DVARA
Health Finance

Vital Signs

Newsletter | Vol-VII, March 2024

Photo: **Minakshi Mahesh Khuspe**,
Health Sakhi, Gondawale Village, Satara

Hope the year has gotten off to a positive and healthy start for you.

Dvara Health Finance's (DHF) mission is to ensure that spending on health translates into better financial and health outcomes for all Indians. Our service, NEEM, is a bundle comprising access to a care team (health worker + digital doctor), generic medicines for chronic diseases and financing solutions.

Our quarterly newsletter, 'Vital Signs', is an effort to build a community of practice for health sector innovators and practitioners in India. We aim to share learnings from new healthcare models and build a vibrant community that helps improve the value equation for household spending on health.

In this edition, we bring you some encouraging data on health outcomes from our customer cohort in Satara (Maharashtra). Also, we share some of the recent process innovations aimed at improving the quality and timeliness of access to care for our customers. Finally, we share with you some experiences from the field and a paper that we found very interesting in the context of improving patient journeys vis-a-vis diabetes & hypertension management.

I am excited to share that we have been working with several new partners in the past few months. On the distribution front, while our core focus is on growing the cohort in Satara to a critical scale, we have also been working with Sarvagram - a leading NBFC focussed on building a rural household-focussed platform. The NEEM product is being offered along with the loan in select branches in Sangli. The hypothesis is that it will increase customer loyalty to Sarvagram even while addressing credit risk arising from the health issues of the borrower. Our technology platform - NEEM360 is now being used by Swabhiman Foundation, a non-profit serving the healthcare needs of the urban poor in Bangalore and the Ambuja Cement Foundation, one of the largest corporate foundations engaged in implementation of multiple rural support programs including a robust healthcare model in over ten states. We continue to grow our partnership with Zeno Health with the shared goal of increasing access to generic medicines. We were thrilled to be selected as a part of ACT's health portfolio and will use the support to grow our Satara base and address critical gaps in the model.

Please send your suggestions and feedback to communications.health@dvara.com. You can also subscribe to the newsletter by signing up here.

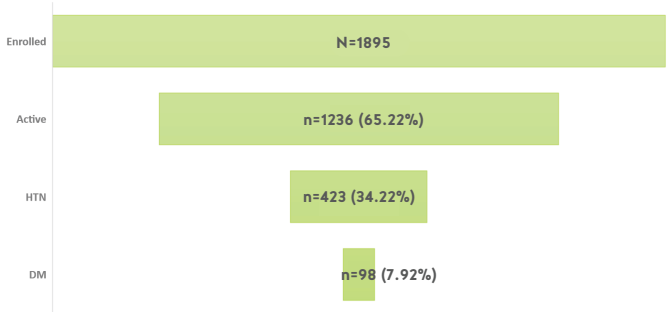
Happy reading and wishing you good health!

Bindu Ananth
Founder & CEO - Dvara Health Finance

Section 1: Health Outcomes of the Satara Cohort

For this exercise, we looked at customers on-boarded between January to September, 2023. We used two additional filters : 1) should be an active customer, i.e, paid at least one subscription in the preceding two months and 2) should have received at least 2 monitoring/check-in visits. For this cohort of customers, we compared values measured during baseline screening with the values recorded by the health worker during the most recent monitoring/check-in visit.

Chart 1: Prevalence of Hypertension and Type 2 Diabetes Mellitus (DM) among the active cohort



Note: 'Active' denotes patients who are active subscribers of the NEEM program

Chart 2: Control (<140/90) in all Hypertensive Patients

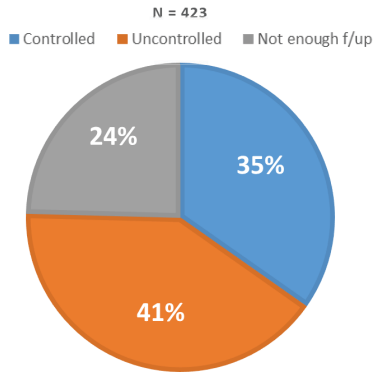
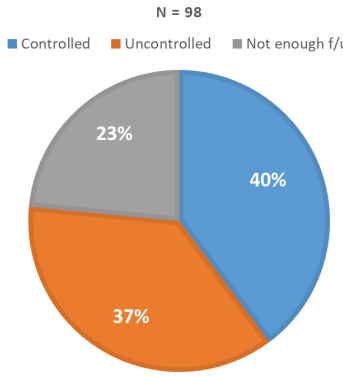


Chart 3: Control in all Type 2 DM Patients (RBS < 200)



It is worth noting that among those who are "uncontrolled", there are positive changes but not to the extent of full control. The "not enough f/up" indicates customers who have not received at least two monitoring/check-in visits since screening. The data suggests to us that a strong beginning has been made while there exists significant room for gains. We expect to publish this data on a quarterly basis and internally, publish this by health worker (HW) to create a culture of accountability for outcomes among care teams.

Section 2: Process Innovation - Straight Through Process & Referral Workflows

Hypertension and diabetes mellitus (DM) are considered the gateway to cardiovascular diseases (CVD). Although initially considered as urban conditions, both hypertension and DM have increasingly been diagnosed in rural communities, thus further widening health inequalities. The prominent challenges in hypertension and diabetes care are late diagnosis, limited access to healthcare providers and medications, non-adherence, and delayed detection of complications. Timely interventions, continuous monitoring, and a comprehensive care approach can mitigate the otherwise debilitating complications and reduce premature morbidity and mortality.

There exists evidence-based, standardised treatment protocol guidelines such as the Punjab Hypertensive Protocol Guidelines and WHO Package of Essential Noncommunicable (PEN) Disease Interventions for Primary Health Care. The simplified protocols promote the use of a defined list of core medicines, making it easy to be deployed through locally recruited health workers (HWs). One concern has been with respect to tailoring care for those who are already on medications or have co-morbidities that make them ineligible for the standard protocols.

In order to address this, Dvara Health Finance's NEEM program has defined criteria at the patient level such that they fit either into 1) a direct or straight through process (STP) that usually applies to a large majority of the patient population or 2) referral to specialist process that caters to a relatively minor proportion of the patient population. These have been automated so that the platform classifies the patient dynamically without the health worker (HM) having to figure this out on the field. Currently, these have been developed for hypertension and DM only.

As the name suggests, the STP is clear and has simple-to-follow instructions (illustrated in Figure-1). The STP is applied to those patients who do not have comorbidities or other complex medical history. This is critical in our context as about 80% of our chronic condition patients are diagnosed for the first time by us. Following the screening process, a patient who qualifies for STP is identified by the NEEM360 platform. A draft prescription is generated based on standard protocols discussed previously. The HW then connects the patient to the doctor for a tele-medicine interaction where this prescription is confirmed or rejected by the doctor. This prescription is then sent to the patient's phone immediately. If the patient so wishes, they can order the medicines through the HW for delivery within 3-4 days. The principal benefit is that the HW is able to achieve much more in a single patient encounter and significantly eliminate loss to follow-up arising from staggering the prescription flow from the screening flow. This "closing of the action loop" is an important consideration in primary care settings.

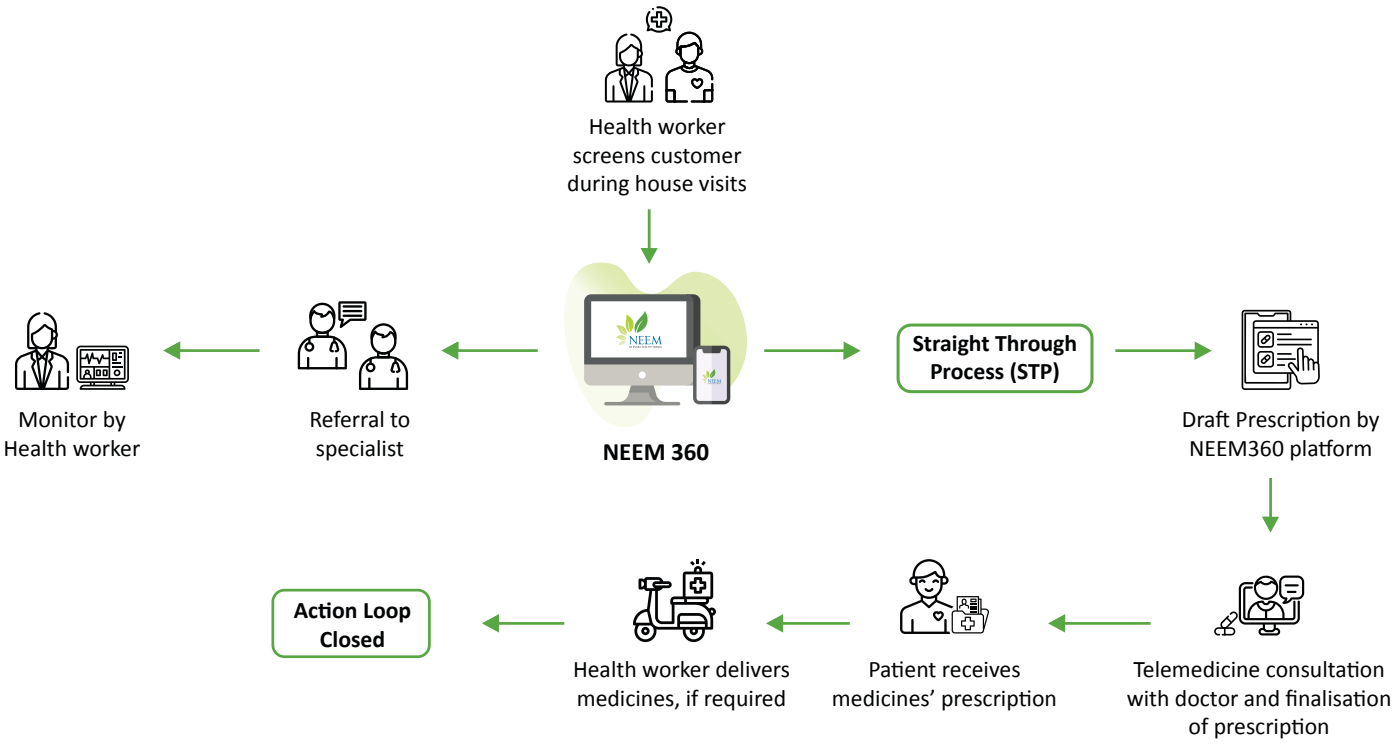
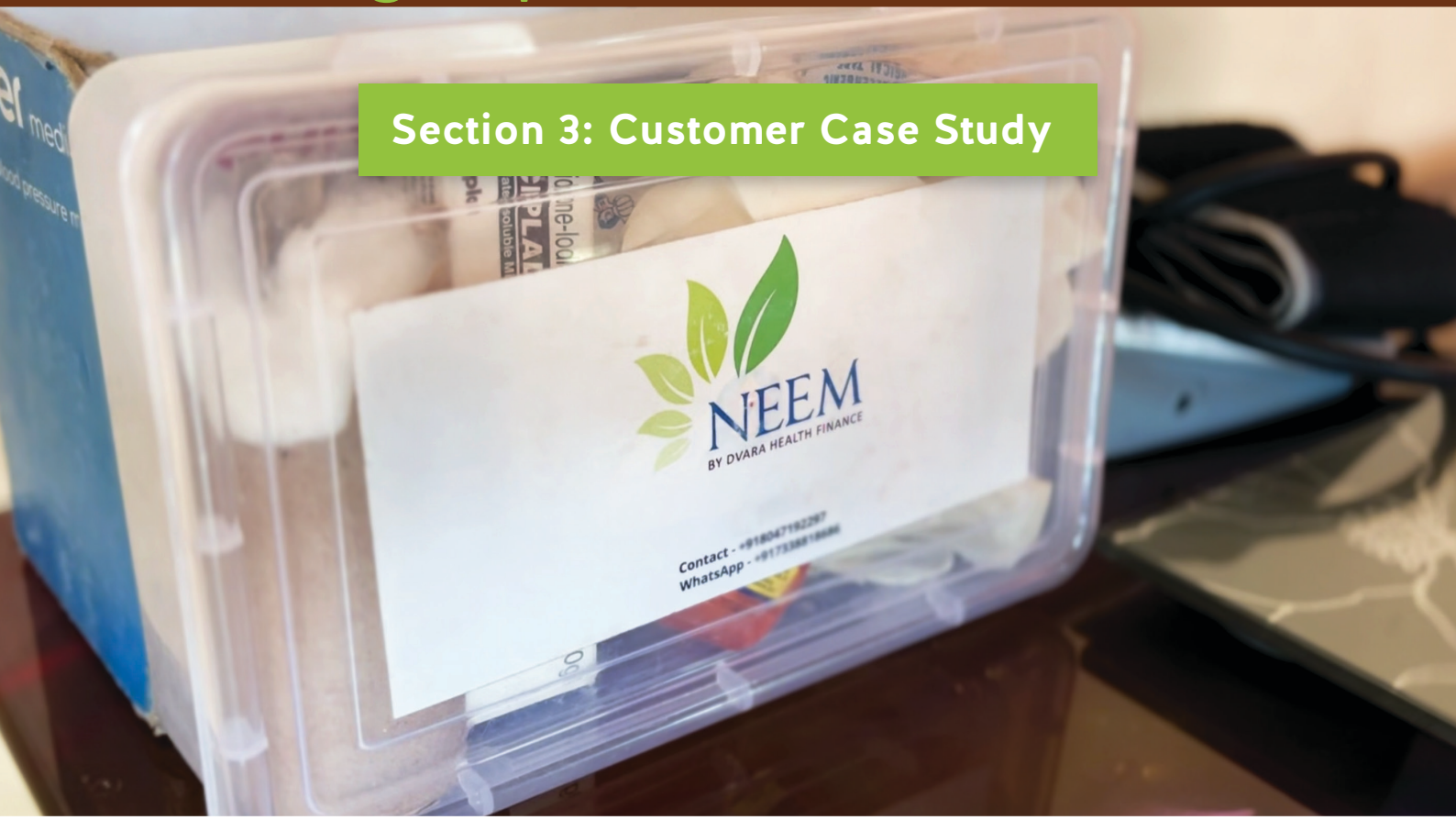


Figure 1: Action loop closed in the straight through process (STP) at a single patient encounter

At the same time, patients who have risk factors and comorbidities require a comparatively complex, non-linear treatment regimen. The NEEM360 platform flags these for referral after the screening flow. Given the remote geographies where we operate, access to specialists is highly constrained and would typically involve several hours of travel. The process developed by NEEM for referral entails a detailed (remote) discussion between the NEEM physician (typically an MBBS doctor) and the relevant specialist (cardiologist or internal medicine MD). There is no direct interaction between the specialist and the patient. During this discussion, the specialist reviews the relevant history, vitals and relevant diagnostic reports and recommends a course of action. Given the resource constraints, a 30 minute session with the specialist on a fortnightly basis is currently adequate to cover all referral patients.

The STP is a process innovation that closes gaps by promoting access to healthcare for timely interventions. HWs are essential for decentralising care, especially primary healthcare. This strategy of task-shifting allows doctors to dedicate more time to complex cases, thereby boosting the efficiency of the health system. This approach can help expand and scale up healthcare services for non-communicable diseases.

Access our full protocol documents for Hypertension and Diabetes.



Section 3: Customer Case Study

Mrs. Swati (name changed for privacy purposes), a 42-year-old female, residing in the Lodhavade village of Man Taluk in Satara district, Maharashtra subscribed to the NEEM program in November 2023. Swati gave a negative history of cardiovascular diseases (CVDs). However, when she visited the local doctor for a fever some months ago, she had been told that she has high BP and was asked to start treatment. Swati said she was scared of going to the hospital again for treatment. The patient has the habit of chewing smokeless tobacco four to five times a day for four years. Her BMI was 28.37 and CVD risk was 5%. She also recollects her mother having 'BP troubles'. No other relevant family history was noted.

On examination by NEEM's trained health worker (HW), the patient had a very high blood pressure of 184/106 mmHg on 06.11.2023. As this BP value was alarmingly high and called for urgent action, the HW informed the digital doctor (DD) immediately and connected the patient with the DD via NEEM360 platform for a telemedicine consultation. The patient's BP was measured again in the virtual presence of the doctor and a diagnosis of hypertension was established. The DD advised the patient to visit a doctor at the nearest hospital and counselled her regarding the probable complications of very high BP. Despite the counselling, the patient refused to go to the hospital citing fear of hospitals as the reason. As an alternative action, on the same day, the DD generated a prescription of Telmisartan 40mg + Amlodipine 5mg, once daily. The HW ensured the medicine was delivered to her at the earliest and advised her to limit salt intake and engage in physical activity for at least 30 minutes/day.

Though the patient refused to go to the hospital, she started taking the prescribed medications. The HW followed up on her regularly with house visits and noted that she is taking the medications regularly. As of 09.01.2024, the patient's BP had gradually reduced to 134/88 mmHg. This change from Stage 3 hypertension to controlled hypertension within two months of initiating treatment is worth noting.

However, on the HW's latest visit to the patient's house, the patient's diastolic BP was elevated at 139/107 mmHg. The patient admitted to not being regular with medicines, highlighting the well-known problem of non-adherence. To address this problem, we at DHF are actively delving into the investigation and comprehension of the factors contributing to non-adherence. In the field, our approach involves inspiring patients through the dissemination of success stories and engaging family members to provide encouragement and reminders for timely medication intake. Simultaneously, on a research front, we are enthusiastic about examining the underlying causes of non-adherence to hypertensive medications.

Section 4: What are we reading?

Article: Many hops, many stops: care-seeking "loops" for diabetes and hypertension in three urban informal settlements in the Mumbai Metropolitan Region
Authors: Ramani S, Bahuguna M, Spencer J, Pathak S, Shende S, Pantvaidya S, D'Souza V and Jayaraman A
Journal: Front. Public Health 11:1257226. doi: 10.3389/fpubh.2023.1257226 (2024)

There is no doubt that non-adherence is an issue that plagues most chronic disease conditions. While we at DHF were brainstorming on how to tackle non-adherence, we came across this interesting article that explores care-seeking behaviour of hypertensive and diabetic patientsresiding in informal urban settlements in Mumbai, India.

The findings from this qualitative study by Mumbai-based Society for Nutrition, Education and Health Action (SNEHA) were derived from a total of 47 interviews and six focussed group discussions with patients, community members, and healthcare providers from both private and public domain. Few main findings are:

1. Patients did not visit a doctor unless they were symptomatic. Concept of prevention was almost absent.
2. First visit when patient was symptomatic was to nearby source of healthcare - a pharmacist or to a 'small doctor', usually Non Degree Allopathic Practitioners (NDAPs)
3. These 'small' doctors had private clinics, were easily accessible, familiar, 'kind', and affordable. However, many 'small' doctors only provided symptomatic treatment to minor ailments and referred patients to more qualified doctors for formal diagnosis.
4. Patients either went back to 'small' doctors when their complaints became severe or went to 'big' private doctors who usually had clinics far from the informal settlements. Public and non-profit healthcare sectors were least sought.

5. Patients made multiple switches between doctors - often switching between 'small' and 'big' doctors, public and private sectors, and allopathic and alternate medicine sectors. Reasons for switches were:
    - To confirm diagnosis
    - No improvement in symptoms - in search of better-suited treatment
    - Due to comorbidities
    - To avoid high cost of consultations, especially at private clinics
    - Influenced by well-wishers's advice
    - Expertise of of different healthcare providers
6. The switches were not linear, but cyclic - multiple 'loops' to confirm diagnoses and multiple stops, loops, and restarts in management and treatment of the conditions.
7. A major influencing factor for the hops, stops, loops, and restarts is the constant need to balance between getting relief and saving on healthcare expenses.
    - Private allopathic doctors were expensive and so were the medications prescribed by them.
    - Buying partial medicines, taking medicines intermittently, and not going back for follow-up visits were few of the ways patients saved on costs.

So, what can be done to avoid these cyclic journeys of patients?

1. Enabling trusted, reliable 'first contact' points for NCD care. The 'small' doctors could be engaged to be these first contact points
2. Integrating care provided by various providers
3. Avoiding diagnostic delays
4. Addressing structural factors such as cost of medicines and providing continuum of care
5. Influencing health-seeking behaviour by improving awareness and attitudes towards long-term treatments
6. Making urban public sector play a more active role by being more accessible and sympathetic to people's felt needs

DHF's NEEM program is addressing many of these challenges by having a locally recruited, hence trusted, HW who is the first contact point. Continuum of care is provided through the HW - right from screening at house visits, prompt diagnosis aided by NEEM360 platform, and prescription of standardised treatment supervised by remote doctors. By providing access to generic medicines, cost of medicines are brought down and the subscription model of the overall program reduces financial burden from consultations and other health events.

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