because of these all reasons, the targets of VHND and JAS meeting is being affected.

- "There is poor interest of members, which leads to difficulty in arranging 60% members in JAS meeting."
- "Members hesitate to come, especially the sarpanch."
- "All the members try to seek some financial benefit if they are coming."
- "Panchayati members don't show much interest, some even don't come."
- "Being money-minded, they demand for some funds to participate."
- "VHND funds being not available continuously, leads to poor interest of members in VHND and JAS meeting."
- "Members are money-minded and make excuses to come because of no financial benefit to them."
- "All the Panchayati members don't come on the same timing and also don't wait for each other."
- "Next target is our VHSND; this is also in the same way, time pass only; if members come, then only possible, otherwise not."
- "If some Panchayati members get late, the available members don't wait."
- "Sometimes, even a single member doesn't come and makes excuses."
- "Availability or presence of sufficient members is a major issue in JAS meeting."
- "JAS meeting is mainly related to dealing with funds, but fund never has come."
- "The issue of VHSND is also the same, poor interest of members."
- "They simply say that mam just take the photo or signature and let us go, we are having many works to do, so members lack the interest."
- "VHSND members mostly complain that fund is not coming, what we have to do by simply discussing the same things each and every month, if fund is not available, what can be done by simply talking and discussing."

4.6 Poor remuneration/compensation:

MLHPs reported that they are not getting their salaries timely, even the incentives are not being provided with the salary; also, MLHPs complained regarding the less salary according the huge work burden for them; they also want that the incentive should be integrated with the salary; overall the MLHPs are not satisfied with their current renumeration.

- "There are always delayed salary and incentive payments; even incentive payment mostly we get after 3 to 4 months."
- "Our salary is too less according to our overburden of work and raising high prices of each and everything; which make it difficult to survive simply on our salary."
- "Incentives are not received along with the salary."

- "The incentives should be integrated with the basic salary itself."
- "Salary, we don't get timely."
- "One of my friends in CHOs have not gotten salary of 5 months."
- "Even we don't get incentive along with salary, mostly incentive we get after 2 to 3 months."
- "Fund availability should be improved and salary should be increased as our work is too much and accordingly our salary is too less."

4.7 No training and updation

MLHPs are having the concern regarding no trainings before introducing a new job work, e.g. no initial training was there before adding the JAS meeting in the primary health care targets; even if trainings are sometimes arranged, they too being arranged mostly by online mode during the duty hours, which inhibits the proper listening or attendance of training; MLHPs feel dis-satisfied because of no updation on job and lack of trainings.

- "Firstly, no initial training or knowledge was provided regarding JAS meeting when it was added newly to the targets."
- "Even if any training is being arranged, that too they always keep online and on inappropriate timings and we only know, how much we be able to attend these. Online trainings should not be there."
- "No updation is there, nothing, some training should be there, time to time, so as we feel we are gaining something on this job."

4.8 Dissatisfaction with job (being MLHP):

MLHPs explored out their dissatisfaction on job especially because of no promotion in the cadre according to qualification and experience and even because of disrespect on the job.

- "I am thinking to leave this job, yes mostly CHOs are saying the same, and nobody is satisfied."
- "I am not at all satisfied mam, where we have done MSc; We might have become principal after 3 years, but here, not even our promotion is there, only there is demoralization of us is there in each and every work."
- "According to qualification, some progress should be there, but on this job, nothing is there."
- "This job I will surely leave after completion of my 3 years, I will apply in some other field, let's see if some other any entrance test of good government job I may clear; Try is only this to leave this job and prepare for any other government job test and as we are postgraduates mam, we can't manage on this job… yes; Just if we see, we are wasting our qualification, our knowledge is being washed off."

4.9 Perceived Uselessness of the Target

MLHPs described the perceived uselessness of some targets especially the target of TB screening as people don't cooperate if they are asked to go the higher institute for screening as they simply demand the medicine and mostly refuse for screening especially because of phobia from TB, also the target of TB screening increases with the increase in OPD, but if there are no 4 basic presumptive signs of TB are present in patient, patients with 4 to 5 days of cough can't be sent for screening of TB just for the sake of incentive; so, MLHPs don't perceive this TB screening target much useful.

- "Even I think that this target of TB referral is totally useless."
- "This target should not be there because what people do, they say that give us medicine, give cough syrup, but if we advise them for diagnostic, they will say that mam you are simply putting us to be tensed, simply give us the medicine."
- "This target of TB screening referral I have never achieved and I can never even achieve because if my monthly OPD is 450 to 500, my TB screening target will also increase; so it's not possible to achieve this target; suppose if I am referring simple cough patients for TB screening, I will only be answerable if someone will ask that why you have referred simple cough patients for TB screening; obviously some strong case is required for TB screening referral; so practically impossible to get this much strong cases to achieve the target."
- "Even I think that this target of TB referral is totally useless as suppose if I am referring 15 to 20 patients for TB screening and practically will feel that TB has spread widely in my area as I am referring this much patients every month for TB screening, so practically there is no logic of this target."
- "Mam, TB cases, honestly I refer surely, like if someone having old cough, as this season most people are suffering from cough, we refer surely, but according to me, this target should not be there because what people do, they say that give us medicine, give cough syrup, but if we advise them for diagnostic, they will say that

mam you are simply putting us to be tensed, simply give us the medicine, if you can't give us the medicine, we can take from private nearby RMP."

Table 13- Description of Theme - **Environmental factors**

N=10

Subtheme	Code	Verbatim
5.1 Extreme weather and location Challenges	• Hindrance of outreach wellness sessions due to extreme weather conditions	• It's difficult to call people for outreach wellness sessions, especially in extreme weathers of summer and winter

5.1 Extreme weather and location Challenges

MLHPs introduced regarding their ground issues of outreach wellness sessions or camps because of lack of infrastructure in the areas, especially in extreme weather conditions as mentioned below….

- "It's difficult to call people for outreach wellness sessions, especially in extreme weathers of summer and winter."
- "Lack of proper place to conduct wellness session in some villages also affects the outcomes of wellness sessions especially in extreme summer or winters."

Table 14- Description of Theme - **Safety concerns**

N=10

Subtheme	Code	Verbatim
6.1 Poor safety at HWCs	• HWCs at secluded places being a safety concern	• CHOs have to sit alone at the HWCs which are at lonely places and don't have any houses nearby

6.1 Poor safety at HWCs

Some MLHPs showed their concern regarding the poor safety at HWC especially because of HWC at abandoned rural areas and also sometimes they have to sit alone in such conditions with no assurance of safety to them especially to the female MLHPs.

- "Safety issues at HWC are also there as many times, CHOs have to sit alone at the HWCs which are at lonely places and don't have any houses nearby."
- "There are safety issues at HWCs because of lonely HWC locations."

Discussion & Conclusion

This study explored the performance of Mid-Level Health Providers (MLHPs) in achieving the Primary Health Care (PHC) targets at Health and Wellness Centers (HWCs) across selected districts in Punjab. The research employed a mixed-method approach, combining both quantitative and qualitative analyses, to assess not only the performance levels but also to understand the underlying challenges encountered by the MLHPs in achieving the Primary Health Care targets.

Performance assessment of MLHPs

The quantitative aspect of the study involved data collection from 299 MLHPs, focusing on their demographic profile and three-month performance assessment regarding PHC targets. The results revealed a diverse range of outcomes across the various PHC targets.

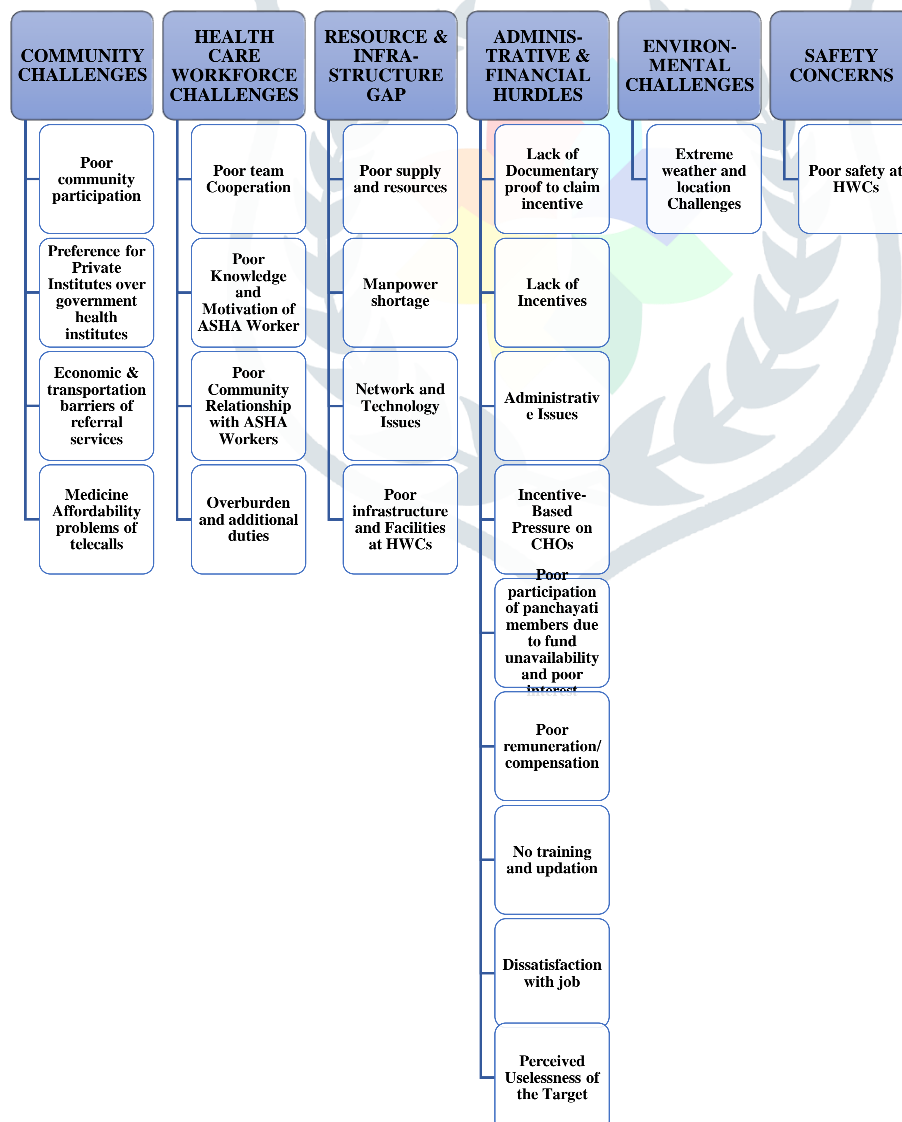
High Performing Areas: The wellness sessions conducted at HWCs demonstrated the highest performance, with a collective three-month average of 98%. Other targets, such as annual health calendar activities (95%) and the number of footfalls (93%), also reflected satisfactory achievement levels. These high-performance areas indicate a strong commitment by MLHPs to promote wellness and engage the community in healthcare initiatives.

Moderate Performance: In contrast, performance related to maternal health care, particularly high-risk pregnancy follow-ups and the identification of high-risk pregnancies, was moderately successful. The proportion of high-risk pregnant women receiving follow-up care reached an average of 85%, while the identification of high-risk pregnancies stood at 79%. This suggests that while maternal health is being addressed, there are gaps in ensuring timely registration and follow-up of high-risk cases.

Low Performing Areas: Notably, targets associated with chronic diseases and referral services, such as screening for non-communicable diseases (NCDs) like hypertension and diabetes, reflected lower performance levels. The average performance for diabetes screening was 71%, while only 54% of teleconsultation services were successfully implemented. The most concerning areas included TB screening (53%), referral services (33%), and NCD screening on the Comprehensive Primary Health Care (CPHC-NCD) platform (37%).

Challenges Encountered by MLHPs

The qualitative analysis, based on in-depth interviews with 10 MLHPs, provided insights into the complex challenges they face in delivering healthcare services at the grassroots level. Six primary themes emerged, shedding light on systemic issues that affect the performance of MLHPs:



Integration of Findings

The findings from the quantitative and qualitative analyses offer a comprehensive understanding of the performance of MLHPs and the challenges they face in delivering primary healthcare services. While the quantitative data demonstrates areas of both success and concern, the qualitative insights provide a deeper understanding of the factors contributing to these performance outcomes.

The MLHPs have shown commendable performance in organizing wellness sessions and handling general patient care, but there is room for improvement in more critical areas such as maternal health, NCD management, and referral systems. The community's reluctance to engage with government healthcare services, coupled with resource constraints and administrative burdens, has significantly hampered their ability to meet some of the PHC targets.

Recommendations for Policy and Practice

To address the identified challenges and improve the performance of MLHPs in achieving PHC targets, several key recommendations are proposed:

Strengthening Community Engagement: Efforts should be made to enhance trust and participation from the community, particularly in rural areas. This can be achieved through targeted health education campaigns, improving the image of government healthcare services, and fostering stronger relationships between healthcare providers and the local population.

Resource Allocation and Infrastructure Development: Ensuring consistent supplies of essential medicines, diagnostic tools, and basic infrastructure at HWCs is crucial. Addressing the gaps in resources will enable MLHPs to provide more comprehensive and reliable healthcare services.

Improving Team Collaboration and Training: To reduce the burden on MLHPs, it is vital to promote a culture of teamwork within HWCs. ANMs, ASHA workers, and other health staff should receive adequate training and motivation to actively contribute to target achievement. Collaborative work environments will enhance the efficiency of service delivery.

Administrative Support and Incentives: Administrative policies should be reformed to provide clearer job descriptions, reduce bureaucratic hurdles, and ensure timely remuneration for healthcare workers. Introducing performance-based incentives for achieving specific PHC targets could motivate staff and improve outcomes.

Addressing Safety and Environmental Barriers: Improving the safety and working conditions of MLHPs, particularly at remote HWCs, is essential. Providing secure infrastructure, transportation for staff, and adequate protection during outreach activities will help in overcoming these barriers.

Concluding Remarks

In conclusion, while MLHPs have demonstrated strong performance in several key areas of primary healthcare, their efforts are hindered by systemic challenges that need to be addressed at both the administrative and community levels. By implementing the recommended strategies, policymakers and healthcare administrators can create a more supportive environment for MLHPs, ultimately leading to improved health outcomes for the population they serve. This research contributes valuable insights into the operational dynamics of HWCs and offers a pathway for enhancing the efficacy of primary healthcare delivery in rural and underserved areas.

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