Evaluation of UHC-Health Wellness Centres in Cuddalore and Virudhunagar Districts

Submitted to

Health and Family Welfare Department
Government of Tamil Nadu

By

Centre for Technology and Policy
Indian Institute of Technology (Madras)

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CENTRE FOR TECHNOLOGY AND POLICY
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Project Team Members:

Research Team
Muraleedharan V R
Rajesh M
Babu R

Field Team Members
Murali Krishnan N
Damodharan M
Tamilvanan A
Manimaran M
Rajendra Prasad A
Saravanan R

For correspondence contact:
V R Muraleedharan (Email: vrm@iitm.ac.in)

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Sincerely

Professor V.R.Muraleedharan
On behalf of everyone involved in this study.

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Section 1. Introduction

The primary objective of this study is to assess the overall impact of HWCs established in the districts of Tamil Nadu. Two specific objectives of the study are:

1. "To what extent and how well the UHC in the state covers the scope of the proposed components / services of the Health Wellness Centres (HWCs) by GoI"; and

2. "To what extent the UHC has effectively improved access to HWCs and reduced out of pocket expenditures (OOPEs) for primary health care in the community".

The report is organised as follows:

Section 2 presents the methodology and results of Household Surveys (HHS) carried out in Cuddalore and Virudhunagar HUDs. Two key results are shown: (a) What proportion of those who felt sick and sought care from HWCs, PHCs and other public facilities, private providers / clinics, pharmacists and others; and (b) how are they spending out of pocket at various levels of care.

Section 3 presents the methodology and results of the Facility Surveys (FS) carried out in Cuddalore and Virudhunagar HUDs. Key results on the footfalls in HWCs (in comparison with HSCs (non-HWCs), volume of work carried out by Village Health Nurses (per month), WHVs (including coverage of patients under MTM scheme) are presented. Section 3.1 presents certain qualitative observations on factors that influence the performance of the field functionaries.

Section 4 presents concluding observations and a few suggestions for additional studies to be carried out to address larger policy questions on the strengthening HWCs.

Section 2: Household Survey

2.1 Methodology

In Cuddalore, a sample of 5 villages (where HWCs are located) and another sample of 5 villages (one each from the villages covered by respective five HWCs) were selected, from Naduveeranpattu Block of Cuddalore HUD.

From each village, a sample of 40 Households were randomly selected. Overall a total of 414 HHS (with 1513 individuals) were surveyed, which constituted about 6.5% population of the 10 villages covered in Naduveeranpattu block.

In Virudhunagar, a sample of 7 villages (where HWCs are located) and another sample of 7 villages (one each from the villages covered by respective 7 HWCs) were selected from three blocks (Tiruchulli, Kariapatti and Aruppukottai) of Virudhunagar HUD.

From each village, a sample of 40 Households were randomly selected. Overall a total of 586 HHS (with 1847 individuals) were surveyed, which constituted about 15% of the total population of 14 villages covered in the three blocks of Virudhunagar HUD.

A Household survey was conducted in Cuddalore HUD during 13 July to 22 July 2022 and in Virudhunagar HUD during 12 Aug to 26 Aug 2022.

NOTE: The population size of villages covered in Cuddalore on an average is much higher than those in Virudhunagar. This may have an influence on the effective coverage of field functionaries in particular (of VHNs and WHVs).

Refer Tables of Appendix 1 for details villages, respective population size etc. A detailed questionnaire was prepared, piloted and administered household level to collect the above mentioned details. (Refer Appendix 4).

2.2 Results

2.2.1. Self-Reported Morbidity

Table 2.1 shows that 19.5% (of 1513 individuals), and 18.6% (of 1847 individuals) have self-reported illness (with a 30-days recall period), in the sampled blocks of Cuddalore and Virudhunagar HUDs.

Table 2.1 Sample Description of Household survey

		Cuddalore			Virudhunagar		
		HWC (5 HWC Villages Surveyed)	**Non HWC (5 non HWC Villages Surveyed)**	**Total**	**HWC (7 HWC Villages Surveyed)**	**Non HWC (7 non HWC Villages Surveyed)**	**Total**
1	HH Surveyed	206	208	414	296	290	586
2	Individuals (N)	781	732	1513	929	918	1847
3	Reported ill in last 30 days (N)	165	131	296	169	174	343
4	% reported ill in last 30 days	21.1%	17.9%	19.5%	18.2%	19%	18.6%

Source: Household survey

Among those who reported illness, 64.9% was females in Cuddalore, and 64.4% was females in Virudhunagar (Refer Table 2.2). Reported illness among the men was about 35% only, in both regions. The median age among those reported illness was 47 in Cuddalore and 50 in Virudhunagar. (Refer Fig2.1)

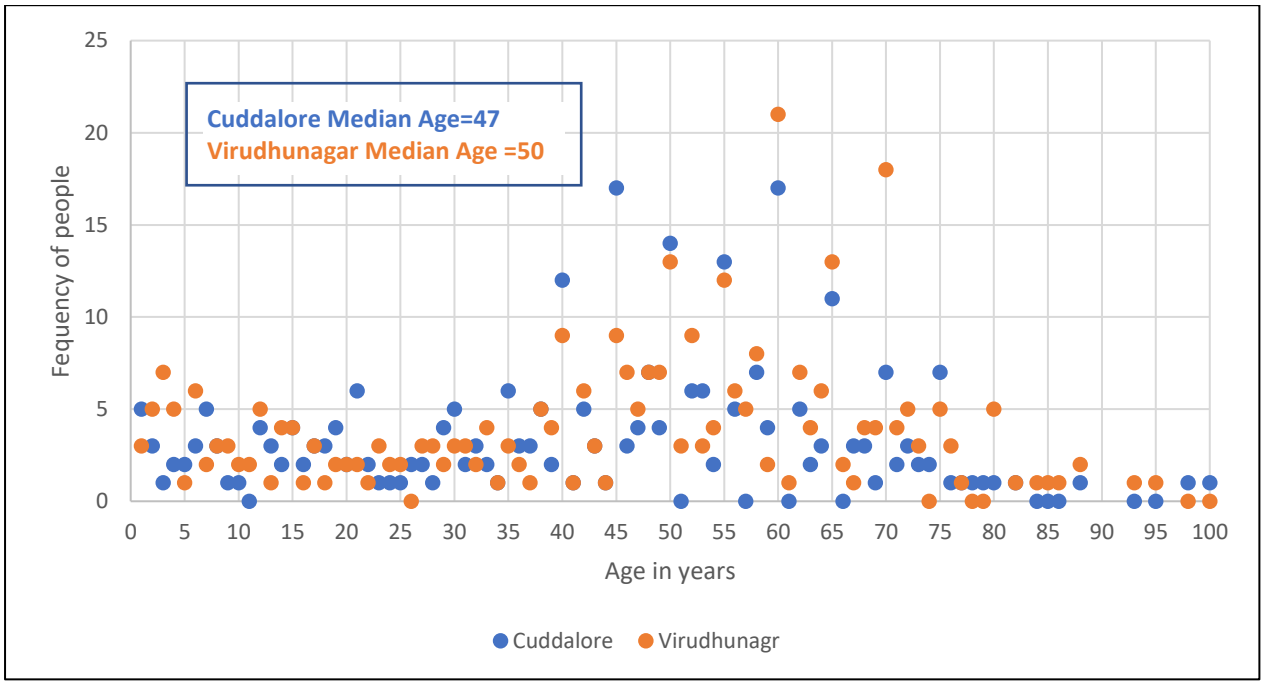
The reasons for the higher reporting of illness by female population needs further research.

Table 2.2 Gender wise reported illness in last 30 days for OP Care

	Cuddalore			Virudhunagar		
Gender	**HWC Village N (%)**	**Non HWC Village N (%)**	**Total N (%)**	**HWC Village N (%)**	**Non HWC Village N (%)**	**Total N (%)**
Male	58 (35.2%)	46 (35.1%)	104 **(35.1%)**	65 (38.4%)	57 (32.8%)	122 **(35.6%)**
Female	107 (64.9%)	85 (64.9%)	192 (64.9%)	104 (61.5%)	117 (67.2%)	221 (64.4%)
Total	**165**	**131**	**296**	**169**	**174**	**343**

Source: Household survey

Fig 2.1 Age distribution for reported ill in last 30 days



Source: Household survey

2.2.2. Self-Reported Chronic Ailments

250 (16.5%) of 1513 individuals surveyed in Cuddalore, and 369 (20%) of 1847 persons surveyed in Virudhunagar, reported to have chronic ailments (Tables 2.3 and 2.4). Of these, nearly 90% reported having Hypertension, or Diabetes or both (Table 2.4). The remaining persons are from various other chronic ailments, such as TB, Thyroid, leprosy.

Table 2.3 Self-reported Chronic Ailments

	Cuddalore			Virudhunagar		
Self -Reported Chronic	HWC N (%)	Non HWC N (%)	Total N (%)	HWC N (%)	Non HWC N (%)	Total N (%)
Yes	117 (15%)	133 (18.2%)	**250 (16.5%)**	190 (20.5%)	179 (19.5%)	**369 (20%)**
No	664 (85%)	599 (81.8%)	1263 (83.5%)	739 (79.5%)	739 (80.5%)	1478 (80%)
Total Individuals	**781**	**732**	**1513**	**929**	**918**	**1847**

Source: Household survey

Table 2.4 Type of Chronic ailments self-reported

		Cuddalore		Virudhunagar	
Sl.n	**Chronic disease type**	**N**	**%**	**N**	**%**
1	Hypertension	97	38.8	159	43.1
2	Diabetes	75	30	95	25.8
3	Both Hypertension and Diabetes	51	20.4	74	20.1
	Total	223	**89.2**	328	**88.9**
4	Thyroid	4	1.6	3	0.8
5	Coronary Artery	4	1.6	6	1.6
6	Coronary Artery, HT and DM	3	1.2	5	1.3
7	Asthma	3	1.2	4	1.1
8	TB	4	1.6	1	0.3
9	Leprosy	2	0.8	0	0.0
10	Skin disease	2	0.8	0	0.0
11	Heart Surgery	1	0.4	0	0.0
12	Hypertension and asthma	1	0.4	1	0.3
13	Mental illness	1	0.4	3	0.8
14	Ulcer	1	0.4	1	0.3
15	Epilepsy	1	0.4	0	0
16	Others *	0	0	17	5.4
	Total	**250**	**100**	**369**	**100**

A MTM beneficiary in Cuddalore HUD

A MTM beneficiary in Virudhunagar HUD

Source: Household survey

* Others includes (Hypothyroidism, Coronary artery, Cerebral palsy, Chronic Liver, Paralysis and bone/joint disease)

Table 2.5 shows the Percentage of men and women reporting chronic ailments, namely from Hypertension or Diabetes or both and other ailments. The distribution is more or less the same as in reported minor ailments (as shown in Table 2.2)

Table 2.5 Gender wise self-reported chronic condition

	Cuddalore		Virdhunagar	
Gender	**All chronic (N=250)**	**Either HT, DM or Both (N=223)**	**All chronic (N=369)**	**Either HT, DM or Both (N=328)**
Male	33.6%	**31%**	37.9%	**37.5%**
Female	66.4%	**69%**	62.1%	**62.5%**

Source: Household survey

2.2.3. Utilisation of Public and Private Facilities for minor ailments (OP care)

Table 2.6 shows proportion of persons who sought care from various levels of care. Overall, utilisation of public facilities varies from 46.3% in Cuddalore to 58.6% in Virudhunagar district.

Evidence shows Sub-Centres (as they existed during pre-UHC HWC period until 2018) at best cater to 1.5% of those seeking primary care (NSSO 71st 2014, UHC-Pilot Report 2018). Upgradation of HSCs to HWCs is expected to increase their utilization. The question is how much of increase has taken place due to the establishment of HWCs.

The survey in Cuddalore and Virudhunagar show clearly the upgradation of HSCs to HWCs has improved their utilisation substantially. Utilisation of HWCs in villages where they are located is 13.3% compared to those villages where they are not present is 0% in Cuddalore. In Virudhunagar, utilisation of HWCs is 23.7% in villages where they are located compared to 1.1% in those villages where they are not located. (Table 2.6). The reasons for higher utilisation of HWCs are due to provision of care on all days of the week, physical presence of MLHPs, drugs, basic amenities, etc.

Table 2.6 Type of health facility utilized for OP care:

		Cuddalore (N=296)			Virudhunagar (N=343)		
s.no	**Type of facility**	**HWC Village %**	**Non HWC Village %**	**Total %**	**HWC Village %**	**Non HWC Village %**	**Total %**
1	HSC	13.3	0	7.4	23.7	1.1	12.2
2	PHC	14.6	37.4	24.7	17.8	19.0	18.4
3	CHC	0	0.7	0.3	0.6	0.0	0.3
4	TALUK HOSP	1.2	1.5	1.4	14.2	32.2	23.3
5	DISTRICT HOSP	11.5	12.2	11.8	4.6	3.5	4.1
6	MEDICAL COLLEGE	0	1.5	0.7	0.6	0.0	0.3
	PUBLIC TOTAL	**40.6**	**53.3**	**46.3**	**61.5**	**55.8**	**58.6**
7	ESI	0	0.7	0.3	0.0	0.6	0.3
8	PVT CLINIC	9.7	6.1	8.1	7.1	6.9	7.0
9	PVT NURSING	0	0	0	0.0	0.6	0.3
10	PVT HOSPITAL	8.5	6.1	7.4	11.2	13.2	12.2
11	TRUST HOSPITAL	4.2	3.8	4.0	0	0	0
12	PVT MEDICAL COLLEGE	0	1.5	0.7	0	0	0
	PRIVATE TOTAL	**22.4**	**17.5**	**20.2**	**18.3**	**20.7**	**19.5**
13	**QUACKS**	**6.0**	**1.5**	**4.0**	0	0	0
14	PHARMACY	21.2	11.5	16.9	8.9	11.5	10.2
15	HOMEREMEDIES	9.7	15.3	12.1	11.2	11.5	11.3
	Total	100	100	100	100	100	100

Source: Household survey

It can be inferred that due to the establishment of HWCs, there is clearly some diversion of patients visiting either PHCs or Taluk Hospitals. In Cuddalore, in villages where HWCs are located, proportion of those using PHCs is 14.6%, compared to those in non-HWCs-villages using PHCs (37.4%). In the case of Virudhunagar, the impact of HWCs is seen more in diversion of patients from Taluk Hospitals – Proportion of those from HWC villages using Taluk Hospitals is about 14.2%, compared to 32% from non-HWC-villages. This reflected in the proportion of persons using HWCs, which is 23.7%.

Over a period of time, as HWCs get stabilized and become more effective in delivering primary care, they would attract more patients both from villages where they are located and from neighbouring villages seeking care from higher levels of public facilities, as demonstrated through UHC pilot phase (UHC Pilot Report 2018).

Utilisation of Private providers and Pharmacists taken together varies from about 30% in Virudhunagar to 40% in Cuddalore. Dependence on pharmacists is quite high in both regions.

The implications of increasing proportion of persons (seeking primary care) from HWCs are reflected in the low financial stress compared to those using private providers and pharmacists, as shown below (refer Table 2.7).

Our results from facility survey (Section 3) corroborates clearly the increased use of HWCs compared to HSCs in the same neighbourhood. We shall discuss these results in the concluding section.

2.2.4. Out of Pocket Expenses for primary care (OP care)

Table 2.7 shows Out of Pocket Expenses for those accessing various types of facilities, towards medical expenses (including drugs, physician fees) and transport expenses.

For those accessing public facilities, OPS for medicines and physicians fees is nearly Zero at all levels of care, while transport expenses is around Rs.30, in both regions. For those accessing private facilities, an average of Rs.696 towards medicine and fees, and Rs.58 towards transportation were spent in Cuddalore, while in Virudhunagar, it was Rs.808 towards medicines and fees, and Rs.81 towards transportation.

Table 2.7 Average out of pocket expenditure for Outpatient care facility wise

		Cuddalore (N=296)			Virudhunagar (N=343)		
	Facility	Medical Expense Rs.	Transport Expense Rs.	Total Expense Rs.	Medical Expense Rs.	Transport Expense Rs.	Total Expense Rs.
1	HSC	0.0	0.0	0.0	0.0	0.0	0.0
2	PHC	0.0	28.6	28.6	0.0	43.7	43.7
3	CHC	0.0	50.0	50.0	0.0	100.0	100.0
4	TALUK HOSP	0.0	50.0	50.0	0.0	27.7	27.7
5	DISTRICT HOSP	5.1	48.0	53.1	0.0	43.9	43.9
6	MEDICAL COLLEGE	0.0	200.0	200.0	0.0	150.0	150.0
	Public	**1.3**	**32.3**	**33.5**	**0**	**29.0**	**29.0**
7	PVT CLINIC	727.5	47.9	775.4	398.8	67.1	465.8
8	PVT NURSING	-	-	-	200.0	16.0	216.0
9	PVT HOSP	988.4	67.7	1056.1	1053.6	90.7	1144.2
10	TRUST HOSP	138.5	38.3	176.8	-	-	-
11	PVT MEDICAL COLLEGE	450.0	200.0	650.0	-	-	-
	Private Total	**696**	**58.3**	**754.4**	**806.2**	**81.1**	**887.3**
12	PHARMACY	114.4	14.6	129.0	105.1	10.2	115.3
13	QUACKS	85.0	0.0	85.0	-	-	-
14	ESI	0.0	50.0	50.0	0.0	50.0	50.0

Source: Household survey

Those using pharmacists, spend about Rs. 114 in Cuddalore and Rs.105 in Virudhunagar.

We should highlight here wages lost as a result sickness and inability to work due to seeking care – close to Rs.300 is lost per day for those who sought care from Public Facilities in both regions; and for those who sought care in private facilities, the wage lost was Rs.531 in Cuddalore and Rs.367 in Virudhunagar. It is important to note that none of those who visited HWCs reported wage loss in both Cuddalore and Virudhunagar.

Clearly, this additional loss of wages is incurred by those who are unable to access HWCs. Those engaged in MGNREGA lose around Rs.250 per day.

Evidently, if direct expenses and loss of wages were added, it would be substantial.

2.2.5. Self-Reported HT, DM or both – receiving drugs under MTM scheme at Home:

Table 2.8 summarises those receiving drugs for HT/DM/ or both directly under MTM Scheme through WHVs at home in Cuddalore and Virudhunagar regions. Among those reported to be suffering from HT/DM/both HT and DM (as shown in Table 2.4), nearly 57% and 71% (in Cuddalore and Virudhunagar, respectively) are receiving drugs at home from WHVs. However, there is not much difference between HWC villages and Non-HWC villages, in Cuddalore and Virudhunagar. But in assessing the overall performance of MTM scheme,

these figures (on the percentage of those receiving drugs at home) should be reckoned along with the fact that only about 16.5% in Cuddalore and 20% in Virudhunagar are aware of their NCD status (as shown in Table 2.3). Further, as highlighted in Tables 3.4 and 3.5, of the total number of persons screened, not more than 2% are ultimately identified as NCD patients. It is relevant to note that the NFHS-5 estimates for high HT in women in the age group of 15-49, and it is 26.8% and for men it is 23.7%, similarly for high DM for women and men in the same age group it is 26.4% and 31.5% respectively. We should expect the prevalence of these diseases in the sample population which includes the elderly as well to be much higher.

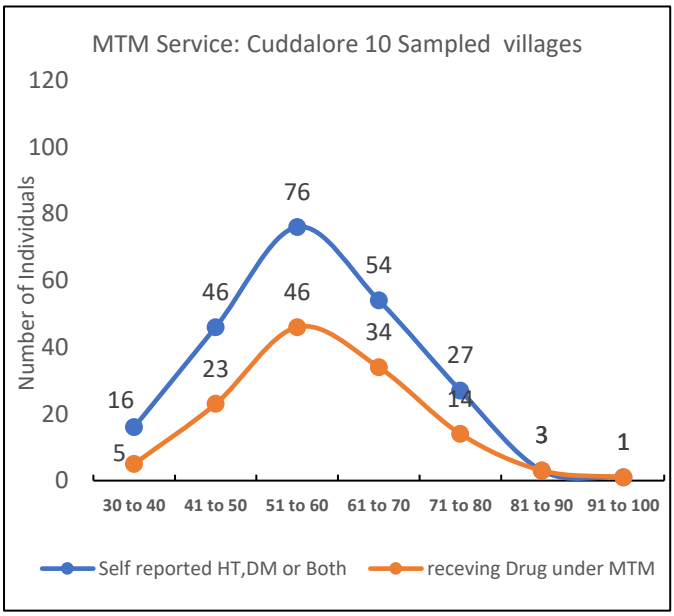
Table 2.8 Percentage of HT, DM or both – receiving drugs under MTM scheme at Home

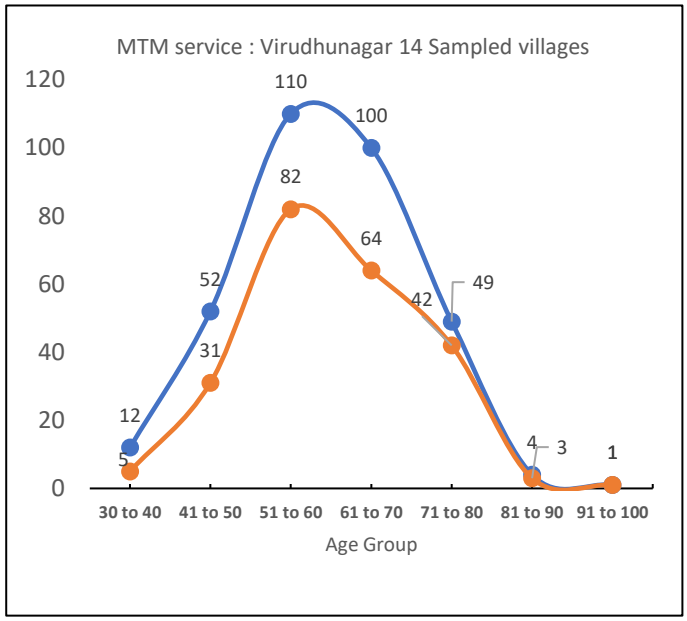
	Cuddalore				Virudhunagar			
Receiving drugs from	**HWC%**	**Non HWC %**	**Total %**	**N**	**HWC %**	**Non HWC %**	**Total %**	**N**
Under MTM Scheme receiving drugs at home	51.6	48.4	56.5	126	73.2	68.1	70.8	231
PHC			43.5	97	2.3	4.5	3.3	11
Taluk					6.9	12.3	9.5	31
DH					1.7	0	0.9	3
PVT CLINIC					4.6	1.9	3.3	11
PVT HOSP					11.0	9.7	10.4	34
PHARMANCY					0	3.25	1.5	5
Total			**100**	**223**	**100**	**100**	**100**	**326**

Source: Household survey

Figure 2.2 shows age wise distribution of these patients receiving drugs at home. More efforts are required to reach out to those in the higher age groups (50 to 70 of age) for home distribution of drugs under MTM.

Figure 2.2 Age Group wise receiving drugs under MTM





Source: Household survey

2.2.5. Awareness about HWCs.

In Virudhunagar overall awareness of households residing in villages where HWCs are located is quite high (94%) while it is only about 35% among those residing in non-HWC villages. What is even more noteworthy is the overall low level of awareness even of HSCs in many of these villages (Refer Table 2.9). Whereas in Cuddalore out of 414 HH surveyed 180 HH (43.4%) reported awareness about upgraded HWC. It may be noted that the average population size of villages in Cuddalore is much higher than those in Virudhunagar (Refer Appendix A). This may also be a factor for the lower level of awareness about HSCs in Cuddalore.

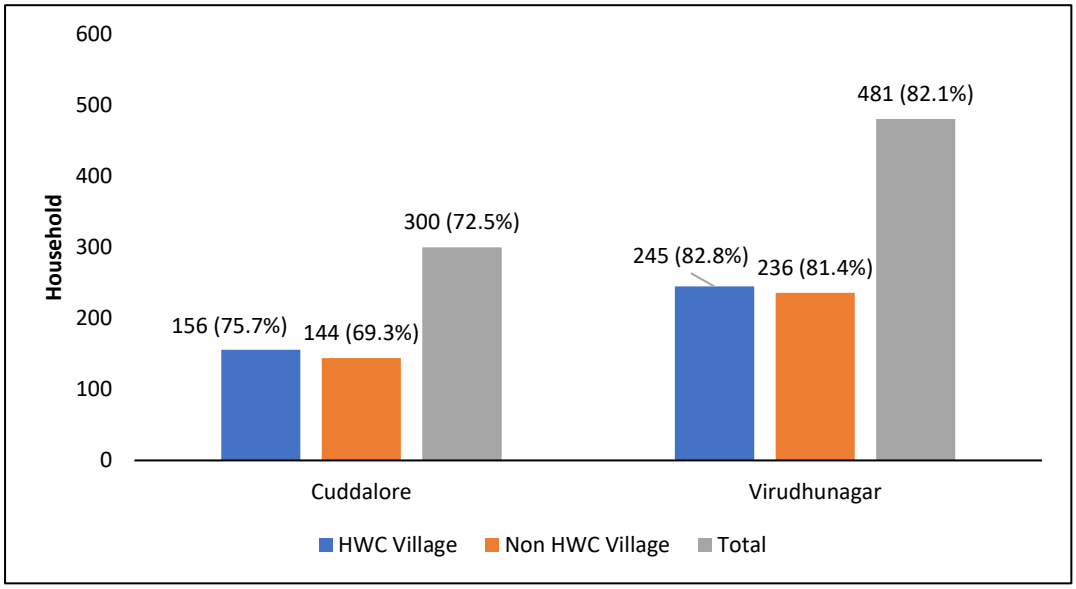
Table 2.9 Household level awareness of HWC/HSC

	Virudhunagar		
	HWC N (%)	Non HWC N (%)	Total N (%)
Aware about upgraded HWC	279 (94.2%)	99 (34.1%)	378 (64.5%)
Aware about HSC (not about upgraded HWC)	13 (4.3%)	64 (22.0%)	77 (13.1%)
Not Aware about Subcenter at all	4 (1.3%)	127 (43.7%)	131 (22.3%)
Total Household	296	290	586

Source: Household survey

The survey also elicited information from household respondents, whether or not they were screened by WHV as part of population based NCD survey (which commenced in 2017). Close to 28% of Households in Cuddalore and 18% of Households in Virudhunagar reported "NO". Considering that the population based screening commenced in 2017, the reasons for this may require further research.

Figure 2.3 Household being Screened by Women Health Volunteer(WHV) - Population Based NCD Screening



Section 3: Facility Surveys

3.1 Methodology

In order to assess the functionality of HWCs, we collected the following information from official records from a sample of health facilities (HWCs): OP attendance at HWCs from records maintained by MLHPs, coverage of ANCs/PNCs/Immunization from records maintained by VHNs, and number of individuals screened for NCDs (particularly for HT and DM), number of persons referred to MO, and number confirmed positive from records maintained by WHV. We also interviewed Health Inspectors from the sampled HWCs. We could not collect any comparable quantitative data on HIs' monthly work. Through open ended discussion with these functionaries, we obtained some qualitative observations on the overall quality and accuracy of data, which we present later in this section.

HWC Chettikurichi in Arupukkottai block with MLHP,VHN, WHV and Health Inspector


HWC Chellancheri in Cuddalore block with MLHP,VHN, WHV and Health Inspector

Selection of Health and Wellness Centres:

The criteria used for selection of HWCs were:

1. All HWCs should have functioned with MLHPs/VHNs/WHVs and HIs at least for 4 months. In Cuddalore, we found that there were only 5 such HWCs. Therefore, we collected information from these five HWCs. In Virudhunagar, we collected information from 7 HWCs (instead of 5 HWCs, due to request from District Officials to include two more facilities declared as HWCs before covid period).
2. Collect relevant data from the months of January 2022 till June 2022. In Cuddalore, we could collect information only for three months (from March to May 2022), while in Virudhunagar, we could get information for six months (from January till June2022).
3. Wherever possible, compare data with pre-covid period. This was not possible, as almost in all Centres, the pre-covid records were not available.
4. Collect information from HSCs (non-HWCs) for comparison of footfalls, in particular. This was possible, from several HSCs – we present these comparative figures between HWCs and HSCs wrt OP attendance in this section.

Table 3.1 below show details of the sampled facilities from various Blocks from Cuddalore and Virudhunagar

Table 3.1 List of Selected HWC for Facility Survey

Cuddalore HUD		Virudhunagar HUD	
Selected HWC	**Block**	**Selected HWC**	**Block**
1. Varakkalpattu	Cuddalore	1. Johilpatti	Kariapatti
2. Vellapakkam	Cuddalore	2. Azhagiyanallur	Kariapatti
3. Chellancheri	Cuddalore	3. M R Puram	Tiruchuli
4. Singirikudi	Cuddalore	4. Karendal	Tiruchuli
5. Pachayankuppam	Cuddalore	5. Mithalaikulam	Tiruchuli
		6. Tamilpadi	Tiruchuli
		7. Chettikuruchi	Aruppukottai

Facility Survey in Cuddalore was carried out during 22.06.2022 to 29.06.2022 and in Virudhunagar during 12.08.2022 to 26.08.2022.

3.2 Results

3.2.1: Foot fall (out patients attendance for minor ailments) in HWCs

Table 3.2 shows monthly average footfall for OP care HWCs in comparison with HSCs in respective blocks of Cuddalore and Virudhunagar. Recorded data from the OP Registers maintained by respective MHLPs is used for this purpose.

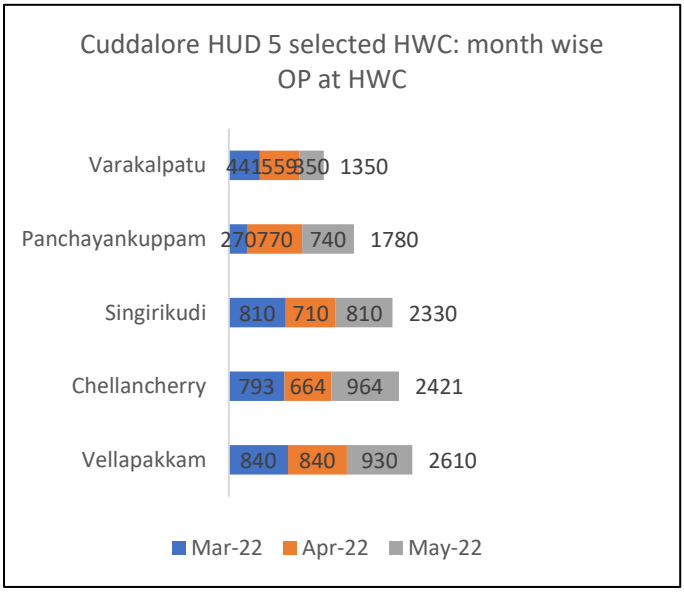
Table 3.2 Monthly Average footfall for OP care at HWCs

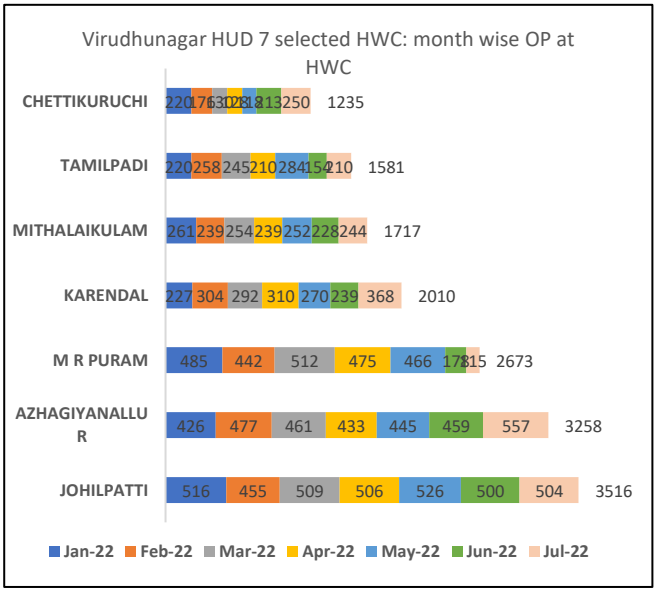
	Cuddalore	Virudhunagar
Average OP Per month Per **HWC**	699	326
Average OP Per month Per **HSC (non-HWCs)**	33	40
Ratio of average OP per month HWC vs HSC	21.2 Times	8.1 Times

Source: MLHP and VHNs record
(March, *April & May 2022)* Monthly OP data of 5 HWCs and 5HSCs is used for comparison.
***** (*Jan to June 2022)* Monthly OP data of 7 HWCs and 7HSCs is used for comparison

On average, OP attendance per HWC per month in Cuddalore is 699 compared to HSC (non-upgraded to HSC) is 33; while in Virudhunagar, it is 326 for HWCs compared to 40 in HSCs. To put it differently, OP attendance per month per HWC in Cuddalore is 21.5 times higher than that in a HSC, while it 14 times higher in Virudhunagar (statistically significant at p < .000, CI 95%). [One caution on the accuracy of OP data: this requires some attention since high targets set for OP attendance may influence what is recorded].

Figures 3.1 show graphically the variations in OP attendance centre wise in various blocks





Source : MLHPs record

The differences are very significant in both districts. We do not have any estimate of Unit Cost of providing services for minor ailments at HWCs or HSC. Nor do we have any estimate of cost of providing other services such as ANC/PNC, NCD services through WHVs for the surveyed centres. A recent study (Shankar Prinja et al., 2021) provides an estimate of annual per capita cost of primary health care through HWCs and PHCs.

3.2.2 ANC / PNC coverage by VHN

Table 3.3 shows per month per VHN's performance for ANC, PNC and Immunization in Cuddalore and Virudhunagar: it is 31.5, 39, and 30 respectively in Cuddalore (based on a sample of 3 month's data); and 41, 17.6 and 36, respectively in Virudhunagar (based on a sample of 7 month's data). With respect to Immunization, the variation in coverage is much larger between the two regions. These figures were based on the records maintained for respective VHNs.

Table 3.3 VHNs Average monthly ANC, PNC and Immunization coverage

	Cuddalore		Virudhunagar	
	Total 5VHNs 3months (Mar-May 2022)	Average Per month Per VHN	Total 7 VHNs 7months (Jan-July2022)	Average Per month Per VHN
ANC visit	473	31.5	2014	41.1
PNC visit	589	39.3	864	17.6
Immunization	462	30.8	1770	36.1

Source: VHNs record

3.2.3 Women Health Volunteers (WHVs): Persons screened for NCDs

Table 3.4 shows number persons screened for HT in Cuddalore and Virudhunagar.
In Cuddalore, an average of 322 persons per month per WHN were screened for HT; in Virudhunagar it is 312. Of these screened per month, 6.9 persons in Cuddalore, and 4.1 persons in Virudhunagar were tested positive. This comes to a mere 2.1% and 1.3% positive cases of the total number of persons screened (over the sampled months), respectively in Cuddalore and Virudhunagar.

Table 3.4 Hypertension screened, referred and confirmed positive by WHVs

	Cuddalore				
	HT Screened	HT Referred	HT Positive	% of Positive of those referred	% of Positive of Total screened
Total 4 WHVs 3month record	3865	NA	83	NA	2.1
Average Per WHV Per Month	322	NA	6.9	NA	
	Virudhunagar				
Total 7 WHVs 7month record	15,308	479	201	42.0	1.3
Average Per WHV Per Month	312.4	9.8	4.1		

Source: WHVs record

Similarly, with respect to DM : Table 3.5 shows number persons screened for DM in Cuddalore and Virudhunagar.

In Cuddalore, an average of 260 persons per month per WHN were screened for DM; in Virudhunagar it is 257. Of these screened per month, 4.9 persons per month in Cuddalore, and 3 persons per month in Virudhunagar were tested positive. This comes to a mere 1.9% and 1.2% positive cases of the total number of persons screened (over the sampled months), respectively in Cuddalore and Virudhunagar.

Table 3.5 Diabetes screened, referred and confirmed positive by WHVs

	Cuddalore				
	DM Screened	DM Referred	DM Positive	% of Positive of those referred	% of Positive of Total screened
Total 4 WHVs 3month	3120	NA	59	NA	1.9
Average Per WHV Per Month	260	NA	4.9	NA	
	Virudhunagar				
Total 7 WHV 7month	12,600	436	146	33.5	1.2
Average Per WHV Per Month	257.1	8.9	3.0		

Source: WHVs record

The reasons for the low percentage of referred patients and of the confirmed positive persons need further research, since existing studies shows a much higher prevalence rate for both HT and DM. The reasons could range from faulty screening, or patients not reporting for confirmation, or other reasons. This does not come under the scope of this study.

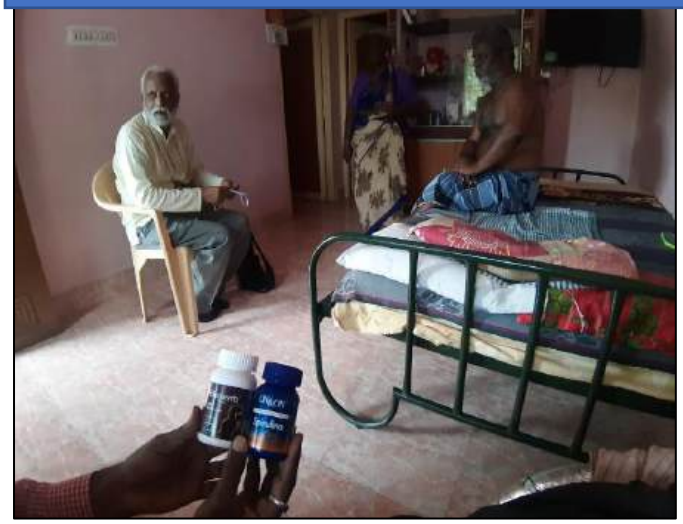
3.2.4 Coverage by Health Inspectors (HIs)

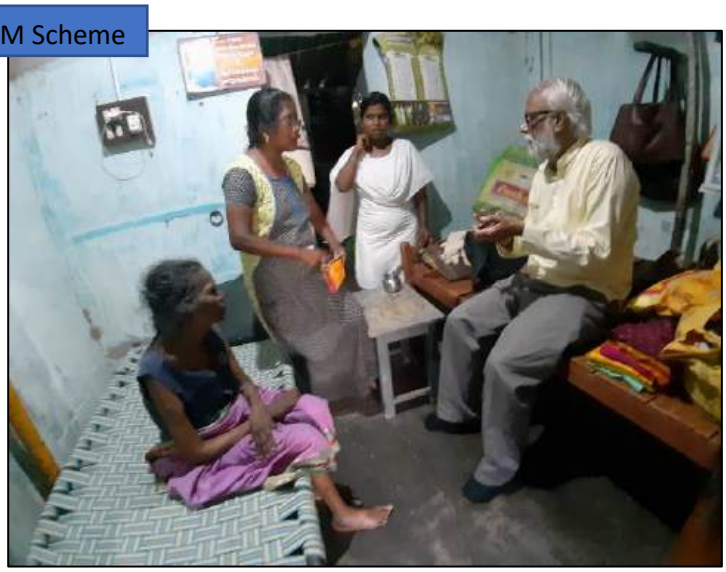
We have not been able to collect and compare information on HIs' monthly performance, because there is no uniform regular record / format available, though each one had a Note Book with some comments / remarks on his work. Typically, the notes had remarks on the number of Water Tanks inspected; some had noted down visits to Anganwadi for checking food quality; some others had some details on their visits to residents of a village; one of them elaborated his assistances to MOs in organising camps. In Virudhunagar, HIs stated that they accompany MTMs for NCD screening (along with MLHPs).

3.2.5 Recent Initiatives – Palliative and Rehabilitative care

Our survey included a sample of 5 patients receiving rehabilitative care at home in Virudhunagar. A lady physiotherapist accompanied by WHV of respective villages visit patients residence once a month and provides physical exercise. Except one patient (who is 82 years of age), others reported improvements. With time, this initiative is likely to make a significant impact on the overall quality of life of those receiving such care at home. It may be noted that such patients are also spending considerable amount of money on medicines. One of them in particular reported a monthly expenditure of Rs.5000 towards medicine.

Palliative and Rehabilitative care beneficiaries under MTM Scheme





3.2.5 Infrastructure – Building, Water, Drugs

Here, we would like to make a few observations on physical infrastructure, access to water, electricity, value of drugs prescribed, besides a few qualitative observations on work environment, difficulties field functionaries face. [Appendix 2 and 3 show, Centre wise observations on these aspects]

Evidently, the HWC in Singrikudi of Cudallore Block and Karendal (Tiruchlli block, Virudhunagar HUD) need immediate attention and should be relocated to a better rented place. Some of them, such as MR Puram and Mithalikulam HWC of Tiruchulli block Virudhunagar HUD need renovation. Lack of running water continues to be a daily problem even now, affecting basic MCH activities.

As for drugs availability, while most HWCs reported adequate supply of drugs, a few reported lack of certain drugs. For example, HWCs in Varakalpattu, Vellapakkam, in Cuddalore reported lack of Tablet Amlodipine for the past two months. The HWC in M R Puram in Virudhunagar reported lack of even Paracetamol during the past two months. These observations are made based on interviews with respective MLHPs.

From the Records, we could extract the quantum and total value of drugs dispensed in HWC in Virudhunagar (7 months data for 3 Centres-Johilpatti, Karendal and Azhagiyanallur HWC). Such figures from other Centres were not readily available.

The total value of drugs dispensed per month per centre in Virudhunagar is about Rs. 1208.75 and about Rs 2.89 per patient visit. The list of drugs dispensed from HWCs varies.

Table 3.6: Cost of Drugs distributed (at TNMSC price) per outpatient visit at HWCs

Virudhunagar HUD			
Total Drug dispensed Cost at TNMSC price (for 3 HWCs for 7 months) Rs.	Average Per month per HWC Drug dispensed cost Rs.	Total Footfall for 3 HWCs for 7month N	Average Drug cost per OP Consultation Rs.
Column1	Column2	Column3	Column4
	"=Col1/3 HWC"		"=Col1/Col3"
25,383.81	1208.75	8784	**2.89**

Source: (7 months drug consumption data for 3 Centres- Johilpatti, Karendal and Azhagiyanallur HWC)

Section 4: Conclusions

Broadly the following observations emerge from this study:

1. Overall, nearly 50% of those seeking primary care depend on public facilities;
2. In villages where HWCs are established, a substantial proportion of people depend on HWCs. This varies from 13% (as in Cuddalore) to about 23% (as in Virudhunagar).
3. As a result, out of pocket expenditure for those accessing HWCs has reduced substantially to almost zero.
4. No one using HWCs reported loss of wages.
5. Our analysis suggests that establishment of HWCs has substantially attracted patients who otherwise would have sought primary care from higher levels of public facilities, thereby rendering investments in HWCs worthwhile.
6. Over a period of time, as HWCs get stabilized and become more effective in delivering primary care, they would attract more patients and divert more patients from higher levels of public facilities, as demonstrated through UHC pilot phase (UHC Pilot Report 2018).
7. In Virudhunagar, two of the 7 HWCs had block hospitals close to them. As a result, dependence on Taluk Hospital was higher before these HWCs were established. From the survey results we can infer that HWCs were able to attract these patients depended on Taluk hospitals.
8. The above observation is further supported by facility surveys, comparing footfalls in HWCs with HSCs (non-HWCs) in the same neighbourhoods. In Cuddalore OP attendance per HWCs (on a monthly basis) is 21 times higher than the HSCs; while Virudhunagar, it about 8 times higher in HWCs than in HSCs.
9. *The difference in footfalls between HWCs and HSCs would have been even much higher in both regions had HWCs been functioning the whole day, instead of half a day.* [Reasons for the closure of HWCs in the afternoons: In Cuddalore, MLHPs were in the field (located in prominent places such as in ICDS centres, Temple premises) to fulfil the targets for OP care – many of them informed us that they had a target of 40 patients per day – this may have an influence on the accuracy of OP records maintained in HWCs. In Virudhunagar, MLHPs (along with HIs) accompanied MTM volunteers visiting households for NCD screening, during afternoon sessions. This was due to the 100-day special drive for NCD screening carried out during the months of June-September.]
10. Several VHNs reported that the are able to spend more time on their regular out-reach work, as a result of the presence HWCs providing primary care. Wherever new HWCs are present, VHNs have showed willingness to stay.
11. Overall, positive cases added to the line list as proportion of total number of persons screened for NCDs, is not more than 2% (for the months sampled for this survey), while the estimates from NFHS-5 shows a much higher prevalence rate. This needs

further research. Clearly, this is a challenge that requires an effective alternative screening and confirmation and follow processes.

12. *Many WHVs complained about their inability to meet the target for their work – which is 20 households per day. Also, as they are expected to deliver medicines to NCD patients through MTM scheme, they are unable to concentrate on carrying out their regular screening for NCDs through household visits.*
13. Overall, all facilities had required work-force.
14. Several HWCs suffer from poor building infrastructure. They need immediate attention and should be relocated at better (rented) places until new buildings are ready for them. Some of them do not yet have access to water – Appendices A and B provide facility wise availability of water, electricity, equipment, drugs, particularly in Cuddalore.
15. The number of drugs dispensed from HWCs varies considerably across the Centres. Standardised list and ensuring availability of such drugs will further strengthen the effective delivery of primary care services. At present the per unit value of drugs dispensed per visit is less than Rs.3. This requires further research.
16. WHV, and HIs in particular need standard formats for maintaining records. There is no uniformity in the Registers they are maintaining. It is very difficult to collate and analyse their performance, let alone the outcomes of the interventions being made. A large portion of cards meant for recording of HT and Sugar values do not have such values. Many have only the date of measurement and a "tick" mark is present in appropriate cells.
17. Many WHVs do not have either public transportation or private vehicles to cover their villages. As a result, their effective coverage suffers.
18. Awareness level of services delivered through HWCs particularly among those living in the neighbourhood is very low, particularly in Cuddalore. Public awareness should be enhanced as an important strategy to improve the efficiency of the primary care delivery system, through diversion of patients going to higher level public facilities.
19. If we focus again on the HWCs, increase the awareness of people about the HWCs, provide the necessary infrastructure and drugs, build a population based registry, link the MTM with the HWCs fully, there is potential to improve the performance of the HWCs.

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Appendices

Appendix 1: District and HWC selected for study

Table 1: District and HWC selected for study

1	**Selected District**	**CUDDALORE**	**VIRUDHUNAGAR**
2	**Selected Block(s)**	**CUDDALORE (Naduveeranpattu)**	**TIRUCHULI BLOCK (4HWC) KARIAPATTI BLOCK (2HWC) ARUPPUKOTTAI BLOCK (1HWC)**
3	**Total No of HSCs**	**29**	**114**
4	**Total Upgraded HWCs**	**10 (August 2022)**	**93 (Sept 2022)**
5	**Selected HWCs for Study**	**5**	**7**

Figure A1: HSC Population norm and population size of HWC (selected for survey)

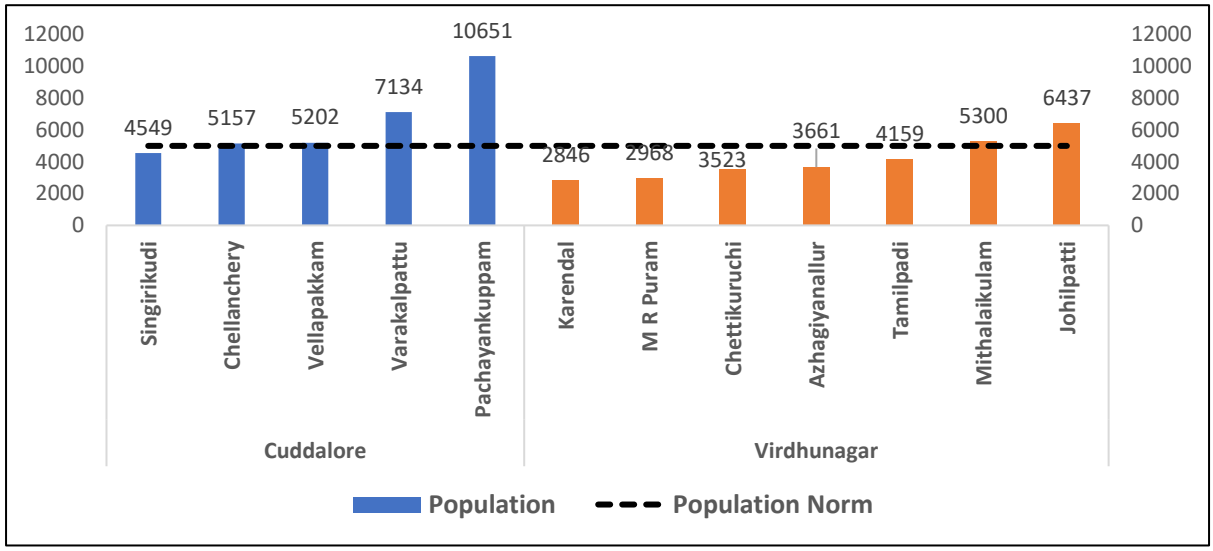

Table 2: Population of Selected HWCs and Non HWCs Villages

Cuddalore 5 HWCs and 5 non HWCs				
	HWC Located Villages	**Population**	**Non HWC villages**	**Population**
1	Varakkalpattu	2390	Thotti	2245
2	Vellapakkam	3345	Azhagiyanatham	1621
3	Chellancheri	2172	Kumaramangalam	1971
4	Singirikudi	1396	Pudukadai	2047
5	Pachayankuppam	4498	Manakuppam	2087

Virudhunagar 7 HWCs and 7 non HWCs				
	HWC located Village	**Population**	**Non HWC village**	**Population**
1	**Johilpatti**	**686**	**Kariyanendal**	**617**
2	**Azhagiyanallur**	**442**	**Kepplingapatti**	**621**
3	**M R Puram**	**1286**	**Meenachipuram**	**634**
4	**Karendal**	**667**	**Kethenayakka npatti**	**580**
5	**Mithalaikulam**	**524**	**Melendal**	**756**
6	**Tamilpadi**	**1993**	**Pacheri**	**580**
7	**Chettikuruchi**	**1879**	**Sugilinatham**	**461**

Appendix 2 : Facility report – Cuddalore

Report on Health Wellness Centre (HWCs) Assessment

Cuddalore Block - Cuddalore HUD

Facility Survey (in 5 HWCs) was carried out during 22.06.2022 to 29.06.2022. In this report, we provide our observations on the status of Human Resources, Infrastructure, and Qualitative observations on equipment, maintenance of records, availability of drugs, etc.

1) Varakkalpattu HWC

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: MCH model- renovated.
- Has electricity, Panchayath water.
- Toilet was **not functional** for the past 6 months and No Running Water facility.

Remarks:

- General Drugs were not available at the HWC. NCD **Drug (T.Amlodipine 5** mg was out of stock for past 2 months)
- MLHP : Registers were not maintained properly (more of duplication registers)
- WHV**:** Referral Registers were not maintained properly (BP and RBS testing values in the MTM Card was not filled)
- **WHV:BP Apparatus was not working for 2 months**
- **HI:** Registers were not maintained properly and they were not aware of their role and responsibilties

2) Vellapakkam HWC

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: New model building (ground floor & 1st floor).
- VHN stays at the Quarters.
- Has electricity, bore water and functional Toilet.

Remarks:

- General Drugs are not available at HWC.
- NCD Drug (**T.Amlodipine** 5 mg was not in stock for past 2 months)
- **MLHP :** Target based OP cases(40 patients) seems difficult since it pushes them to the field in the Afternoon for attaining the daily target
- **BP apparatus often gets repaired which affects the screening procedure.**

3) Singirikudi HWC

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: Currently operates at a Library.
- Electricity is available.
- **No toilet and Water facility.**
- IEC materials were displayed but not for all services listed under HWC.

Remarks

- MLHP : BP apparatus was not working , she borrows from WHV.

4) Chellancherry HWC

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: New model building (ground floor & 1st floor).
- VHN **not staying** in Quarters.
- Has electricity, Panchayat water; Toilet is functional with Running Water facility; Over Tank & Motor Pump
- IEC materials were displayed in HWC

Remarks:

- **MLHP :** Target based scheme was difficult , as it pushes them to the field in the afternoon for attaining the daily target (16-05-2022 onwards OP Target is fixed to 40 and 40 TNPHR entry has to be made daily) .

5) Pachayankuppam HWC:

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: MCH old building.
- Has electricity, Panchayat water (available only on alternate days which should be stored and used)
- **Toilet Dysfunctional for a long time. No Running Water facility, Over Tank & Motor Pump**
- Only RCH related IEC materials were displayed but not for other services listed under HWC.

6) Sivapuri HWC: [additional HWC visited; not included in the final analysis]

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: Panchayat type building.
- Has electricity , but **No toilet, Running Water facility and Tank/Motor Pump**

7) T S Pettai HWC [additional HWC visited, not included in the final analysis]

Human Resource Status:

- VHN, MLHP, WHV & HI are in Position

General Infrastructure status:

- Building type: Panchayat type building.
- Has electricity, but **No toilet and Water facility at HWC**

Remarks:

- MLHP : No proper format for register maintenance.
- Inadequate drug availability.
- WHV: Battery replacement for Digital BP apparatus has to be done weekly. She reports out of pocket expenses and her salary is also too low.

*****

Appendix 3 : Facility report – Virudhunagar

Report on Health Wellness Centre (HWCs) Assessment

Virudhunagar HUD

Facility Survey (in 7 HWCs) was carried out during 12.08.2022 to 26.08.2022. In this report, we provide our observations on the status of Human Resources, Infrastructure, and Qualitative Observations on equipment, maintenance of record, availability of drugs etc.

1.Azhagiyanallur HWC (Kariyapatti Block)

Human Resource Status

- VHN, MLHP, WHV & HI are in Position.

Infrastructure Status

- Building Type : TNIP Model
- Availability : Electricity, Water, Over tank , Water motor and Toilet with running water facility

Remarks:

- Drugs were available adequate.
- Registers of MLHP and WHV well maintained.
- BP Apparatus, Glucometer available in the Centre.
- WHV feedback she need Hand Gloves & Sanitizer for Gluco Testing.

2. Johilpatti HWC (Kariyapatti Block)

Human Resource Status

- VHN, MLHP, WHV & HI are in Position.

Infrastructure Status

- Building Type : MCH Model
- Availability : Electricity, Water, Over tank , Water motor and Toilet with running water facility,

Remarks:

- General drugs were not available frequently. T.Paracetamol provided for HWC– (4000 total quantity) was diverted to Kalkuruchi PHC due COVID Vaccine Camp.
- Registers of VHN,MLHP & WHV well maintained.
- MLHP maintains more than 30 Registers. In those registers more than 10 Registers are related to MCH Work, same register maintained by VHN also. It was observed duplication of registers.

3.Chettikuruchi HWC (Aruppukottai Block)

Human Resource Status

- VHN, MLHP, WHV & HI are in Position.

Infrastructure Status

- Building Type : New MCH Model (Inaugurated 15 days Before)
- Availability : Electricity, Water, Over tank , Water motor and Toilet with running water facility.

Remarks:

- Registers of MLHP , WHV well maintained.
- MLHP attended training monthly 15 days, for past four months.

4.Karendal HWC (Thiruchuli Block)

Human Resource Status

- VHN, MLHP, WHV are in Position, and HI position is Vacant.

Infrastructure Status

- Building Type : Rental (Rs.1000 /-)
- **Single room rented** difficult to perform even MCH services
- Has Electricity, but **no Water and Toilet** facility

Remarks

- Drugs were available adequate.
- Registers of VHN, MLHP & WHV well maintained.
- No reimbursement for the rent paid by VHN for last one year.

5. Mithalaikulam HWC (Thiruchuli Block)

Human Resource Status

- VHN, MLHP, WHV are in Position & HI are in Vacant.

Infrastructure Status

- Building Type : MCH Model
- Has Electricity, but **no Water and Toilet** facility

Remarks:

- Registers of MLHP , WHV well maintained.
- BP Apparatus, Gluco meter available in the centre.
- Poor Infrastructure , needs renovation work.

6.Tamilpadi HWC (Thiruchuli Block)

Human Resource Status

- VHN, MLHP, WHV are in Position & HI are in Vacant.

Infrastructure Status

- Building Type : TNIP Model
- Has Electricity, Water and Toilet

Remarks:

- Drugs were not available adequate.
- Registers of WHV well maintained.
- Facility have no compound wall; public misuse the facility area .
- WHV The Pink Dress – only one set provided.
- WHV: Has to buy frequently batteries for digital BP apparatus, have to buy additional notebooks for record maintenance

7.Muthuramalinga Puram HWC (Thiruchuli Block)

Human Resource Status

- MLHP, WHV are in Position
- VHN and HI vacant

Infrastructure Status

- Building Type : TNIP Model
- Has Electricity and Toilet ,but no water at facility

Remarks:

- Drugs were not available adequate.(T. Paracetamol &T.Septron Shortage)
- Registers of MLHP well maintained.
- WHV has not maintained registers properly.
- WHV need Orientation training as she don’t know screening process.

Appendix 4 : Questionnaire for HH survey

இந்திய தொழில்நுட்ப நிறுவனம் மெட்ராஸ்
சுகாதாரசேவைகளின் பயன்பாடு மற்றும் மருத்துவ செலவுகள் கணக்கெடுப்பு
June –Sep 2022

அறிமுகம் மற்றும் ஒப்புதலை தெரிவித்தல்:
வணக்கம் என்னுடைய பெயர் _____நான் _____நிறுவனத்தில்பணிபுரிகிறேன். சுகாதாரமையங்கள்செயல்படும் விதம் மற்றும் மருத்துவ செலவுகள், குடும்ப உறுப்பினர்களுடைய விபரங்கள் உட்படபெண்கள் ,ஆண்கள் மற்றும் குழந்தைகள் ஆகியோரின் உடல் நலம் பற்றிய ஒருகணக்கெடுப்பை நாங்கள் மேற்கொண்டு இருக்கிறோம்.இந்த கணக்கெடுப்பில்உங்களுடையகுடும்பத்தினரின்பங்களிப்பை நாங்கள் பெரிதும் விரும்புகிறோம்.உங்கள் குடும்பத்தைபற்றிய சில கேள்விகளை கேட்க நான் விரும்புகிறேன் .இந்த கணக்கெடுப்பு 35 நிமிடங்களுக்குள்முடிந்துவிடும். நீங்கள் தரும் தகவல்கள் மற்றும் உங்கள் பெயர் கண்டிப்பாகஇரகசியமாக வைக்கப்படும்.இந்த கணக்கெடுப்பில்பங்குபெறுவது என்பது சுய விருப்பத்தின் பேரில் அமைவது முக்கியமாகும். நீங்கள் விருப்பமில்லாதகேள்விகளுக்கு பதிலளிக்க வேண்டாம்.இதில் உங்களது பங்கேற்ப்பு முக்கியமானது. ஆகையால் இந்தகணக்கெடுப்பில் நீங்கள் பங்கேற்பீர்கள் என்று நாங்கள் நம்புகிறோம்.
இந்த சமயத்தில் கணக்கெடுப்பை பற்றி என்னிடம் ஏதேனும் கேட்க வேண்டுமென்று நீங்கள் விரும்புகிறீர்களா? (கணக்கெடுப்பாளர் அணைத்து கேள்விகளுக்கும் பதில் கூறுவதுடன், சந்தேகங்களை தீர்த்துவைக்கவும்.)
ஒரு வேளை இக்கணக்கெடுப்பை பற்றி மேலும் தகவல்கள்தேவையெனில்,நீங்கள் கீழ்க்கண்ட நபரைத்தொடர்புக் கொள்ளலாம்.(கணக்கெடுப்பாளர்தொடர்புகொள்வதற்க்கானதகவல்களைதரவும்).
Prof. MuraleedharanV R, Principal Investigator, IIT Madras contact: 91761 66536
நாம் இப்பொழுது உரையாடலை தொடங்கலாமா?
பதிலளிப்பவர் ,சம்மதம் தெரிவிக்கிறார் :
.1உரையாடலைதொடங்கவும்.
பதிலளிப்பவர் ,சம்மதம் தெரிவிக்கவில்லை.2 :முடிவு
பங்கு பெறுபவரின் கையொப்பம் நாள்:

[1]	Details of the sample household	
1	Name of the District:	
2	Name of the Block:	
3	Name of the Village/ Ward:	
4	Sample household Id:	
5	House Hold Size	
6	Name of informant:	
7	Address (with house number and phone number):	
8	Whether this HH being screened under Population based screening by WHV (Y/N)	
9	Has any member of the household been visited under MTM	
10	Religion(code)	
11	Social Group (code)	
12	Household Usual Consumer Expenditure (Rs.)	
13	The nearest Govt health care facility from the household (code)	
14	Distance of the nearest Govt functional healthcare provider from the household (km)	a. ……(Kms) b. ……..(Time to reach) c. ……..(Mode of Transport)

9. Religion: Hinduism-1,Islam-2,Christianity-3, others-9

10. Socialgroup:Scheduledtribe-1,Scheduledcaste-2,Otherbackwardclass-3, General -4

12: Type of provider:

- Formal healthcare provider government: sub centre - 11, PHC-12,CHC-13, Area/ Sub District/ Taluk Hospital-14, District Hospital-15, Medical College Hospital-16, ESI Hospital- 17, CGHS- 18, others -9(specify)
- Formal healthcare provider private: private doctor/ clinic-21, private nursing home-22, private hospital-23, charitable/ Trust Hospital-24, private multi/ super specialty hospital-25, private medical college-26, others -9(specify)
- Informal healthcare provider: RMP-31, Traditional healer-32, others -9(specify)

[2]	Particulars of the household members							
1	Study Id							
2	Name							
3	Relation to head of the family							
4	Gender (M = 1,F = 2)							
5	Age (Years)							
6	Do you have any one of these chronic ailments (Code)							
7	Have you been visited under MTM scheme by the WHV							
8	If C3 and C5 in Q6 and not receiving drugs under MTM ; specify where they are collecting drugs [code 8]							
8.1	If Private how much are you spending per month for consultation + drugs + diagnosis							
9	Ill in last 30 days (Y =1, N =2)							
10	Hospitalized in the last one year (Y=1, N=2)							

3: Relation to the Head : head-1, wife or husband-2, Son or daughter-3, Son in law or daughter in law-4, Grandchild- 5 , Parent, - 6, Parent in law- 7, Brother or sister- 8, Brother in law or sister in law -10, Niece or nephew -11, Adopted/foster/step -13 , Domestic servant -14, others -9 (specify)

6:Chronic Ailments: Tuberculosis - C1, Leprosy- C2, Hypertension- C3, Coronary artery disease- C4, Diabetes Mellitus- C5, Mental Illness- C6, Asthma - C7, HIV/AIDS -C8, Cancers/Tumor-C 9, Epilepsy -C10, Paralysis of limbs- C11, Gastric/ Peptic Ulcer -C12, Chronic skin diseases -13, Chronic liver disease -14, Bone /Joint disease -C15, Others -9 (Specify)

8: Type of Facility provider:

Formal healthcare provider **Government**: sub centre - 11, MLHP –OR-11A, PHC-12, CHC-13, Area/ Sub District/ Taluk Hospital-14, District Hospital-15, Medical College Hospital-16, ESI Hospital- 17, CGHS- 18, others -9 (specify)

Formal healthcare provider **Private**: private doctor/ clinic-21, private nursing home-22, private hospital-23, charitable/ Trust Hospital-24, private multi/ super specialty hospital-25, private medical college-26, others -9(specify)

[3]	Expenditure incurred for treatment of ill household members during the last 30 days							
1	Study Id							
2	Ailment suffering/suffered in the last 30 days							
3	Type of Facility visited for outpatient care(Code3)							
4	Reason for not seeking care (Code4) (if code: 99 in Q3)							
4.1	Reason for not availing Govt facility for OP care(code:4.1)							
	Expenditure incurred for treatment of ailment in the last 30 days (amount in Rs.)							
5	Consultation/ Service fee							
6	Diagnostic tests (lab & radiology)	6 a. from the hospital /clinic visited						
		6 b. from out side						
7	Medicines	7 a. from the hospital /clinic visited						
		7 b. from out side						
8	Transportation							
9	Informal payments							
10	**Total Expenditure**							
11	Did You lose any Daily wages during ill period (Yes/No) If Yes specify amount (also for dependent)							

Code : 3 Type of Facility provider:

Formal healthcare provider **Government**: sub centre - 11, PHC-12, CHC-13, Area/ Sub District/ Taluk Hospital-14, District Hospital-15, Medical College Hospital-16, ESI Hospital- 17, CGHS- 18, others -9 (specify)

Formal healthcare provider **Private**: private doctor/ clinic-21, private nursing home-22, private hospital-23, charitable/ Trust Hospital-24, private multi/ super specialty hospital-25, private medical college-26, others -9(specify)

Informal healthcare provider: RMP-31, Traditional healer-32, others -9(specify), Provider was not visited – 99

Code : 4 Why no provider was visited : non - medical facility (provider)available in the neighbourhood -1, medical facility available but no treatment sought owing to: lack of treatment facilities at the provider -2, lackoffaith-3,longwaiting-4,financialreasons-5,ailmentnotconsideredserious-6, home remedies-7, bought medicines from pharmacy-8, others–9 (specify)

Code: 4.1Reason for not availing Govt facility for OP care: Lack of transport-1, quality of services-2, inadequate drugs-3, lackoffaith-4, longwaiting-5, ailment not serious-6 others –9 (Specify)

[4] Awareness of New/Upgraded HWC:

***are you Aware of the Health Subcenter (HSC) ____ (Yes / NO)**

1. Are you aware of the new/upgraded HWC?

i) Yes ii) No(End / Skip to Section 5)

1.1 If Yes name of HWC_____ [To be asked if HH Village is not same as HWC village]

2. Do you know that an additional New Nurse has been appointed to provide services(Yes/No)

_____

3. If Aware of HWC; whether you use HWC facility for OP care? Yes/No_____(if Yes skip to question5)

4. Aware of HWC but did not seek care from HWC though ill/sought care from other facility level: Reason _____*(End / Skip to Section 5)*

(Ask for what services they got there... specifically whether they were able to get drugs at that location itself or were referred elsewhere for drugs?)

5. Are you satisfied with the Services :(Good/Moderate/Poor) _____

6. If required will you seek care again from HWC facility? Yes/No _____

1.6.1 If Yes reason _____

1.6.2 If No reason _____

7. What other services would you like to be provided at the HWC?

8. If this HSC / HWC was not present, whom would you have consulted?

5] Makkalai Thedi Maruthuvam MTM service :(Only to those households who say they were visited under MTM)

S.N	Question	Response	
	[Study ID as per section 2]		
1	When did the WHV first visit you under MTM? (Month/Year)		
2	How often has she visited you in the last six months (optional question)		
3	Have you already been diagnosed with Hypertension / Diabetes?		
4	If so, where were you diagnosed (use facility code for answer)		
5	When were you first diagnosed for Hypertension/ Diabetes (Month/Year)		
6	Was your Blood Sugar/ BP checked by the WHV		
7	Were you supplied drugs for diabetes/ hypertension by the WHV		
8	How often is the WHV visiting you and supplying you with the required drugs		
9	For how many days are the drugs supplied		
10	Do you have any problems in getting drugs regularly under the scheme?		
11	Before MTM where were you collecting the Drugs (code5)		

Name of the Drugs and Quantity consumed per month

12

	Hypertension Drug Name	Strength (mg)	Quantity Per Month	Diabetes Drug Name	Strength (mg)	Quantity Per Month
Study ID						
i						
ii						
iii						
iv						

13	If Private how much were you spending for drugs per month Rs		
14	If Government how much were you spending for Transportation Rs		

Code: 5

- Formal healthcare provider **Government**: sub centre - 11, PHC-12, CHC-13, Area/ Sub District/ Taluk Hospital-14, District Hospital-15, Medical College Hospital-16, ESI Hospital- 17, CGHS- 18, others -9 (specify)
- Formal healthcare provider **Private**: private doctor/ clinic-21, private nursing home-22, private hospital-23, charitable/ Trust Hospital-24, private multi/ super specialty hospital-25, private medical college-26, others -9(specify)
- **Informal healthcare provider**: RMP-31, Traditional healer-32, others -9(specify), Provider was not visited – 99

Any Feedback/ Suggestion/ Grievance for MTM Scheme:

Appendix 5: Questionnaire for Facility Survey

Interaction with Women Health Volunteer (WHV)

Name of the WHV: _____ **WHV Residing Village: _____**
Name of the HWC: _____ **Age of WHV: _____**
Education: _____ **Contact : _____**
Name of the Investigator: _____ **Date of Survey: _____**

1) When did you join the Service _____
2) Farthest village travelled for drug distribution (MTM) _____KMs _____ mode of Transport
3) How many villages are covered by you _____ Population _____
4) What is the mode of the Transport you use frequently for MTM _____
5) Number of Patients in Line List _____
6) For how many days drugs are given to a patient _____
7) Number of Home Visits per day for
    a. Screening _____
    b. Drug distribution _____
8) Number of Dropped out/Discontinued Patient from your Line List and Reasons

9) Any Incentives received by you per month _____
10) Difficulties encountered while providing MTM service

11) Patients feedback/ appreciation for the home visit MTM service

Name of the Services	Outcome						
	2022						
	Jan	Feb	Mar	Apr	May	Jun	Jul
No of Total patients screened							
No of Total patients referred to PHC							
No of Total patients on Follow-up							
No of patients-Screened HTN							
No of patients-Referred HTN							
No of patients-positive HTN							
No of patients-Screened DM							
No of patients-Referred DM							
No of patients-positive DM							
No of patients referred Ca Cx							
Total							

Interaction with Health Inspector (HI)

Name of the HI: _____
HI Residing Village: _____
HI HWC Village: _____
Age of HI: _____
Education: _____
Contact: _____
Name of the Investigator: _____
Date of Survey: _____

1. What are the Primary functions of your job?

2. What are the Challenges/ Barriers that you feel in performing your work?

3. Can you give any suggestion to overcome those mentioned barrier (s) ?

4. What are the registers you maintain? (Ask for details regarding the same)

5. Who is reviewing your reports periodically? (Can you please show your reports?)

Interaction with Village Health Nurse (VHN)

Name of the VHN: _____
VHN HWC Village: _____
Education: _____
Name of the Investigator: _____

VHN Residing Village: _____
Age of VHN: _____
Contact: _____
Date of Survey: _____

1. What are the Primary functions of your job?

2. What are the Challenges/ Barriers that you feel in performing your work?

3. Can you give any suggestion to overcome those mentioned barrier (s)?

4. After appointing MLHP, how are your outreach activities impact?

5. Are you in Deputation Posting? If yes, how is your regular work affected?

6. Do you handle Population Registry? If yes can you please explain about it…

7. Are you used to PICME app?

Name of the Services	Outcome						
	2022						
	Jan	Feb	Mar	Apr	May	Jun	Jul
General OP							
Ante natal Care (No. of Visits)							
Post- natal Care (No. of Visits)							
Immunization							
No of VHN Day							
No of AN Clinic							
Total							

Interaction with Mid-Level Health Provider (MLHP)

Name of the MLHP: _____ **VHN Residing Village: _____**
MLHP HWC Village: _____ **Age of MLHP: _____**
Education: _____ **Contact: _____**
Name of the Investigator: _____ **Date of Survey: _____**

1. What are the Primary functions of your job?

2. What are the Challenges/ Barriers that you feel in performing your work?

3. Can you give any suggestion to overcome those mentioned barrier (s)?

4. Can you explain about your workload?

5. How well is your co-ordination with other Community Health Workers? (Explain with scenarios)

Name of the Services	Outcome						
	2022						
	Jan	Feb	Mar	Apr	May	Jun	Jul
Total Minor Ailments							
No of patients-Screened HTN							
No of patients-Referred HTN							
No of patients-positive HTN							
No of patients-Screened DM							
No of patients-Referred DM							
No of patients-positive DM							
Total							

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