

EVALUATION OF

THE KARACHI

HEPATITIS C STRATEGY

MAHAR COLONY AND BALDIA

March 2023

This publication was produced at the request of Médecins Sans Frontières (MSF) – Operational Centre Brussels (OCB) under the management of the Stockholm Evaluation Unit (SEU).

It was prepared independently by Erum Rasheed.

DISCLAIMER

The authors' views expressed in this publication do not necessarily reflect the views of MSF and the SEU.

CONTENTS

ACRONYMS.....	2
EXECUTIVE SUMMARY	3
1. INTRODUCTION	8
1.1 Second highest burden in the world.....	8
1.2 MSF Hepatitis C Karachi Strategy	8
2. THE EVALUATION	11
2.1 Evaluation purpose	11
2.2 Evaluation scope.....	11
2.3 Evaluation questions.....	11
2.4 Evaluation approach & methodology.....	12
2.5 Ethical aspects	12
2.6 Limitations	12
3. PROGRAM LOGIC	14
3.1 Lack of Understanding & Planning for The Catalytic Dimension	15
4. FINDINGS.....	17
4.1 Machar Colony	17
4.2 Baldia	26
4.3 Catalytic Dimension	28
5. RECOMMENDATIONS.....	35
APPENDIX.....	36
APPENDIX 1 – Evaluation Matrix	36
APPENDIX 2 – Documents Reviewed.....	38
APPENDIX 3 – Stakeholder Consultations	38
APPENDIX 4 – Models of Care.....	40
APPENDIX 5 - Disaggregated Data Machar Colony.....	42

ACRONYMS

APRI	Aspartate Aminotransferase to Platelet Ratio Index
DAA	Direct-Acting Antivirals
DAC	Development Assistance Committee
DOH	Department of Health
GP	General Practitioner
HCV	Hepatitis C Virus
HIV	Human Immunodeficiency Virus
IRD	Interactive Research and Development
LHW	Lady Health Workers
MOH	Ministry of Health
OCB	Operational Centre Brussels
OECD	Organisation for Economic Co-operation and Development
PCR	Polymerase Chain Reaction
PHC	Primary Health Care
RDT	Rapid Diagnostic Test
SEU	Stockholm Evaluation Unit
SOF/DAC	Sofosbuvir/Daclatasvir
SVR	Sustained Virologic Response

EXECUTIVE SUMMARY

As of 2020, there were an estimated 57 million people chronically infected with Hepatitis C virus (HCV) globally, with around 10% of these living in Pakistan.¹ A recent systematic review and meta-analysis estimated that the HCV seroprevalence in general population of Pakistan is 6.4%.²

MSF has run an HCV project in Machar Colony Karachi since 2015. In 2020, MSF revised its strategy for the 2021-2024 period to build on the success and capitalise on earlier experience.

The Stockholm Evaluation Unit (SEU) commissioned this evaluation to reflect and take stock of this revised strategic direction and the likelihood of its success within the given context.

KEY FINDINGS

Hepatitis C Karachi Project is categorised as a “choice” or a “catalyst” project. A recent paper written by the Stockholm Evaluation Unit (SEU) identified the lack of clarity and consistency on how the Operational Centre Brussels (OCB) conceptualizes the catalytic element of its choice projects; and how the catalytic dimension is incorporated in the design and delivery of an intervention. Document review and stakeholder consultations conducted during the evaluation indicate that this holds true for Hepatitis C Karachi Strategy as well: a systematic and a thorough process of needs assessment, project planning, monitoring and adaptive management was noted within both the direct fields of interventions, Machar Colony and Baldia. However, there is lack of consistent understanding and planning of how the results achieved in these sites can be utilised to create a bigger systemic change and health impact.

A program logic was developed in consultation with the Hepatitis C Karachi project team, to initiate this process of identifying the catalytic effect program is aiming for, how it links to the individual activities in Machar Colony and Baldia and the expected short and longer-term outcomes. The sense-making exercise identified:

- **Direct field of intervention 1 Machar Colony:** Aims to bend the HCV curve in Machar Colony, to significantly reduce the viremic prevalence of HCV in a community that has a known high prevalence and multiple risk factors of HCV transmission but has limited access to healthcare services.
- **Direct field of intervention 2 Baldia:** Aims to integrate HCV vertical program in the existing primary health care centre in Baldia to increase access to HCV care for a larger population of Baldia currently living with a high HCV prevalence rate.
- **Machar Colony and Baldia have two distinct models of care and approaches to delivery:**
 - Machar Colony is a community-based vertical HCV program run solely by MSF.
 - Baldia is a decentralized HCV model of care integrated at a PHC facility and is run by Ministry of Health (MOH) with support from MSF.

¹ Ayoub HH, Abu-Raddad LJ. Treatment as prevention for hepatitis C virus in Pakistan: mathematical modelling projections. *BMJ Open*. 2019;9: e026600. doi:[10.1136/bmjopen-2018-026600](https://doi.org/10.1136/bmjopen-2018-026600).

² Al Kanaani Z, Mahmud S, Kouyoumjian SP, Abu-Raddad LJ. The epidemiology of hepatitis C virus in Pakistan: systematic review and meta-analyses. *Royal Society Open Science*. 2018;5: 180257. doi:[10.1098/rsos.180257](https://doi.org/10.1098/rsos.180257).

- **Catalytic effect (bigger anticipated change):** Through action, evidence, and advocacy the interventions will demonstrate to the government how two distinct models of care can be replicated at scale; and how policy and practice of HCV management can be improved to reduce the HCV burden in Pakistan, and beyond (see section 3 for the program logic).

KEY FINDINGS – MACHAR COLONY

Aligns with MSF Overarching Strategy

MSF is enabling access to HCV care for a marginalised and under-resourced community currently living with a high HCV prevalence rate. Machar Colony has been ignored by government administrators even after it was officially incorporated in the administrative map under Keemari District. The residents have limited access to healthcare with just one dispensary within Machar Colony and no primary health care facilities. For a high proportion of undocumented migrants, it is also difficult to access public healthcare services available outside of Machar Colony.

Planned project activities on track with team rapidly adapting to challenges

Though it is still early stages of implementation, current data on the key performance indicators (objectively verifiable indicators) suggest progress is on track. The bullet points below summarise how the current project is tracking against each of the key steps in the causal pathway (see section 3 for the program logic) that are key to achieving the overall outcome of reduction in HCV prevalence in Machar Colony:

- **People understand what HCV is and the importance of getting tested and treated:** Health promotion team goes door-to-door to increase awareness of HCV. They have reached 24% of the total population of Machar Colony in 8 months. The target numbers were not reached due to several reasons including monsoon rains, Ramadan, Eid, political campaigns, security threats, heatwave, COVID-19, and dengue outbreak.
- **People agree to screening:** 70% of the people approached agreed to take Rapid Diagnostic Tests (RDT). Strategies to increase this proportion are under consideration.
- **Timely diagnosis and treatment initiation:** 60% of those who were tested HCV-positive are initiated on treatment. About 33% did not come to the clinic but are being actively followed up.
- **Patients' complete treatment and have positive treatment outcomes:** 175 people or 40% of the who started treatment have completed treatment so far. Thirty-four were successful and 7 reported treatment failure.

Barriers to Impact

The bullet points below list the key steps in the causal pathway that are either missing from the current strategic design or not on track:

- **Majority of the Machar Colony residents are screened:** Due to complex operating environment, many factors hinder MSF's screening progress and may continue to do so in the future. This will affect the extent to which the HCV curve in Machar Colony is bent by December 23 (the planned end date of operational activities).
- **Treatment initiation of high proportion of HCV positive patients:** Currently, only 60% of those who were tested HCV-positive are initiated on treatment. This does not meet the micro-elimination target of 90% treatment initiations.

- **People adopt safe practices:** “An essential component of HCV elimination is reducing transmission by infected people who have not yet been treated or responded to treatment. Prevention thus needs to remain a prominent element of national and subnational responses to HCV”.³ It is likely that with the limited focus on reducing risk of transmission, it will be a challenge to reach the goal of “bending the curve” or sustain it in the longer run.
- **Capacity building of partners:** As stated above, with a lack of structural response on preventing transmission, coupled with a possibility of movement of population cohorts in or out of Machar Colony, it is likely that HCV will still exist (or return) in the community in the longer term. Hence it is important that HCV care continues even after the end of MSF’s strategy period. MSF had initially intended to deliver this intervention in partnership with local organisations. This would have helped built capacity of local partners and lead to potential hand over post December 23 to ensure sustainability. However, these partnerships could not materialise.

KEY FINDINGS – BALDIA

MSF team has faced many challenges and delays working in Baldia. However, there is progress in the right direction. The bullet points below summarise how the current project is tracking against each of the key steps in the causal pathway (see section 3 for the program logic) that are key to achieving the overall outcome of successful HCV integration at Baldia Primary Health Care (PHC):

- **Model adapted to the needs of PHC:** MSF has adapted to the needs and ways of working of MOH to facilitate successful integration of HCV model in Baldia PHC constantly liaising with DHO Baldia.
- **Capacity building of Baldia PHC to integrate model of care:** A successful training was delivered to 119 MOH Lady Health Workers (LHW). The training evaluation found an increase in LHW knowledge of HCV; about 60% of them had a score of 75% and above after attending the workshop. However, there are no MOH medical doctors that can be trained to manage HCV at the PHC which will likely become a barrier to sustainable integration.
- **Increased number of people screened and initiated on treatment:** A total of 1101 people were screened, of which 46 were confirmed to have HCV. Twenty of these people were initiated on treatment.

Barriers to Impact

The bullet points below list the key steps in the causal pathway that are either missing from the current strategic design or not on track:

- **Successful integration of the model:** MSF continues to transfer its existing knowledge and building capacity of Baldia to integrate the HCV model of care in the PHC setting. However, success of its efforts rely on the extent MOH can sustain the integration and continue to screen and treat HCV patients in the longer term (beyond MSF’s involvement). The evaluation respondents noted the dire lack of resources, professionalism and willingness which may become barriers to success following MSF’s exit.

³ Lazarus, J. V., Safreed-Harmon, K., Thursz, M. R., Dillon, J. F., El-Sayed, M. H., Elsharkawy, A. M., Hatzakis, A., Jadoul, M., Prestileo, T., Razavi, H., Rockstroh, J. K., Wiktor, S. Z., & Colombo, M. (2018). The Micro-Elimination Approach to Eliminating Hepatitis C: Strategic and Operational Considerations. *Seminars in liver disease*, 38(3), 181–192. <https://doi.org/10.1055/s-0038-1666841>.

THE CATALYTIC EFFECT

Pakistan government has set itself a target to screen 50% of the eligible population, aiming to reach 69 million persons with anti-HCV screening and 5.15 million with Polymerase Chain Reaction (PCR) confirmation testing between July 2020 and June 2025. However, government has made limited progress towards these elimination goals. In this scenario where there is limited action from the government, MSF's work in Baldia and Machar Colony contributes to Pakistan's National Elimination Goals 2030. Of the total national target to screen 69 million persons, MSF is aiming to screen about 112,000 in Machar Colony and make HCV care accessible to 100,000 to 200,000 people in Baldia. While these numbers may seem like a drop in the ocean, the projects hold broader value as demonstration projects to create bigger systemic change through evidence and advocacy.

Government of Pakistan currently aims to “Build on early micro-elimination and Human Immunodeficiency Virus (HIV) programs to scale-up HCV testing” as well as “Continue decentralizing HCV treatment to health centers and basic health units”.⁴ Aligned with these priorities, MSF's work builds on the evidence, and aims to produce small victories that will inspire the government to replicate and scale up models of care for full scale elimination.

While these models of care remain relevant to the current national strategic priorities, some evaluation respondents mentioned what Pakistan instead needs is an Egypt style aggressive mass screening and testing campaign. This national strategic change seems plausible given that Pakistan is one of the cheapest manufacturers of Direct Acting Antivirals (DAAs), has increased capacity of PCR testing and increased coordination between provinces and federal capital as part of COVID-19 response. Lack of political willingness and resources are likely the major barriers to adopt such an approach. MSF can likely play a role to address these barriers. However, given the limited involvement of external stakeholders in the evaluation, the feasibility of this needs further investigation.

Regardless of the catalytic objectives, effective operational research and advocacy will remain critical to the success. The current progress on operational research is satisfactory, however, there hasn't been much progress on advocacy in the absence of an advocacy manager. Respondents highlighted several gaps in operational research and advocacy, that are likely to become barriers to achieving successful catalytic change. The factors considered key to achieving a systemic change and health impact include:

- **Evidence that influences policy and practice change:** There is growing acknowledgement in the public health field that translation of evidence is often ineffective and inefficient. For catalytic effect to take place, evidence must not only be disseminated but also translated in complex systems. The evaluation respondents highlighted the need to have evidence on the significance of outcomes as well as the cost effectiveness of the models of care, to support effective translation.
- **Catalytic ambitions align with the national context and priorities:** Catalytic change can only be achieved collectively, with key stakeholders working in collaboration creating momentum in a unanimous direction. Hence it is important that the catalytic effects; systemic change and health impact MSF is aiming for are aligned with the present contextual realities and priorities; and there is willingness and readiness in the sector.

⁴ National Hepatitis Elimination Profile for Pakistan, Coalition for Global Hepatitis Elimination, June 2022.
<https://www.globalhep.org/news/national-hepatitis-elimination-profile-pakistan-key-takeaways>.

- **Advocacy for change:** Advocacy strategy should be aligned with the catalytic objectives set in collaboration with the project team.

1. INTRODUCTION

1.1 SECOND HIGHEST BURDEN IN THE WORLD

As of 2020, there were an estimated 57 million people chronically infected with HCV globally, with around 10% of these people living in Pakistan.⁵ A recent systematic review and meta-analysis estimated that the HCV seroprevalence in general population of Pakistan is 6.4%. HCV transmission appears to be primarily driven by healthcare-related exposures, such as therapeutic injections, intravenous infusions, and poor sterilization of medical equipment.⁶

1.2 MSF HEPATITIS C KARACHI STRATEGY

MSF OCB has been in Machar Colony since 2012 (figure 1 below shows how MSF's involvement has changed overtime).

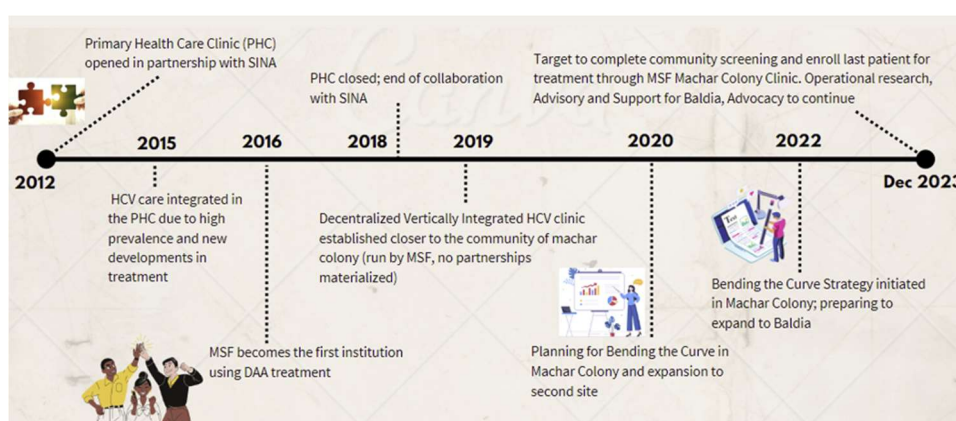


Figure 1. Timeline of MSF's work on Hepatitis C in Machar Colony

1.2.1 PRIMARY HEALTH CLINIC WITH SINA

In February 2015, observing a high prevalence in the community, HCV was integrated in the primary health care clinic run in partnership with SINA. In 2016, MSF became the first institution in Pakistan using Direct Acting Anti-viral (DAA) treatment. Use of the new highly effective DAA treatment allowed MSF to increase patients initiated on treatment to up to 200.⁷ MSF successfully demonstrated that a decentralized, integrated model of care for Hepatitis C can be effective in a high prevalence, low-resource setting in terms of cure rate (published - Management of chronic Hepatitis C at a primary healthcare clinic in the high-burden context of Karachi-Pakistan).⁸

⁵ Ayoub HH, Abu-Raddad LJ. Treatment as prevention for hepatitis C virus in Pakistan: mathematical modelling projections. *BMJ Open*. 2019;9: e026600. doi:10.1136/bmjopen-2018-026600.

⁶ Al Kanaani Z, Mahmud S, Kouyoumjian SP, Abu-Raddad LJ. The epidemiology of hepatitis C virus in Pakistan: systematic review and meta-analyses. *Royal Society Open Science*. 2018;5: 180257. doi:10.1098/rsos.180257.

⁷ Karachi Hepatitis C Project Document 2021-2024, MSF, 20-09-2019.

⁸ Capileno, Y. A., Van den Bergh, R., Donchunk, D., Hinderaker, S. G., Hamid, S., Auat, R., Khalid, G. G., Fatima, R., Yaqoob, A., & Van Overloop, C. (2017). Management of chronic Hepatitis C at a primary health clinic in the high-burden context of Karachi, Pakistan. *PloS one*, 12(4), e0175562. <https://doi.org/10.1371/journal.pone.0175562>.

1.2.2 MOVED AWAY FROM A DECENTRALISED INTEGRATED MODEL OF CARE IN PHC SETTING

However, in 2018, the PHC was closed as the collaboration ended with SINA and it was suspected that the clinic will be destroyed if the Government proceeded with the plan to develop the circular railway line in the area (no progress on this to date).

MSF recognising the burden of HCV in the community, decided to continue Hepatitis C activities in Machar Colony. At this stage, MSF's priority was still to continue with its decentralised integrated model of care run in a partnership arrangement. Several options were explored: rent and MOH dispensary options pursued as well as potential sentinel sites at secondary and PHC level.⁹ However, eventually MSF was unable to continue with the same model of care due to several challenges including, limited existing primary health care facilities in/ or close to the Machar Colony community, bureaucracies of working with MOH facilities, not aligned with national strategy at the time.

1.2.3 MSF HEPATITIS C CLINIC MOVED CLOSER TO THE COMMUNITY

This led to MSF instead setting up an HCV Clinic at a new location closer to the Machar Colony community that is fully run by MSF. The previous location of the clinic (at the border of the colony) impacted access to the services for part of the community, living “deeper” in the community. This new location (centrally located) allows for more equal access to different subgroups of the community, especially to ethnic groups that were underrepresented in the statistics previously because of the geographic location of their home. This clinic, a vertical model of care, has operated since 2018 and is still functional today.

1.2.4 BENDING TO CURVE IN MACHAR COLONY

However, MSF soon realised that the passive approach of waiting for the community to come to the clinic to get screened, was not having as substantial an impact in terms of number of patients treated.

Meanwhile, in 2019, Pakistan hosted the World Hepatitis Conference where the Health Minister unveiled the Prime Minister's comprehensive package to control Hepatitis C epidemic in Pakistan. This put the spotlight on Pakistan's elimination goals. This influenced MSF to start planning for a new strategic direction “Bending the Curve” in 2020. “Bending the curve” model is based on the micro-elimination approach to eliminating HCV. The goal is to significantly reduce the prevalence of HCV in the population of Machar Colony by scaling up the number of people screened, diagnosed, and treated. When enough HCV infected persons at risk of passing the virus to others are treated successfully, the possibility of further transmission will be eliminated, thereby achieving “treatment as prevention”.¹⁰

1.2.5 BALDIA

The vertical program being run in Machar Colony may be the only possible solution for the population of Machar Colony with a high burden of HCV and no access to health care services. However, MSF realised that such a model has its limitations (in terms of replicability and sustainability). Given the

⁹ 2017 10 ARO Pakistan notes_Final.

¹⁰ Lazarus, J. V., Safreed-Harmon, K., Thursz, M. R., Dillon, J. F., El-Sayed, M. H., Elsharkawy, A. M., Hatzakis, A., Jadoul, M., Prestileo, T., Razavi, H., Rockstroh, J. K., Wiktor, S. Z., & Colombo, M. (2018). The Micro-Elimination Approach to Eliminating Hepatitis C: Strategic and Operational Considerations. *Seminars in liver disease*, 38(3), 181–192. <https://doi.org/10.1055/s-0038-1666841>.

high burden of disease, a decentralised integrated model of care is more feasible to scale up the access to HCV treatment in Pakistan. Even though the political will of the government to decrease the HCV prevalence in the country by decentralizing the treatment had been emphasized during the World Hepatitis Day meeting in July 2019, there was little action. Hence MSF, given its past success in implementing the model with SINA, chose to demonstrate HCV integration in a MOH PHC facility in Baldia.

2. THE EVALUATION

2.1 EVALUATION PURPOSE

The purpose of this evaluation is to reflect and take stock of the revised strategic direction and the likelihood of its success in the given context.

The evaluation will confirm the current strategic design and program logic, mapping out the inputs and activities of the program and how they are expected to achieve the desired outcomes and impact.

The evaluation report will be used to:

- Inform future strategic planning;
- Enhance shared understanding of the program and its context; and
- Document the current progress towards expected results.

2.2 EVALUATION SCOPE

The current Hepatitis C Karachi Strategy 2021 – 2024 including operations in Machar Colony and Baldia are included in this evaluation. Even though MSF has worked in Machar Colony since 2015, this is an ex-ante evaluation looking at the revised strategic design and its likelihood of success in the future, hence past achievements and challenges are not included in the evaluation report.

2.3 EVALUATION QUESTIONS

The project's evaluation questions have been developed in line with the Organisation for Economic Co-operation and Development (OECD) Development Assistance Committee (DAC) Criteria of Evaluation. It answers the following evaluation questions:

Table 1. Evaluation questions

Relevance	To what extent the program's objectives and design respond to beneficiaries needs and priorities?
Coherence & Appropriateness	How appropriate is the strategic design of the program when considering the overall objective and the context?
Effectiveness	How likely is the program to achieve its objectives?
Impact	What difference is the program likely to make?

Continuity and Sustainability	To what extent does the design of the strategy consider longer term context and sustainability of impact?
-------------------------------	---

The sub-evaluation questions, the indicators and the methods that will be used to answer each of these evaluation questions are detailed in the evaluation matrix in Appendix 1.

2.4 EVALUATION APPROACH & METHODOLOGY

A theory based mixed methods evaluation was conducted including:

- **Program logic workshop:** A workshop was conducted with the key stakeholders working on the Karachi Hepatitis C strategy at the Machar Colony clinic. This involved discussing a draft program logic developed after the one-on-one interviews. The feedback of the participants was incorporated in the final program logic (Section 0).
- **Program document review:** This included the program documentation provided by MSF and literature scan (see Appendix 2 for the list of documents reviewed).
- **Stakeholder interviews and focus groups:** A total of 20 one-on-one interviews were conducted. Three focus groups were conducted (see Appendix 3 for a list of consultations).
- **Program data analysis:** This included the log frame and case cascade data.

2.5 ETHICAL ASPECTS

The evaluation was conducted legally and ethically and with due regard for the rights and welfare of those involved in evaluation. The customs, culture and dignity of human subjects was respected.

- Informed consent was taken from all stakeholders interviewed for the evaluation. All participants were given the option of anonymity/confidentiality.
- The recordings of the interviews, all program documentation and program data provided are stored in a secure location.
- The final report and findings will be shared with SEU and Evaluation Committee. It will be shared further only after the approval from SEU.

2.6 LIMITATIONS

- The evaluation began in July 22 at which point the strategy was still in early days of implementation. This meant there was lack of sufficient evidence to draw conclusions on progress against targets.
- The evaluation did not include interviews with the patients. Considering it was a strategic ex-ante evaluation, it was considered sufficient to consult with the key stakeholders currently involved in the design and delivery of Hepatitis C program. The perspectives of the patients and the community of Machar Colony included in the evaluation are drawn from the consultation with the field staff working directly with the community. Direct involvement of patients would have

required ethical review and likely pose risks such as building untimely expectations in these early stages of implementation.

- There is limited representation of the views of external stakeholders working in the sector due to challenges of scheduling interviews in the timeframe of the evaluation. Sindh was affected heavily by flooding at the time of the evaluation that affected the availability of many government and non-government stakeholders.

3. PROGRAM LOGIC

Hepatitis C Karachi Project is categorised as a “choice” or a “catalyst” project.

“Choice projects ...are projects which are selected around medical and humanitarian needs in situations where we can maximize both the health impact on the population and a systemic change in the environment through our action, our evidence, and our advocacy. These are usually situations which are not acute disruptions but chronic health crises, where OCB believes it can make a difference.”

Catalytic Dimension in OCB Project Cycle, Stockholm Evaluation Unit, 2022

Choice projects have two components:

1. **Direct field of intervention:** Project has value and has its own structural integrity.
2. **Catalytic effect:** Bigger anticipated reaction through action (intervention), evidence and advocacy. This triggers change outside of direct field of intervention. *Error! Bookmark not defined.*

The current Hepatitis C Karachi Strategy has two direct fields of interventions; Machar Colony and Baldia. These projects (in their own right) will bring immense value by increasing access to Hepatitis C care and reducing the overall burden of disease in these respective locations. However, the intention is not for this to end here; rather for it to serve as “demonstration” or “pilot” projects that are means to introduce and experience two new Hepatitis C models of care in these respective settings. Through action, evidence, and advocacy these will facilitate replication and scale up at provincial and national levels. Figure 2 demonstrates how the expected outcomes and the bigger anticipated change differ in Machar Colony and Baldia. Further details of the differences in the two models can be found in Appendix 4.

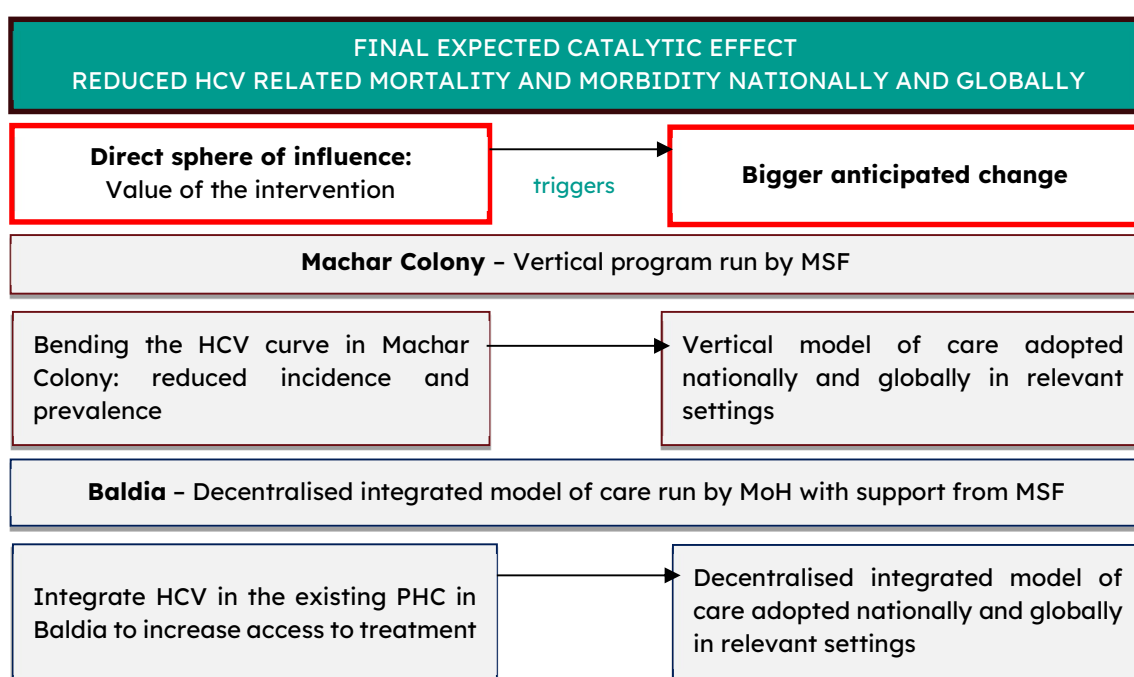


Figure 1. Hepatitis C Karachi Catalytic Dimension

3.1 LACK OF UNDERSTANDING & PLANNING FOR THE CATALYTIC DIMENSION

A recent paper written by the Stockholm Evaluation Unit (SEU), identified the lack of clarity and consistency on how OCB conceptualizes the catalytic element of its choice projects; and how the catalytic dimension is incorporated in the design and delivery of an intervention. Document review and stakeholder consultations conducted during the evaluation indicate that this holds true for Hepatitis C Karachi Project; a systematic and a thorough process of needs assessment, project planning, monitoring and adaptive management was noted within both the direct fields of interventions, Machar Colony and Baldia. However, there is lack of consistent understanding and planning of how the results achieved in these sites can be utilised to create a bigger systemic change and health impact (see Section 0).

A program logic (see Figure 3) of the program was developed in consultation with the Hepatitis C Karachi project team, to initiate the process of identifying the catalytic effect program is aiming for and how it links to the individual activities in Machar Colony and Baldia and the expected short-term and longer-term outcomes.

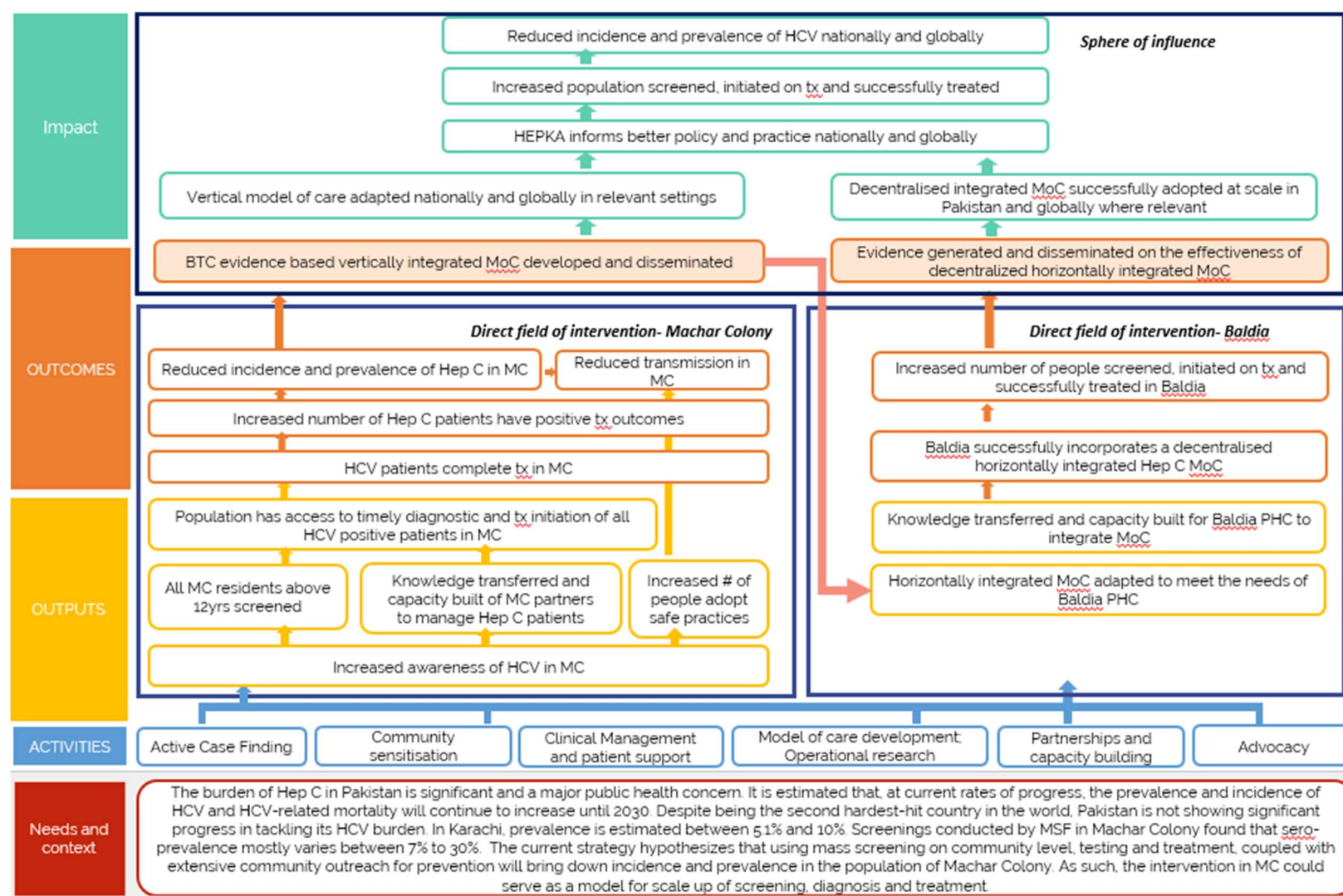


Figure 3. Hepatitis C Karachi Strategy Program Logic

4. FINDINGS

4.1 MACHAR COLONY

4.1.1 MEETING COMMUNITY NEEDS

Serving a community otherwise ignored

“Very brave of MSF to work in Machar Colony”

Machar Colony is one of the largest urban slums. Like any other slum there is lack of basic necessities, overcrowding, substandard housing, unhealthy living conditions, poverty, and social exclusion. However, these are not the reasons deterring organisations from working here; it’s due to its reputation of being one of the most dangerous places in Karachi.

It has also been ignored by government administrators even after it was officially incorporated in the administrative map under Keemari District. The residents have limited access to healthcare with just one dispensary within Machar Colony and no primary health care facility. For a high proportion of undocumented migrants, it is also difficult to access public healthcare services available outside of Machar Colony.

There is high prevalence of Hepatitis C in the community due to multiple risk factors including poor infection control practices in healthcare settings, and unsafe practices of unlicensed health professionals, traditional birth attendants, spiritual healers as well as hijama practitioners. Using unsafe practices for the peeling of shrimps by those employed in the formal and informal fish factories has also been identified as a risk factor in some parts of the colony. Prevalence survey conducted by IRD earlier this year found the seroprevalence in Machar Colony is 12.4% and viraemic prevalence is 4.0%.

MSF has persistently worked to serve this community since 2015, despite these complex challenges. Many respondents indicated that the prevalence identified by IRD is much lower than they had initially expected which they attributed to MSF’s work in the past (considering there is no other Hepatitis C care provider of similar scale operating in the community). MSF, with the current strategy, has set itself an even more ambitious target to bend the curve of Hepatitis C, realising it has ethical and moral obligation to not leave the community without a substantial impact.

MSF and its people have a very strong positive reputation in the community (as noted by the evaluation respondents who work directly with the community). People associate their name with trust and expectation. They have built strong relationships with the community leaders organising regular meetings to ensure the needs of the community are always understood, and the political sensitivities are well-respected and balanced (especially working in a community where ethnic clashes are common). These relationships also help influence action.

“MSF has a strong name so people listen...”

Apart from directly impacting the community of Machar Colony, MSF's mere presence in the community has much greater value and provides a strong opportunity to demonstrate to provincial and national governments, the needs and issues facing the community, and advocate for better access to healthcare and other social support services. It also holds opportunity to influence other local and international organisations to partner with MSF to expand support to the community.

“It puts Machar Colony on the map.”

Additional needs of the community

While ‘bending the curve’ aligns with public health and MSF’s strategic priorities, community will likely disagree it meets their health needs.

This is a very vulnerable community faced by multiple challenges. Amongst them, a disease such as HCV which doesn’t make them feel particularly sick, doesn’t take priority (as reported by the staff who work directly with the community, see section 2.6). Since the community also associates MSF with running a primary health care centre in the past, they often approach the field workers requesting for more services to be added or for information regarding other more pressing health conditions such as dengue, malaria or diabetes.

“Yes they see Hep C but there are more urgent needs as they are cut off from service.”

“MSF should start thinking about holistic needs. Maybe advocacy with government to put a clinic here or partner with other providers. Hep C standalone is great but we are not listening to the community.”

“...Why not other diseases...dengue malaria; skin disease; HIV; Diabetes; Hepatitis B.”

4.2.1 EFFECTIVENESS OF PROJECT ACTIVITIES

Screening and care cascade

The table below summarises progress of the program against the assigned targets. These targets were set based on the experience at the MSF Machar Colony clinic, literature review and the WHO elimination targets.

Table 2. Progress against targets (Machar Colony)

	# OF PEOPLE	ACHIEVED %	TARGET
People reached	26,843	24%	112,843
People screened (proportion accepted RDT)	18,668	70%	70%
Tested HCV positive	745		
Treatment initiated	447	60%	90%

Lost to follow up	245		
Not eligible for treatment initiation	53		
Patients currently on treatment	272		
Treatment completed	175		
SVR-12 test performed	41		
Treatment successful	34	83%	90%
Treatment failure	7	17%	<5%

Please see appendix 5 for disaggregated data by gender, age, and ethnicity.

Only 24% of eligible population reached

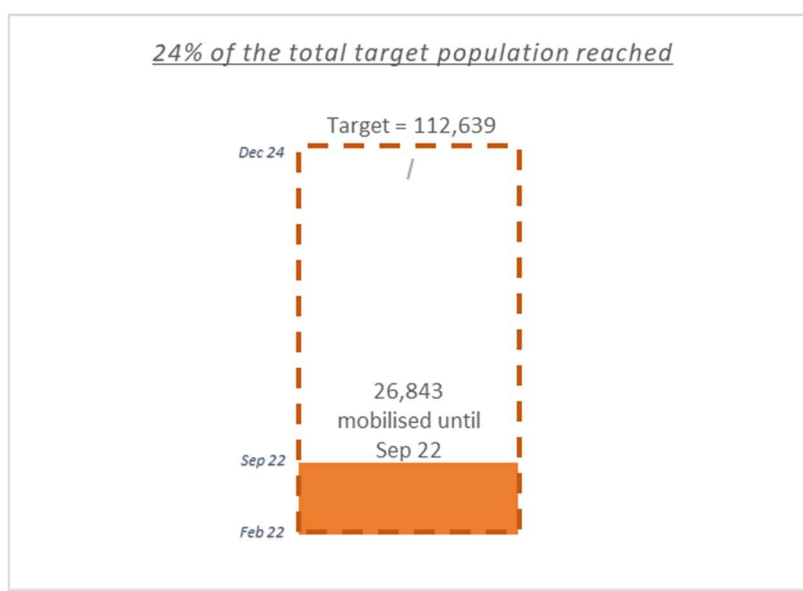


Figure 4. Screening target achieved

Only 24% of the target population of 112,639 was reached in the 8 months since program initiation. The monthly targets of screening were not met due to several reasons:

- Monsoon rains: many places have no drainage system which makes them inaccessible for vans.
- Ramzan and Eid holidays: this involved shorter days and holidays.
- Political campaigns and protests: these can be within Machar Colony or within the rest of the city where health promotion staff are commuting from.
- Security concerns.
- Heatwave: some staff got heatstroke working in the field.
- COVID-19 and Dengue outbreaks: affected staff attendance as well availability of the community.

The team has very strong internal systems of monitoring progress, taking feedback from the community and the field workers to make adaptations as needed. The team is currently exploring several options to increase screening numbers:

- More engagement with community influencers: getting them to make announcements and engage with communities before the van visits;
- Distributing flyers;
- More branding to enhance visibility of the MSF workers and vans;
- Announcing about MSF screening vans at mosques;
- Text messages (drafted by MSF) to be sent to the community-by-community influencers; and
- Expanding the team as well as procuring more vans will be explored next year.

Majority of the people agree to do the screening test

About 70% of the people approached by MSF agreed to do the screening test. MSF reached to a total of 26,843 people and 18,668 were screened.

Majority of the people accept to the screening test due to the following reasons:

- MSF has a very good reputation in the community.
- Health promotion team understands the local context: the team understands the culture of the diverse communities living in the area, can most of the time speak their local language and understand the reservations they may have with Hepatitis C screening. Most of the time the community also recognise them/ or know them from past work. This helps the team to contextualise their message and establish connection leading to higher chance of people getting convinced.
- It is easier to convince people who belong to the Bengali community: this community has the highest HCV prevalence rates, so they often know about HCV through someone who has had it before. The Bengali community was also the focus of MSF's past work which has also helped build awareness.
- Health promotion team note any feedback provided by the community during the household visits. This helps early identification of common concerns and if there is a need to adapt the messaging or approach.
- Involvement of community influencers has had a positive impact on building acceptance.

About 30% of clients refused to be screened. While there is no quantitative data being collected on why people refuse to be screened, evaluation participants identified the following reasons:

- Difficult to convince people due to lack of symptoms. It is common perception in the community to not seek treatment for something that is not creating significant problems and instead trust God that everything will work out for the better on its own.

“Allah malik hai (God is in charge).”

- Difficult to convince people who believe in spiritual healing/ traditional healing as opposed to taking medications.
- Fear that getting tested will reveal they have HCV leading to stigma and discrimination.
- Harder to convince people who belong to the Pashtun community, especially women who do not consider appropriate to visit a van in the absence of their husbands.

- Low visibility of MSF vans and workers due to security reasons.

Following recommendations were discussed:

- Door-to-door screening as opposed to just mobilisation.
- Self-testing kits.
- Doctors and/or community leaders visit the household or do a phone follow-up with those refusing to be screened.
- Seminars or information sessions for high-risk group such as barbers, fish factories, schools, madrassahs.
- Mass media campaigns including TV ad, radio messages or social media.

Only 60% of those who test HCV positive were initiated on treatment

Out of 745 people who were confirmed to have HCV, 447 (60%) were initiated on treatment which does not meet the set target of 90%.

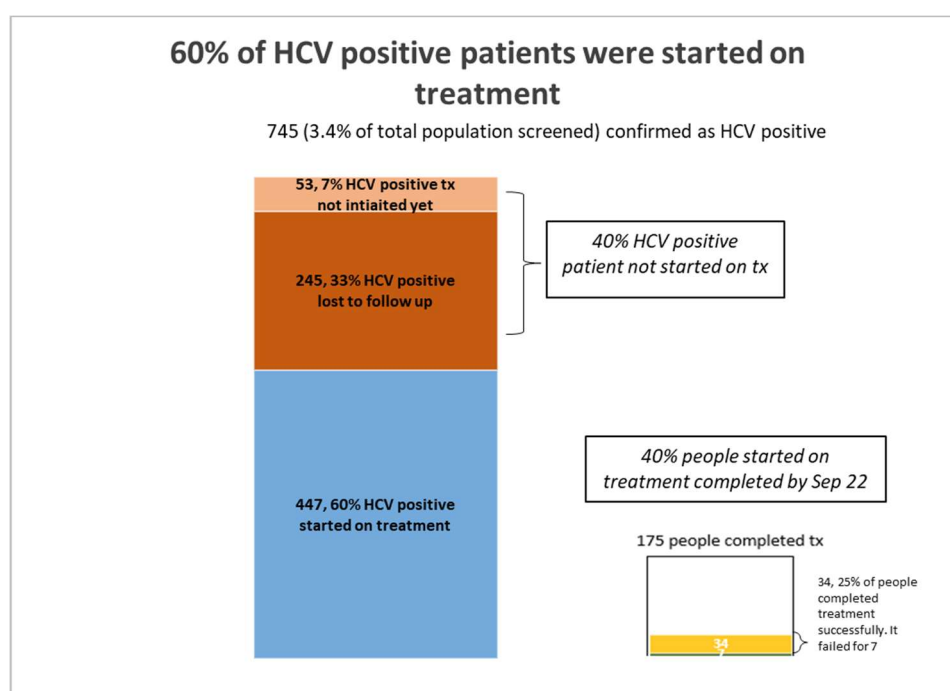


Figure 5. Proportion of patients initiated on treatment

Patient support and counselling; simplification of the diagnosis protocol; and reduction in time between diagnosis and treatment has helped improve the number of HCV positive patients started on treatment.

“Now we do same day treatment initiation that reduces loss to follow up.”

“After BTC was started, patient flow in the clinic has increased.”

However, there is still 33% of the people who were tested positive but did not show up at the clinic to start treatment. The program has recently introduced processes to ensure that these people are actively followed up through phone calls. It is important to monitor the lost to follow up closely. If active follow up doesn't work, the program can explore options of initiating treatment at home, or in screening vans, as currently being done by Agha Khan micro-elimination program in Malir.

Remaining 7% were not eligible for treatment or were in the process of starting treatment:

- 13 pregnant women
- 8 on waitlist (due to patient related factors)
- 3 not initiated (e.g. due to referral)
- 1 not yet assessed
- 1 refused
- 27 case report forms awaiting data entry

Small number of patients completed treatment till September 22

175 people reported to have completed treatment by September 22 which is 40% of the people who were started on treatment. Of this 41 got SVR-12; for 34 treatment was successful and 7 reported treatment failure (remainder are awaiting SVR-12).

A good treatment adherence is observed so far (however, it is too early to draw any conclusions):

Patients support and counselling: step by step guidance is provided and the message is reinforced several times through the patient journey.

“They don't understand the first time.”

“BTC patients know more when they come to the clinic and also noticed better adherence than before.”

“Patients are not given the same level of guidance and attention at any other facility as they are able to get at the MSF Hep C Clinic.”

- Auto-generated reminder SMS sent to the patient reminding them of their appointment date.
- Free treatment and the positive perception of MSF having good medicine.
- Any patients who show up for their follow up later than scheduled date, are sent to the patient support counsellor to counsel them on the importance of treatment adherence. If a genuine problem such as travelling for work is identified, they are given medication for a longer duration.

Patient support and counselling

The current intervention focuses a lot on patient counselling and providing detailed guidance to each patient. They are educated on HCV prevention, harms, and importance of being tested and treated throughout their patient journey (at their doorstep, screening van, several times at the clinic by the nurse, GP and patient support team). The same message is reinforced several times to ensure learning and influencing behaviour change. The high numbers of screening and treatment adherence indicate

patient support and counselling is influencing behaviour change (however, it is still early in the program cycle to draw any conclusions). This was also highlighted during consultations with staff:

“First they would reject our medicine, go to other clinic and get dum (spiritual healing) but now because of door-to-door BTC people listen to us more.”

“The clinic staff had to invest more time on counselling before now they feel the patients coming to them through BTC are already aware.”

“The focus on patient education and guiding them in such a manner is considered rare at other public and private health care facilities. This often becomes a reason of poor patient adherence.”

“Government set up different...no care no guidance.”

“Too much time in Jinnah (government hospital).”

A few respondents, however, also noted patients being agitated that the same information is repeated several times.

4.2.3 GAPS IN THE CURRENT STRATEGIC DESIGN AND DELIVERY

Ambitious target

MSF's target is to reach out to a total population of 112,639 aged over 12 years by December 23. As noted in the section above, Machar Colony's complex operating environment and factors beyond MSF's control will likely make this a difficult target to achieve in the allocated time.

Two telecom workers lynched in Karachi's Machhar Colony over kidnapping rumours

Many respondents of the evaluation agreed that these challenges were not considered fully when setting the ambitious screening targets.

“Very ambitious screening target...exploring mechanisms to get teams to work faster but context will not change.”

“Not a realistic goal to screen in 2 years.”

“Quality and quantity both need to be maintained. Counselling and convincing also takes time...”

Lack of primary prevention interventions

Prior research has shown that major causes of spreading HCV are unsafe blood transfusions, re-use of therapeutic syringes, unsafe medical and surgical practices, shaving at barbers, ear, and nose piercing. However, there is no data on exact HCV transmission drivers in Machar Colony. MSF's community

assessments as well as the baseline prevalence survey are expected to provide some insights on the drivers of HCV transmission and key populations to help MSF develop targeted approaches to prevention.

Currently MSF's prevention strategy is only to build community awareness of risk factors through extensive community sensitization and health promotion. Several primary prevention interventions (such as safe and appropriate use of injections, safe handling and disposal of sharps and other waste, training of health personnel) were considered by MSF, however, have not been adapted so far due to economic, cultural, security and political barriers.

“Also making a lot of noise on unsafe practices by practitioners could have affected their livelihoods when they wouldn't have the resources to commit to safe practices income and expenses would have been impacted.”

“Similarly, we attempted to engage partners to reach out to people using drugs but could not be materialised.”

“An essential component of HCV elimination is reducing transmission by infected people who have not yet been treated or responded to treatment. Prevention thus needs to remain a prominent element of national and subnational responses to HCV.”

Lazarus, J. V., Safreed-Harmon, K., Thursz, M. R., Dillon, J. F., El-Sayed, M. H., Elsharkawy, A. M., Hatzakis, A., Jadoul, M., Prestileo, T., Razavi, H., Rockstroh, J. K., Wiktor, S. Z., & Colombo, M. (2018). The Micro-Elimination Approach to Eliminating Hepatitis C: Strategic and Operational Considerations. *Seminars in liver disease*, 38(3), 181–192. <https://doi.org/10.1055/s-0038-1666841>

It is likely that with the current limited focus on reducing risk of transmission, it will be a challenge to attain the goal of “bending the curve” in Machar Colony and sustain it in the longer run.

Lack of partnerships

As stated above, with a lack of structural response on preventing transmission, coupled with a possibility of movement of population cohorts in or out of Machar Colony (MSF staff living in Machar Colony are of the perspective that the residents are permanent and also unlikely to move due to lack of national identity cards however, with lack of evidence the possibility can't be excluded), it is likely that HCV will still exist (or return) in the community in the longer term. Hence it is important that HCV care continues even after the end of MSF's strategy period.

MSF had initially intended to deliver this intervention in partnership with local organisations. This would have helped built capacity of local partners and lead to potential hand over post December 24 to ensure sustainability. However, these partnerships could not materialise due to several reasons:

- Lack of potential partners working in Machar Colony;
- Lack of visibility new partners are likely to get within the community;

- Logistical issues of operating a clinic inside the community;
- Partner resource constraints; and
- Disruptions and priority shifting due to COVID-19.

“It was external reasons, but we should have had plan B and C. It is very important, and we should have pursued it(partnerships) further. There is still opportunity though there is no reliable actors or health facility.”

4.2 BALDIA

4.2.1 MEETING THE NEEDS OF THE COMMUNITY

Baldia Town is an important industrial area between the Karachi Circular highway – and the biggest slum in Pakistan (Orangi Town). Baldia Town has a much larger population of 400,000 persons (compared to Machar Colony) and a high prevalence of HCV.¹¹ Baldia Town is not a geographically enclosed and stable population like that of Machar Colony. The healthcare services available in the area are limited to one Rural Health Center (Baldia PHC) which lacks capacity for HCV screening and treatment. MSF aims to build that capacity at the PHC to enable access to HCV care to a catchment population of about 100,000 to 200,000.

MSF has adapted to the needs and ways of working of MOH to facilitate successful integration of HCV model in Baldia PHC constantly liaising with DHO Baldia:

- The HCV management protocol is aligned with national guidelines.
- Despite the many challenges faced, MSF has persisted to work in collaboration with government staff and extend their support beyond the contract, where needed, to ensure the momentum and progress continues.

“It’s MSF adapting to MOH way of working not the other way round.”

4.2.2 EFFECTIVENESS OF PROJECT ACTIVITIES

Screening and care cascade

There was a delay in initiating activities in Baldia mainly due to COVID-19 vaccination site operating at the Baldia PHC with majority of the staff working at full capacity. It officially started in August 2022 and up till September 2022, a total of 1,101 people were screened, of which 46 were confirmed to have HCV. Twenty of these people were initiated on treatment. The remaining 26 were put on a waiting list for treatment initiations, pending the blood examinations for calculating the (Aspartate Aminotransferase to Platelet Ratio Index) APRI score.

Table 3. Screening and care cascade (Baldia)

	#	%
People screened	1,101	
Tested HCV positive	46	4%
Treatment initiated	20	43%
Pending results	26	57%

¹¹ Karachi Hepatitis C Project Document 2021-2024, MSF, 20-09-2019

Capacity-building

GeneXpert machines delivered along with training of MOH lab technicians

All the logistic work for the renovation of Baldia Town RHC has been completed with installation of genexpert, air conditioner and a backup generator. MOH laboratory technicians were also trained for RDT, PCR and Sustained Virologic Response (SVR) testing with GeneXpert machine and collection of blood samples.

Provision of medicines and training of MOH staff

MSF is also currently providing medicines to the active patients.

Unable to train MOH medical doctors

MSF Baldia coordinator was originally tasked to train and support the PHC medical doctor, however the position is currently vacant. MSF Baldia coordinator (also a medical doctor) is filling this gap in the interim. The issue has been raised several times with DHO Baldia, however, no progress has been made.

Successful lady health worker training delivered

A successful training was delivered to 119 MOH Lady Health Worker (LHW) for outreach, screening referrals and follow-up. MSF's training was highly appreciated by the LHWs (as reported by MSF staff). The training evaluation found an increase in LHW knowledge of HCV; about 60% of them had a score of 75% and above after attending the workshop. They appreciated the participatory nature of the training that included role plays and demonstrations.

A hotline has also been set up for the LHWs by MSF to seek further support if needed.

Gaps in the current strategic design and delivery

Lack of an exit strategy

MSF continues to transfer its existing knowledge and building capacity of Baldia to integrate the HCV model of care in the PHC setting. However, success of its efforts rely on the extent MOH can sustain the integration and continue to screen and treat HCV patients in the longer term (beyond MSF's involvement). The evaluation respondents noted the dire lack of resources (no doctors present at the PHC, poor maintenance of facility), professionalism and willingness (DHO Baldia's lack of responsiveness) may become barriers to sustainable transition.

“We can make the system and deploy but what is the point if there is no political willingness.”

“Once it's handed over who will maintain? There has been no water the PHC since 5 days...”

“Advocacy at a higher level than DHO Baldia is needed to get more ownership.”

4.3 CATALYTIC DIMENSION

Pakistan's National Hepatitis Strategic Framework (2017-2021) is now out of date and is replaced by 2030 elimination goals for HCV. Pakistan government has set itself a target to screen 50% of the eligible population, aiming to reach 69 million persons with anti-HCV screening and 5.15 million with PCR confirmation testing between July 2020 and June 2025. The plan recognises that Pakistan can see a return on this investment within 3 years.¹²

However, government has made limited progress towards these elimination goals.

“Government objective and outcomes are very aligned. But government has no action plan.”

Some of the barriers faced by the government include:

- Lack of political willingness and commitment.
- High turnover in government.
- Lack of coordination across federal, provincial, and local governments.
- High cost and limited availability of PCR test.
- Lack of awareness across the health sector (including clinicians) of the new simplified testing and treatment guidelines and lack of specialist buy in to handover HCV management to General practitioners (GPs).
- Shifting priorities especially due to COVID-19 and recent floods.
- While most of the respondents agreed that one of the reasons is also lack of funding, it was acknowledged that reducing the burden of HCV no longer requires significant amount of money that will be hard for the Government of Pakistan to arrange. The more dominant perception is that the lack of progress is more due to lack of political willingness and commitment than lack of resources.

“The treatment is not as expensive anymore...However places that have a high burden...It becomes a lot of money...Pakistan's main problem is the missing means; financial constraint.”

“Let's face it, government is never short of money, and we are talking x million dollars which is not a huge sum of money by any standard for such a big task.. but it is the commitment that needs to be understood and realised.. this is a very low hanging fruit...There is no other disease of this magnitude that can be cured with so little amount of money and time.”

In this scenario where there is limited action from the government, MSF's work in Baldia and Machar Colony will contribute to Pakistan's National Elimination Goals 2030. Of the total national target to screen 69 million persons MSF is aiming to screen about 112,000 in Machar Colony and make HCV care available to 100,000 to 200,000 people in Baldia. While these numbers may seem like drop in the

¹² National Hepatitis Elimination Profile for Pakistan, Coalition for Global Hepatitis Elimination, June 2022.
<https://www.globalhep.org/news/national-hepatitis-elimination-profile-pakistan-key-takeaways>

ocean, the projects hold broader value as demonstration projects; to create bigger systemic change through evidence and advocacy. The interventions (if successful) will demonstrate to the government how two distinct models of care can be replicated in similar settings and scaled to achieve its elimination goals and reduce the HCV burden in Pakistan, and beyond.

4.3.1 BIGGER HEALTH IMPACT

The following catalytic dimensions were identified during stakeholder consultations and workshop (however, note that these are not explicitly defined in the strategy):

- MSF's work in Karachi demonstrates to the government two different models of care that can be replicated and scaled depending on the needs and context of the diverse population sub-groups. This aligns with WHO recommendation of delivering for equity (*reach out to sectors that are most likely overlooked and the approach should be adopted to meet their needs*)¹³:
 - Machar Colony model of care: Demonstrates how a micro-elimination program can be replicated in high prevalence, under-resourced, geographically enclosed population areas where there is no access to health centres and basic health units.
 - Baldia model of care: Demonstrates how government can operationalize its strategic aim of decentralizing HCV treatment to health centers and basic health units. Baldia can be used as case study to replicate the integration of HCV program in other similar settings.
- There is an intact continuum of care central to achieving elimination and reducing morbidity and mortality which can be hard to achieve, even in well-resourced settings and is likely to be particularly challenging in slum settlements. Machar Colony intervention can provide the evidence on the outcomes, acceptability, and cost-effectiveness of approaches that can minimise losses in this care cascade.¹⁴ Particularly the planned operational research focuses on:
 - **Cost-effectiveness of a simplified “treat-all” approach:** Current WHO and Pakistan clinical guidelines direct the Aspartate aminotransferase (AST) to platelet ratio index (APRI) is derived for all individuals, and people with an APRI score above 1 (who don't also have signs of decompensated liver disease) are given a 24-week course of Sofosbuvir/Daclatasvir (SOF/DAC). Under the current strategy, MSF is now testing the cost-effectiveness and success of removing APRI scoring from the clinical protocol, for a more simplified “treat-all” approach in which people without clinical signs of liver disease are put on a 12-week regimen of DAA drugs (viz., sofosbuvir (SOF) and daclatasvir (DAC)). If proven effective in Machar Colony, this will have a significant contribution in reducing the delays in treatment initiation in similar context.
 - **Effectiveness of community-based approaches to scale up screening:** Evaluate the effectiveness of door-to-door mobilisation and use of self-testing kits for mass screening and treatment.
- The project in Machar Colony is also providing second line and third line treatment (currently not readily available in Pakistan) to patients who have failed initial treatment. It will further help gather

¹³ Hellard, Margaret et al. “The Elimination of Hepatitis C as a Public Health Threat.” Cold Spring Harbor perspectives in medicine vol. 10,4 a036939. 1 Apr. 2020, doi:10.1101/cshperspect.a036939

¹⁴ Operational Research Protocol, Bending the Curve of Hepatitis C in Machar Colony: a feasibility study for micro-elimination of hepatitis C virus in an informal settlement in Karachi, Pakistan, MSF, 11-07-2022

evidence on treatment failures and potential resistance to DAAs which will inform any future approach of HCV care in the high burden context of Pakistan.

4.3.2 EFFECTIVENESS OF PROJECT ACTIVITIES

Operational research

Progress

Over the course of 36 months, MSF aims to engage in research collaboration with partners to document the impact of bending the curve to be used for advocacy. The two planned research studies include:

1. The operational research protocol for Hepatitis C screening and treatment which have the following objectives:
 - To provide a simplified algorithm for screening, diagnosis, and treatment of HCV infection in Machar Colony.
 - To provide simple, high-quality treatment guidelines for patients with chronic HCV infection
2. Pre and post survey prevalence (run by research partners Interactive Research and Development (IRD)).

Some challenges were faced with the pre prevalence survey (number of academic partners available, lack of capacity and capability of academic partner), but the current progress on operational research is reported to be satisfactory: the protocol has been approved by MSF ethics and is with national ethics board. It is anticipated to receive the approval by end of December to begin research in quarter one of 2023.

IRD prevalence survey (pre-survey) is complete, and the results have been shared with MSF and incorporated into the effectiveness model.¹⁴

Gaps

MSF's operational research strategy has three aims:

1. Supporting programmatic teams by providing them the data and the insights required to improve program design and implementation;
2. Ensuring that there is implementation knowledge and evidence that can be taken beyond the program; and
3. Backing up advocacy.

While these aims were understood by many stakeholders consulted, a few gaps were highlighted in the operational research strategy:

1. Strong focus and priority in planning for aim 2 (operational research protocol which is focused towards academic publications), whereas a lack of documentation and planning for specific objectives under aim 1 and 3.
2. Assumption that the product (academic publication) of operational research protocol (aim 2) will by default become the product to back up advocacy. It is not clear if this will be sufficient to achieve the catalytic dimension. There is lack of alignment between advocacy goals and evidence generated under the operational research protocol.

The linear representation of action, evidence, advocacy is an oversimplification and there are various feedback loops and activities running in parallel¹⁵. Often times dissemination is considered the end goal and there is little focus on pushing it through to translation into practice. Advocacy can do that role however OR needs to come together to achieve that.

3. Lack of planning on operational research, data and evidence that will be required for Baldia to achieve the catalytic objectives and demonstrating how government can replicate the integration of a vertical HCV program in other PHC settings.

Advocacy

Progress

An advocacy strategy was developed that is focused on improving access to screening, making better treatment options more available to patients, and fostering public dialogue on Hepatitis C by engaging stakeholders to bear witness.¹⁶

Various key stakeholders were engaged to share the operational research protocol and included as co-authors to signify its importance and help with dissemination and translation.

However, there hasn't been much progress beyond this in the absence of an advocacy manager. There have been delays in hiring the candidate. The implementation team has now requested to have a dedicated advocacy manager for Hepka based in Karachi. This has been approved even though it is not fully aligned to MSF's usual approach (which has been to hire an advocacy manager based in the mission in Islamabad supporting various projects).

Gaps

Several gaps were highlighted in the advocacy strategy during the evaluation. The respondents also highlighted common challenges faced in achieving the advocacy objectives in the past:

- Advocacy is not given the same priority (on MSF's catalyst projects) as operational research even though both are equally important to achieve catalytic objectives.

“MSF not at the forefront we advocate simultaneously. But priority is medical activity first; learn from doing, then once evidence is there then we advocate based on OR we advocate.”

- Lack of clarity of roles and responsibilities between advocacy manager and project team. Furthermore, it is not clear how the role of advocacy team differs from that of communications team.
- Lack of consistent understanding of what advocacy really is and its importance to catalyst projects.
- Lack of coordination and alignment between advocacy objectives and project objectives.

¹⁵ Catalytic Dimension in OCB Project Cycle, Stockholm Evaluation Unit, 2022.

¹⁶ Advocacy Strategy Hepatitis C Karachi 2020-2022, MSF.

“There should be clear advocacy strategy, aligned with your operational objectives.”

- Lack of alignment with national priorities.

“We have been reactive...we need to have a more proactive approach and have a continuous process.”

- Frequent turnover at MSF affects relationship building and affects continuity of advocacy efforts.

“Individual is stronger than institute...one establishes relationship but then momentum is broken when the person changes.”

“Also often the messaging is not consistent as staff changes due to lack of strategy and plans.”

- Lack of consistency and follow up: often there will be one meeting with no follow up after that which breaks the momentum.

“MSF has been adhoc with how they have collaborated with others.”

- Waiting for evidence to start advocacy: this is often too late.

“Keep them engaged. Important to keep the momentum within political levels.”

4.3.3 KEY ENABLERS OF SUCCESS

There are several factors that the evaluation respondents considered key to successfully utilise the results in direct intervention sites to influence a bigger systemic change:

Evidence that influences policy and practice change including significance of impact and cost effectiveness

For the models of care in Machar Colony and Baldia, to be replicated by the government they must firstly, demonstrate significant impact and secondly, be cost effective for the resource scarce public health sector to replicate.

“The obvious question will be how many you treated, in how much time and with how much money.”

“When you see MSF resources, the level of resources we are putting in one health facility against the number of patients you are treating will be a big question mark...and that would definitely be questioned by the government...”

“Government will require rationalising of resources – this should be ready as advocacy message to say this is how cost effective this is to convince them it is workable and sustainable.”

Currently, both the models of care are focused on achieving the desired outcomes in the respective sites with limited consideration of their cost-effectiveness and replicability. This is likely to become a barrier for the interventions to influence catalytic effects.

While BTC in Machar Colony is likely to have an impact, it is a very resource intensive model that will be a struggle to replicate in most settings in Pakistan.

“We do not have enough resources in a country like Pakistan.”

In comparison, Baldia model of care is more resource efficient. However, it is early in the project phase to predict the significance of impact. Currently its delivery is highly dependent on MSF with no exit plan and lack of willingness and commitment from MOH.

Catalytic ambitions align with the national context and priorities

It is important to recognise that while MSF has a lot more control and influence in direct fields of intervention, the higher up in the causal chain we go, the lesser control MSF must influence change. Catalytic change can only be achieved collectively, with key stakeholders working in collaboration creating momentum in a unanimous direction. Hence it is important that the catalytic effect; systemic change and health impact MSF is aiming for are aligned with the present contextual realities and priorities; and there is willingness and readiness in the sector.

“MSF operates in bubbles, adopting a directive approach rather than understanding the needs and realities of the people we are working with.”

“We need to acknowledge there is a whole environment out there if we want to be successful.”

Government of Pakistan currently aims to “Build on early micro-elimination and HIV programs to scale-up HCV testing” as well as “Continue decentralizing HCV treatment to health centres and basic health units”.¹⁷ Aligned with these priorities, MSF’s work builds on the evidence, and aims to produce small victories that will inspire the government to replicate and scale up models of care for full scale elimination.

While these models of care remain relevant to the current national strategic priorities, several evaluation respondents mentioned what Pakistan instead needs is an Egypt style aggressive mass screening and testing campaign. This national strategic change seems plausible given that Pakistan is one of the cheapest manufacturers of DAAs, has increased capacity of PCR testing and increased coordination between provinces and federal capital as part of COVID-19 response, and simplified protocols.

“Perhaps the best way to eliminate Hepatitis C nationally is what Egypt did and that was a very concentrated, all stops pulled out kind of a thing which went on for 3-4 years and they were done. My feeling

¹⁷ National Hepatitis Elimination Profile for Pakistan, Coalition for Global Hepatitis Elimination, June 2022.
<https://www.globalhep.org/news/national-hepatitis-elimination-profile-pakistan-key-takeaways>

is that with the burden of disease we have, that is the sort of approach we need to take and get rid of this thing as quickly as possible which we have the capacity to do with cheapest drugs, implementation steps have been highly simplified so you just need a big high profile campaign at the country level or even at the provincial level which just goes in there and does the job as quickly as possible.”

Lack of political willingness and resources are likely the major barriers to adopt such an approach. MSF can likely play a role to address these barriers, however, given the limited involvement of external stakeholders in the evaluation, the feasibility of this needs further investigation.

4.3.4 ADVOCACY FOR CHANGE

Advocacy strategy should be aligned with the catalytic objectives set in collaboration with the project team. An effective advocacy approach should include:

- **Right messaging and right timing:** The project team and advocacy team should work together to identify the key messages for advocacy. It is also important to time the advocacy efforts appropriately. The objectives should be set considering the readiness, willingness and resource availability of the government and the sectors.

“Also understand you are not there to put government and sector under stress.”

- **Consistency:** There should be a consistent approach to engagement and strategies to keep up the momentum
- **Collective voice:** Collaboration and finding a collective voice is key for advocacy success. A thorough stakeholder analysis must be conducted to ensure relevant messaging is delivered to the respective audience. Stakeholders should include:
 - National government and provincial governments: MOH but also other relevant departments such as finance.
 - Champions of change working on the same agenda in the sector to develop a more coordinated approach.
 - People on the ground that is patients and health practitioners to raise voice and demand a change.

“It can’t be done in isolation by just by MSF. Needs collective voice with different organisations, service providers, stakeholders, even within government you can get that support but can’t be done alone by MSF being an international organisation.”

“We have not been as engaged with authorities.”

“Target right people with the right message.”

RECOMMENDATIONS

MACHAR COLONY

Effectiveness of project activities	→ Continue to monitor screening and care cascade as strategies are adopted to improve screening numbers and treatment adherence. The allocated time frame and resources might need re-considering achieving the desired target.
Sustainability of impact	→ Collect evidence of divers of transmission and explore opportunities for reducing risk of transmission either through direct intervention by MSF or through partnerships and advocacy. "Treatment as prevention" is likely to not achieve a sustainable reduction in HCV prevalence if unsafe practices continue and if new population group settle in Machar Colony. → Continue to explore potential partnership opportunities. This will enable capacity building and hand over to a local provider post MSF's strategic period December 2023 to ensure Machar Colony residents continue to receive HCV care.

BALDIA

Capacity building	→ Consider if the set targets for the allocated time are realistic given the delays and challenges.
Sustainability of impact	→ To ensure success in Baldia, there is an urgent need for better advocacy to harness the support of relevant stakeholders. → A clear exit plan is needed identifying exactly what a sustainable model run purely by MOH would likely entail to facilitate timely transition.

CATALYTIC DIMENSION

Catalytic objectives	→ Key stakeholders (including Cell, SAMU, Mission, Machar Colony and Baldia project team, Advocacy, Comms) should work collaboratively to further clarify the catalytic objectives of the strategy and plan how these will be achieved. → Once a consistent understanding of the catalytic objectives of the strategy is developed, the implementation plans, advocacy strategy and operational research plan should be revisited to ensure they facilitate achievement of catalytic objectives. → Issues regarding replicability and sustainability in Machar Colony and Baldia need to be discussed separately and agreed on by all relevant stakeholders.
Advocacy strategy	→ Update advocacy strategy to incorporate the changing needs and context; as well as the limitations highlighted of the past advocacy approaches (sections 6.2.2 & 6.3).
Operational research	→ Explore the feedback loops between action, research and advocacy; and how each can enhance and support the other. → Plan for operational research, data and evidence required for advocacy of Baldia model of care.

APPENDIX

APPENDIX 1 – EVALUATION MATRIX

Evaluation Questions	Sub-evaluation questions	Indicators	Data Sources
Relevance: To what extent the program's objectives and design respond to beneficiaries needs and priorities?	<p>Are the program's objectives adequately defined? How does the program align with the:</p> <ul style="list-style-type: none"> • Needs of the population of Machar Colony? • Provincial and national needs of Pakistan? • MSF priorities and principles? <p>How realistic and feasible are the program objectives? How can the program meet the needs of the beneficiaries better?</p>	<p>Evidence from program data review and stakeholder views</p> <ul style="list-style-type: none"> • Needs analysis was conducted before program was designed • Program objectives are adequately defined • Program objectives meet the current needs of the population of Machar Colony • Program objectives meet the needs of Baldia PHC • Program aligns with Provincial and National priorities • Program aligns with MSF priorities and principles • Realistic time and resources have been assigned to achieve the objectives 	<ul style="list-style-type: none"> • Program logic workshop • Program document review • Stakeholder interviews
Appropriateness: How appropriate is the strategic design of the project when considering the overall objective and the context?	<ul style="list-style-type: none"> • The activities are appropriate to achieve the strategic objectives defined? 	<p>Evidence from program data review and stakeholder views on extent</p> <ul style="list-style-type: none"> • BTC strategy and planned activities are appropriate to achieve targets set • Activities are on track to develop evidence based decentralized vertically integrated model of care • Activities in Baldia are appropriate to developing a scalable decentralized horizontally integrated model of care • Activities in Baldia are appropriate to building MOH PHC capacity and local ownership • OR and advocacy strategy and activities are appropriate and aligned with the overall program objectives 	<ul style="list-style-type: none"> • Program data analysis • Program document review • Stakeholder interviews
Effectiveness: How likely is the program to achieve its objectives?	<ul style="list-style-type: none"> • To what extent have the BTC screening and treatment targets in MC been achieved? • To what extent is the program on track to achieve the operational research goals? 	<p>Progress against targets for</p> <ul style="list-style-type: none"> • # of people screened above 12 years of age • # of people refused screening • # of people diagnosed (PCR positive) 	<ul style="list-style-type: none"> • Program data analysis

	<ul style="list-style-type: none"> • To what extent is the program on track to achieve the advocacy goals? • To what extent is the program on track to achieve the goals in Baldia? • What can be done to make interventions more effective? 	<ul style="list-style-type: none"> • # of tx initiated • # of people successfully treated (cured) • # of people dropped out <p>Evidence from program data review and stakeholder views on likelihood:</p> <ul style="list-style-type: none"> • MSF will successfully build Baldia PHC capacity to manage HCV • MSF will successfully develop a decentralized horizontally integrated model of care appropriate to be scaled by MOH • Operational research goals will be met • Advocacy goals will be met 	<ul style="list-style-type: none"> • Program document review • Stakeholder interviews
Impact: What difference is the program likely to make?	<ul style="list-style-type: none"> • To what extent is the program likely to reduce incidence and prevalence of Hep C in Machar Colony? • How is the program likely to influence provincial, national, and global policy and practice? • What are the barriers of achieving the desired impact? How can the program enhance impact given its limited resources? • What aspects are likely to achieve highest impact? 	<p>Evidence and stakeholder views on likelihood:</p> <ul style="list-style-type: none"> • HCV Prevalence and incidence will be reduced in Machar Colony • MSF activities will influence provincial and national policy and practice • An evidence-based model of care will be developed that is appropriate to adapt and scale 	<ul style="list-style-type: none"> • Program document review • Program data analysis • Stakeholder interviews and focus groups
Continuity: To what extent does the design of the program consider longer term context and sustainability of impact?	<p>How has the program strategy and design accounted for sustainable longer-term impact (beyond MSF's involvement)?</p> <p>What are potential barriers that can hinder continuation of positive effects once MSF leaves and how can the program plan to address these?</p>	<p>Evidence from program data review and stakeholder views on extent:</p> <ul style="list-style-type: none"> • Program strategy adequately addresses how the benefits will be sustained in the longer term <ul style="list-style-type: none"> ◦ Access to HCV Care in Machar Colony and Baldia ◦ Utilisation of operational research findings to inform policy and practice ◦ Advocacy to influence national policy and practice ◦ Health systems strengthening and local ownership • Program design recognizes potential barriers to sustainable impact and puts in strategies to address them 	<ul style="list-style-type: none"> • Program document review • Stakeholder interviews

APPENDIX 2 – DOCUMENTS REVIEWED

- Advocacy Strategy
- Auditor general report on Hepatitis Program, 2015
- BTC Clinical Protocol
- Catalytic Drivers in OCB Project Cycle SEU
- Evaluation of the Catalytic Role of Mumbai TB Project
- Medical Narrative: Medical Narrative 2022
- Meeting minutes
- MSF OCB Operational Prospects 2020-23
- National Hepatitis Strategic Framework for Pakistan
- Old Strategy documents 2018 and 2019
- Operational research papers published
- Operational Research Protocol
- Pakistan's Hep C elimination program at a glance; Hepatitis C elimination strategy, Huma Q, Advisor to PM on Hep C
- Program log frame 2021-2024
- Q1 and Q2 Narrative Report
- Revised Strategy: Multi-year project document 2021-24
- WHO Building blocks of health systems
- WHO HCV Guidelines towards Simplified HCV Service Delivery

APPENDIX 3 – STAKEHOLDER CONSULTATIONS

MSF CELL	MSF PAKISTAN	EXTERNAL – GOVERNMENT AND PARTNERS
Head Of Cell (Helmi Mekaoui)	Mission Head (Azaad Alocco)	Hepatitis C Industry Expert Pakistan (name not revealed due to preserve anonymity)
Medical Officer Cell (Yves Wailly)	Medical Coordinator (Gul Khalid)	
SAMU Referent (Petros Isaakidis)	Project Coordinator (Elisha Sithole)	
SAMU Referent (Dimitri Donchuk)	MAM (Dr. Khawar)	
Health Policy Advisor (Angela Uyen)	PMR (Dr. Manuela)	
	Epidemiologist (Dr. William)	
	Doctor Hep C Clinic Machar Colony (Natasha)	
	Medical Officer Baldia (Dr. Mubashir)	
	Health Promotion managers (Patrick)	
	Health promotion team (focus group)	
	Counsellor (Beenish)	
	Yasir Kazmi (Advocacy Manager)	
	Maryiam (Mission Pharmacist)	
	Nurses (Mumtaz & Sunila)	
	Data officers (Rehman and Munawar)	

	Health Promotion Officer Baldia (Anila)	
--	--	--

APPENDIX 4 – MODELS OF CARE

Table below summarises the key features of the two models of care:

	MACHAR COLONY – VERTICAL PROGRAM	BALDIA – DECENTRALISED HORIZONTALLY INTEGRATED
Who is it for?	<ul style="list-style-type: none"> Low resource setting with no access to primary health care facility High prevalence community at high risk Geographically enclosed (not as much population moving in and out) 	<ul style="list-style-type: none"> Access to a functional primary healthcare facility High prevalence areas Wider population areas

	MACHAR COLONY – VERTICAL PROGRAM	BALDIA – DECENTRALISED HORIZONTALLY INTEGRATED
Model of care	<ul style="list-style-type: none"> Vertically integrated model of care including a whole cascade of care for HCV fully managed by MSF Door to door mobilisation, health promotion and screening vans moving from one neighbourhood to the other. Self-testing kits to be rolled out soon Simplified process to minimize time between diagnosis and treatment including <ul style="list-style-type: none"> RDT and GeneXpert No APRI Score needed Further tests and assessments done at DOW or SIUT 12-week treatment Monthly follow ups 	<ul style="list-style-type: none"> Decentralised model of care integrated at a MOH PHC facility. This is a vertical model in that it also provides cascade of care from screening to treatment within one roof, however, is also horizontally integrated that is the same patients come to the same facility for other diseases. Government Lady Health Workers doing door to door mobilisation and referrals to PHC for screening as trained by MSF staff. National process for diagnosis <ul style="list-style-type: none"> RDT; GeneXpert; PCR, APRI score at PHC Treatment duration based on APRI score Only end of treatment follow up

	MACHAR COLONY – VERTICAL PROGRAM	BALDIA – DECENTRALISED HORIZONTALLY INTEGRATED
	<ul style="list-style-type: none"> • Patient support and counselling throughout the patient journey: 	<ul style="list-style-type: none"> • Limited counselling by lady health workers and at the PHC by nurses and doctor
	<ul style="list-style-type: none"> • Task shifting by using drivers as laymen counsellors; nurses to support GP 	<ul style="list-style-type: none"> • Task shifting by using nurses to support GP
	<ul style="list-style-type: none"> • Patients receive only HCV care 	<ul style="list-style-type: none"> • Patients may come into PHC for any other condition but will be screened for HCV

	MACHAR COLONY		BALDIA
	Activity		
Responsibilities	Door-to-door mobilisation	MSF with support from community influencer	Government LHW
	Diagnostics and treatment	MSF with referral partners Dow and SIUT	MOH PHC staff. MSF provided training, GeneXpert machines and medications
	Patient support and counselling	MSF	Nil. Limited extent by MOH PHC staff
	Operational research	MSF with academic partners	Nil. MSF collecting the data
	Advocacy	MSF	MSF

APPENDIX 5 - DISAGGREGATED DATA MACHAR COLONY

SCREENING

Table 1. Number of people screened by main language spoken

	BENGALI	MIXED (BENGALI AND PASHTO)	PASHTO
Number people screened	7,632 (32%)	8,170 (34%)	8,201 (34%)

Table 2. Number of people screened by gender

	MALE	FEMALE
Number people screened	14,157 (59%)	9,844 (41%)

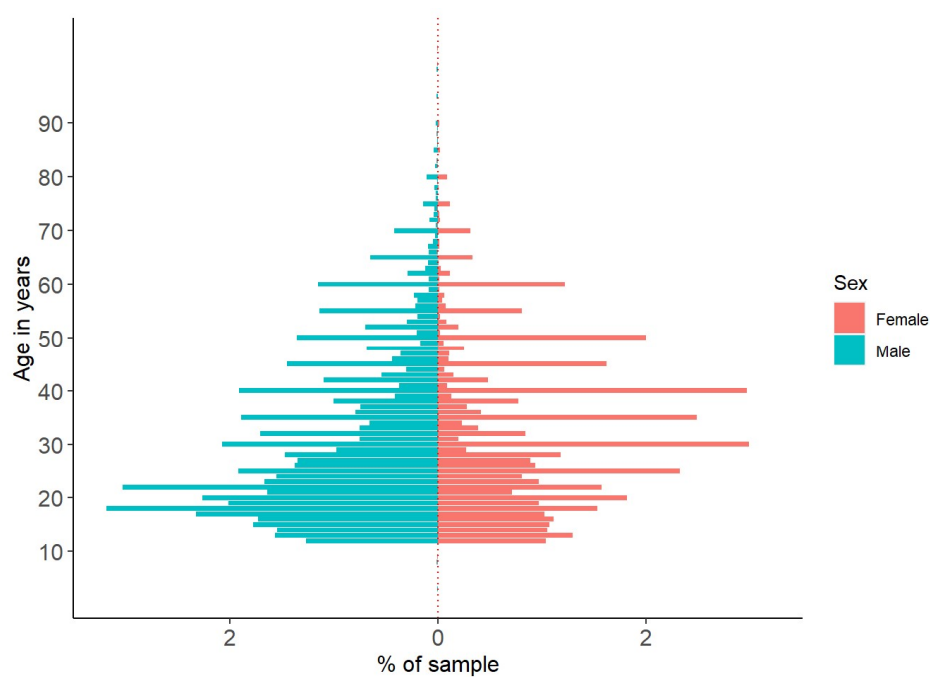


Figure 1. Number of people screened by age

DIAGNOSED

Table 3. HCV positive by main language spoken

	BENGALI	MIXED (BENGALI AND PASHTO)	PASHTO
Number people PCR positive	499 (54%)	277 (30%)	154 (17%)

Table 4. HCV positive by gender

	MALE	FEMALE
Number people PCR positive	618 (66%)	312 (34%)

Table 5. HCV positive by age

	<18 YRS	18 - 30 YRS	31 - 40 YRS	41 - 50 YRS	51 - 60 YRS	61 - 70 YRS	>70 YRS
Number people PCR positive	10	246	263	192	132	58	29

TREATMENT INITIATED

Table 6. Treatment initiation by main language spoken

	BENGALI	MIXED (BENGALI AND PASHTO)	PASHTO
Number of treatment initiations	314 (53%)	166 (28%)	110 (19%)

Table 7. Treatment initiation by gender

	MALE	FEMALE
Number of treatment initiations	407 (69%)	183 (31%)

Table 8. Treatment initiation by age

	<18 YRS	18 - 30 YRS	31 - 40 YRS	41 - 50 YRS	51 - 60 YRS	61 - 70 YRS	>70 YRS
Number of treatment initiations	7	159	154	130	87	38	15

Stockholm Evaluation Unit
<http://evaluation.msf.org/>
Médecins Sans Frontières

Independently written by
Erum Rasheed
March 2023