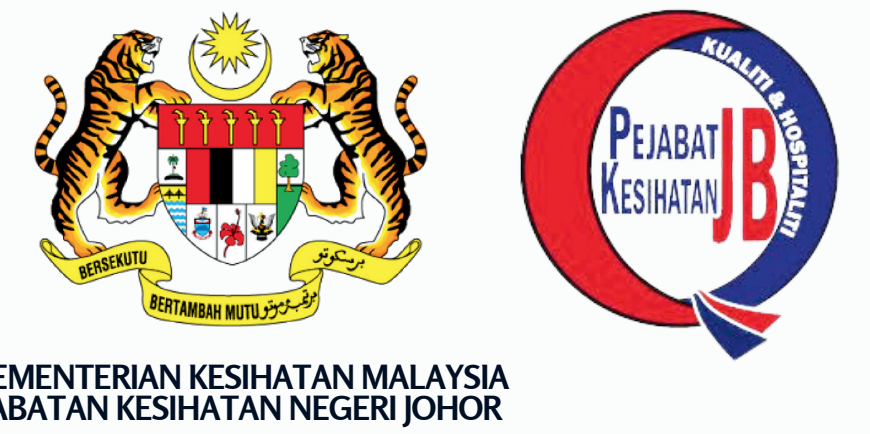


INCREASING PERCENTAGE OF PATIENTS WITH HEPATITIS C RECEIVING TREATMENT IN KLINIK KESIHATAN LARKIN JOHOR BAHRU

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1. SELECTION OF OPPORTUNITIES FOR IMPROVEMENT

INTRODUCTION

Hepatitis C is a viral infection by Hepatitis C virus that causes inflammation of liver. In Malaysia, approximately 2.5% of our population is infected with the Hepatitis C virus (HCV) (Rosaida et al 2020).

At the end of 2019, it was projected that over 400,000 Malaysians were chronically infected with Hepatitis C, with only approximately 1% of them receiving treatment. (WHO, 2020). Untreated Hepatitis C can result in increased complication such as liver cirrhosis, hepatocellular carcinoma and even death

TERM AND DEFINITION

DAAs	Direct-Acting Antiviral	Drugs used to treat hepatitis C that target specific steps in the hepatitis C virus (HCV) life cycle
SVR-12	Sustained Viral Response -12	Hepatitis C is undetectable for twelve or more weeks after the end of treatment
MMT	Methadone Maintenance Therapy	Methadone is an opioid and it has been used to treat opioid dependence
OSCA	One Stop Center for Addiction	One-stop service centre for voluntary treatment and rehabilitation in the community for individuals addicted to substances and drugs
STD	Sexually Transmitted Disease	Infections spread mainly by contact with genitals or bodily fluids

PROBLEM PRIORITIZATION

group members: 9
score 1-3

OPPORTUNITIES (LIST OF PROBLEMS)	S	M	A	R	T	Σ
The percentage of patients with Hepatitis C receiving treatment in Klinik Kesihatan Larkin Johor Bahru is low	27	23	21	22	20	113
Increase number of defaulters among the patients involve in Methadone Maintenance Therapy program in Klinik Kesihatan Larkin	18	20	17	15	16	86
Use of illegal substances among patients involve in Methadone Maintenance Therapy program is high in Klinik Kesihatan Larkin	19	20	18	21	19	97
Low quality of life among patients in One Stop Center Addiction in Klinik Kesihatan Larkin	11	10	13	17	9	60

PROBLEM ANALYSIS

S	Untreated Hepatitis C can result in increased complications, such as liver cirrhosis, hepatocellular carcinoma, and death. (Sulkowski, M et al). Early treatment of Hepatitis C will reduce life-threatening complications, which reduce morbidity and mortality.
M	Data can be collected through monthly retention and medical records of Hepatitis C patients from June 2021 until May 2023. In addition, the collection of data can be done by using questionnaires.
A	Hepatitis C is curable. Thus, treatment of Hepatitis C is important in improving quality of care of patient.
R	Action can be conducted through establishment of a dedicated clinic along setting up Hepatitis C Champion Team, introduction of MYRisk Form, MYHEP C HCW Toolkit and MYHEP C Patient Toolkit, establishment of MYHEP C Tracker System, collaboration with multi-agencies, enhancing screening and awareness programs to increase the number of Hepatitis C patients receiving treatment.
T	Studies can be conducted within time frame

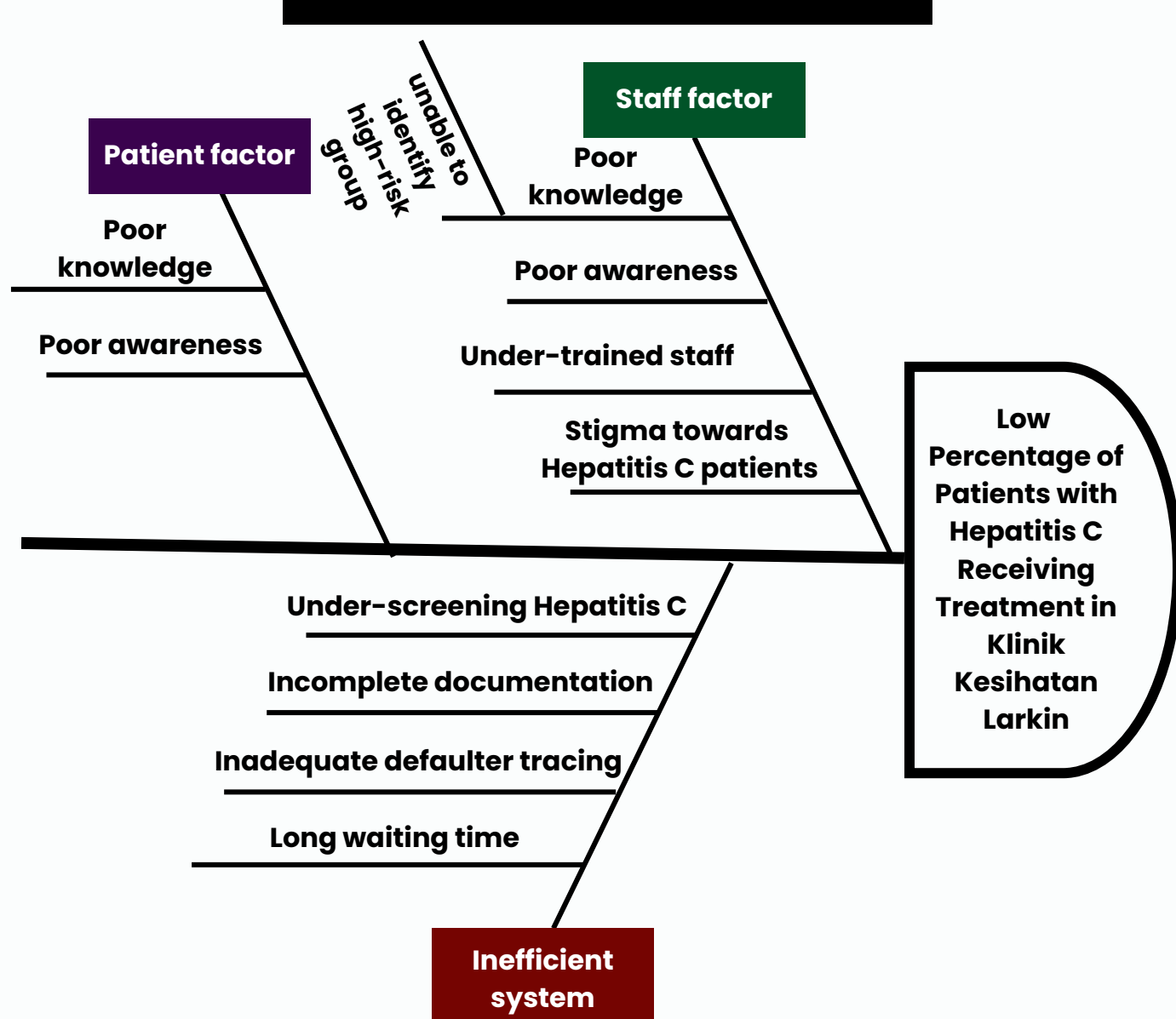
PROBLEM STATEMENT

The percentage of patients with Hepatitis C receiving treatment was 75% from June 2021 until May 2022. According to the target of the National Strategic Plan for Hepatitis B and C 2019-2023, the aim is to treat ≥ 90% of the population in need of treatment.

The contributing factors to the lower percentage of patients with Hepatitis C receiving treatment in KK Larkin included long waiting time, under-trained staff, under-screening of Hepatitis C, poor knowledge among staff and patients, limited awareness among staff and patients, disease-related stigma, incomplete documentation and inadequate defaulter tracing.

The purpose of the study is to increase the percentage of patients with Hepatitis C receiving treatment at KK Larkin from 75% to 90%.

PROBLEM ANALYSIS CHART



2. KEY MEASURE FOR IMPROVEMENT

OBJECTIVE

GENERAL OBJECTIVE
To increase percentage of patients with Hepatitis C receiving treatment in Klinik Kesihatan Larkin
SPECIFIC OBJECTIVE
To verify the magnitude of the patient with Hepatitis C not receiving treatment
To identify the contributing factors that attribute to the problem
To formulate strategies and plan of action
To implement appropriate remedial measure
To evaluate the effectiveness of interventions.

INDICATOR

$$\frac{\text{Number of patients with Hepatitis C receive treatment in KK Larkin}}{\text{Total number of patients with Hepatitis C in KK Larkin}} \times 100\%$$

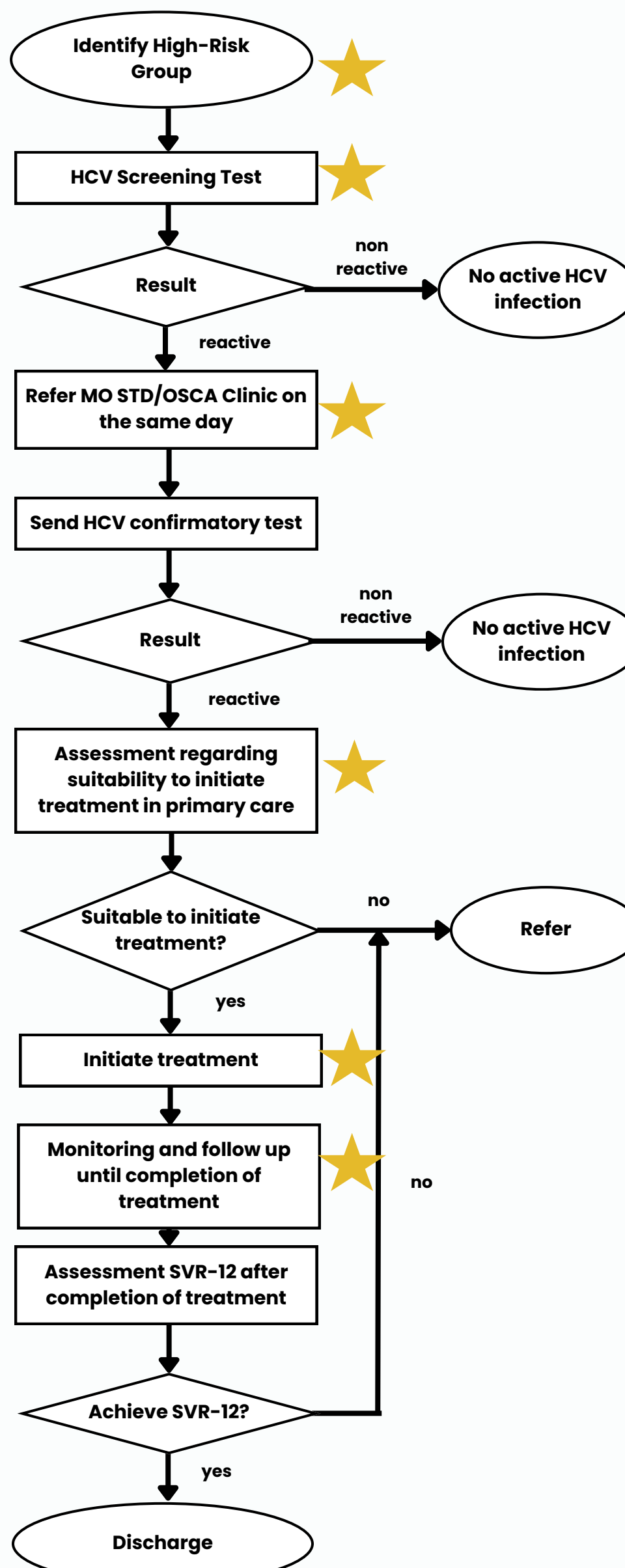
STANDARD

National Strategic Plan for Hepatitis B and C 2019-2023

Aim to treat population in need of treatment:

≥ 90%

PROCESS OF CARE



MODEL OF GOOD CARE (MOGC)

Critical steps	Criteria	Standard	Pre-remedial	Post-remedial
Identify high risk group	Healthcare workers must achieve good score (≥80%) in knowledge and awareness assessment test.	> 75%	30%	94%
	Healthcare workers must use MYRisk Form for all patients to identify high-risk groups	100%	-	100%
Hepatitis C screening	All high-risk patients that has been identified and agreed for testing must be screened for Hepatitis C.	100%	16%	70%
Refer MO STD/OSCA in the same day	All patients with reactive RTK Hepatitis C must be referred to MO STD/OSCA (Hepatitis C Champion Team) on the same day	100%	-	100%
	All patients must be given appointment to OSCA/STD clinic via MyHepC Tracker System	100%	-	100%
Assessment prior initiating treatment	All healthcare workers must use MYHEP HCW Toolkit for all patients assessment and treatment	100%	-	100%
	Assessment regarding suitability of initiating treatment in primary care must be done prior to initiate treatment	100%	100%	100%
	All patients must be given MYHEP Patient Toolkit at the start of treatment	100%	-	100%
	Assessment of patient knowledge and awareness regarding Hepatitis C must be done	> 50%	25%	92.3%
Initiate treatment	Initiation of treatment must be done within one year	100%	75%	92.3%
Monitoring and follow up	Patient must be monitored using MyHepC Tracker System	100%	-	100%
	Patient must be monitored their medication intake via Drug Diary (included in MYHEP Patient Toolkit)	100%	-	100%

3. PROCESS OF GATHERING INFORMATION

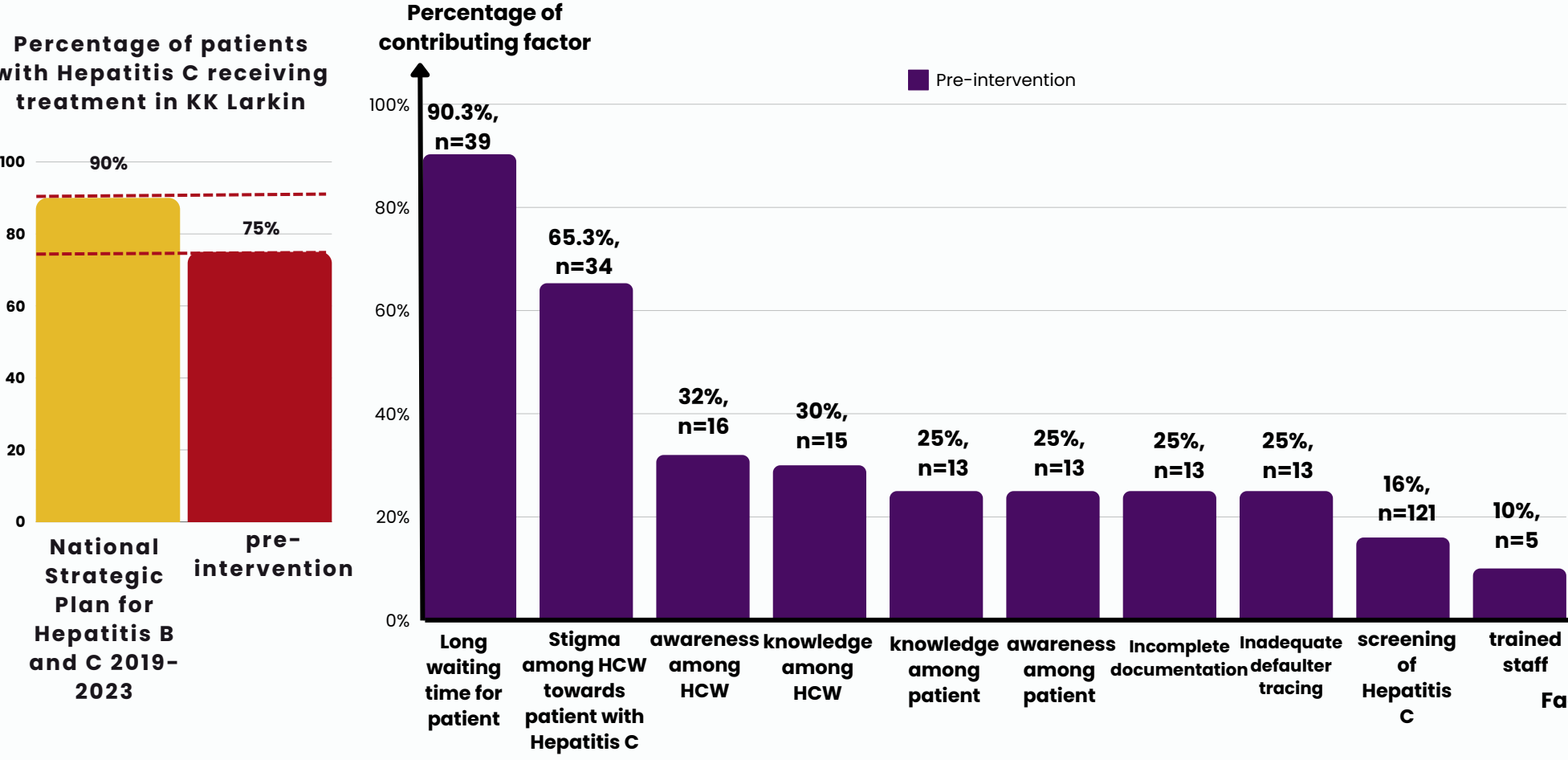
METHODOLOGY

Type of Study	Duration	Objective	Study Tool	Sample Size
Quality Improvement Study	May 2022 – June 2022	To identify percentage of patients with Hepatitis C receiving treatment To verify the magnitude of the patient with Hepatitis C not receiving treatment To identify contributing factors among patients	Hepatitis C monthly retention data from May 2022 to June 2023 Patient medical records from May 2022 to June 2023 Patient's Direct Antiretroviral Drugs (DAA) Diary Questionnaires form	Patients N:52
	June 2022 – May 2023	To identify contributing factors among healthcare worker To evaluate effectiveness of intervention	Questionnaire Form (Google Form) Microsoft excel Monitoring Form Questionnaire Form (Google Form) Microsoft excel	Healthcare workers N:50 Patients N:13

Inclusion Criteria	Exclusion Criteria
<ul style="list-style-type: none"> Patients who have been confirmed diagnosis of Hepatitis C Patients who are under harm reduction program, diagnosed with Human Immunodeficiency Virus (HIV) infection, diagnosed with Sexual Transmission Disease (STD) and drug abuser. Drug abusers who are under detention Agensi Antidadah Kebangsaan 	<ul style="list-style-type: none"> Hepatitis C patients who are under ongoing follow-up at other healthcare facilities Hepatitis C patients who have passed away
Healthcare workers including Family Medicine Specialist, Medical Officers, Pharmacists and Paramedics	Healthcare workers including 'Pembantu Perawatan Kesihatan', 'Pembantu Tadbir' and Ambulance drivers

4. ANALYSIS AND INTERPRETATION

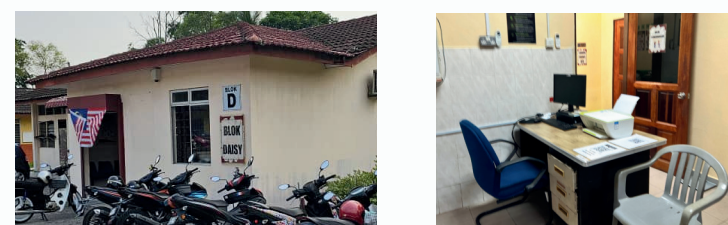
Factor that contribute to low percentage of patients with Hepatitis C receiving treatment in Klinik Kesihatan Larkin



5. STRATEGY FOR CHANGES

1. ESTABLISHMENT OF DEDICATED CLINIC

- To provide comprehensive patient management, offering thorough assessments, counseling, continuous patient monitoring and ensuring adherence to treatment. It also reduces waiting periods for patients, provides patient privacy and helps mitigate disease-related stigma.



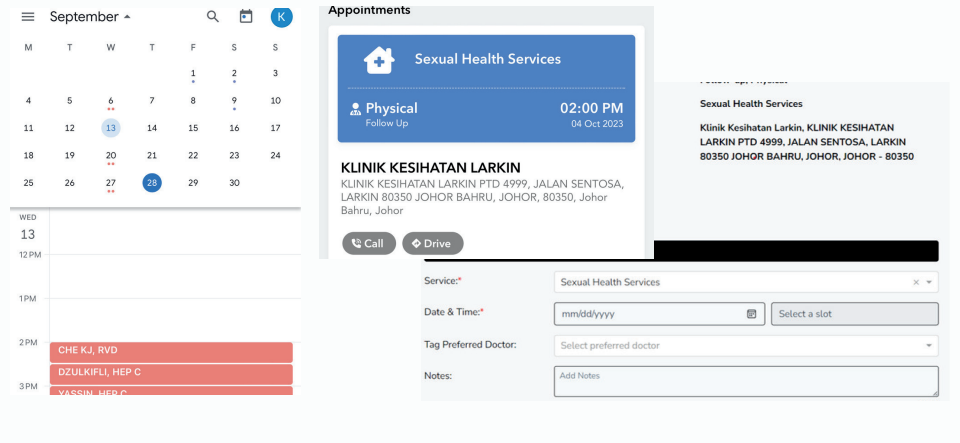
- Formation of Hepatitis C Champion Team consisting of 10 trained healthcare workers that able to focus in managing Hepatitis C patient



3. INNOVATION

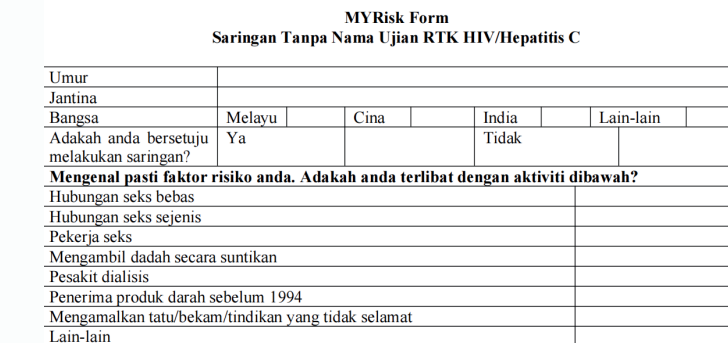
MYHEP C TRACKER SYSTEM

- Establishment of MYHEP C Tracker System by utilizing MYVAS and Google Calendar to track patient's attendance and to ease defaulter tracing.



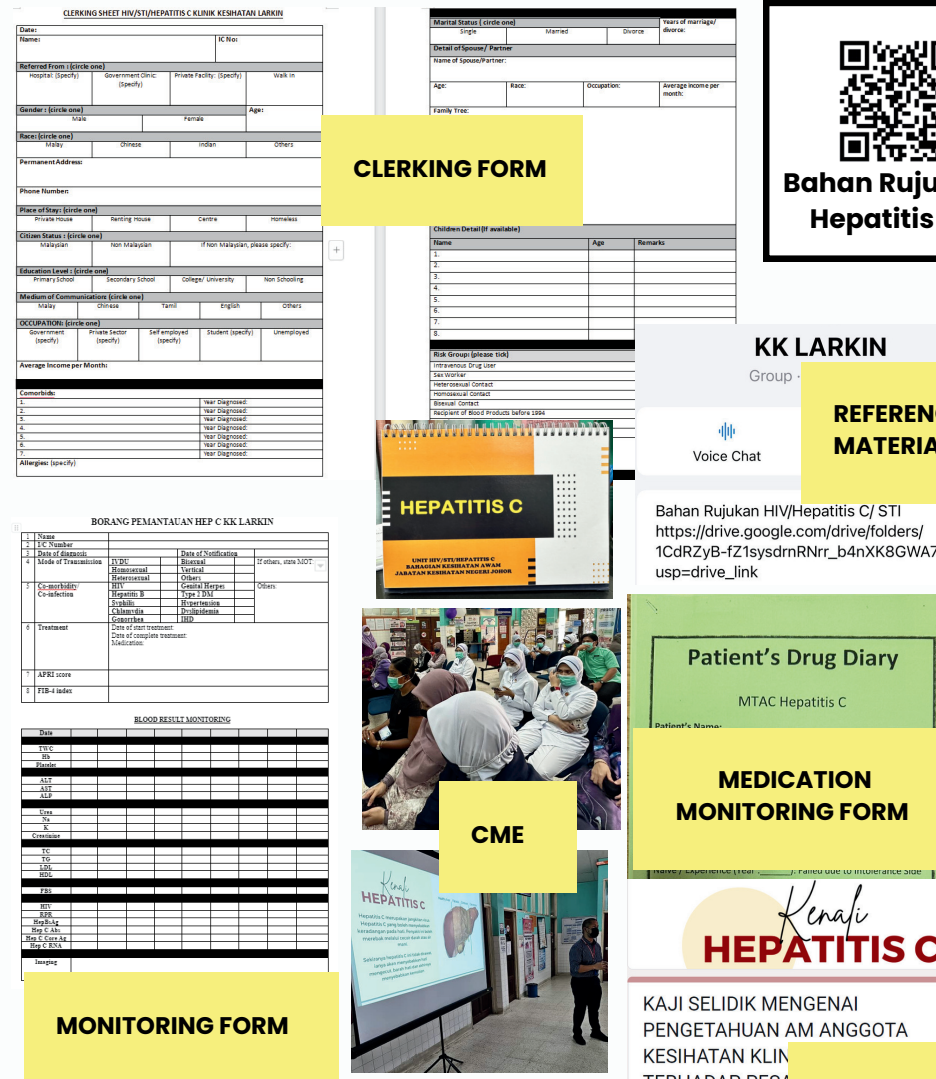
MYRISK FORM

- To assist healthcare professionals in identifying high-risk groups for Hepatitis C and further strengthen Hepatitis C screening. This form includes detailed patient information, risk factors, and consent for Hepatitis C screening



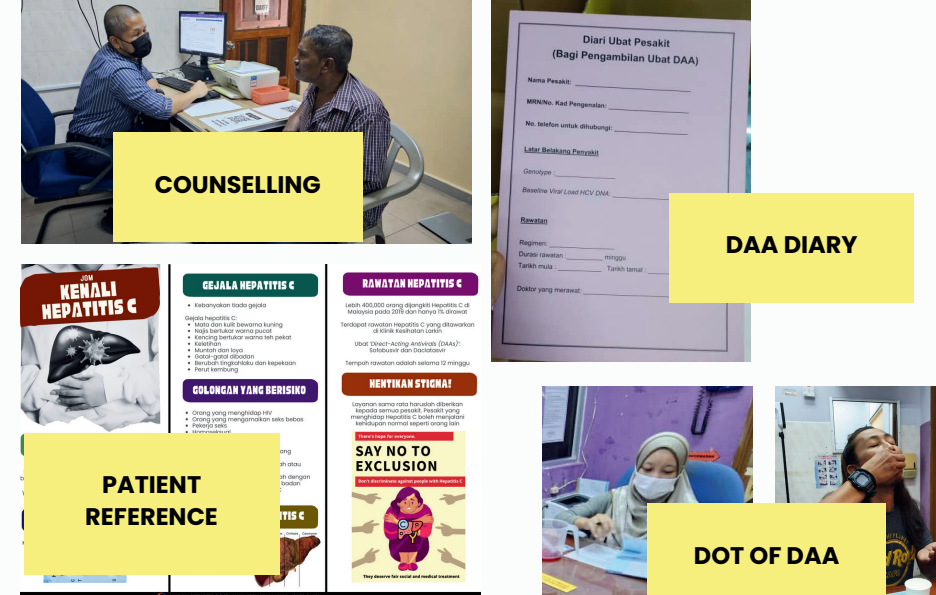
MYHEP C HCW TOOLKITS

- To address documentation issues, assist healthcare workers throughout the treatment process, and improve their understanding of Hepatitis C. The toolkit include clerking forms, monitoring forms, patient treatment files, medication monitoring forms, and reference materials on Hepatitis C
- Regular training, sharing, continuous medical education (CME) and knowledge assessment among healthcare workers is conducted



MYHEP C PATIENT TOOLKITS

- To ensure the effectiveness of treatment and management of Hepatitis C patients
- These toolkit is provided to patients undergoing treatment and it include a medication treatment diary (DAA diary) and reference materials on Hepatitis C.
- For patients in the MMT program, their medication intake is monitored through direct observation therapy (DOT) to ensure compliance



4. COLLABORATION

AGENCI ANTIDADAH KEBANGSAAN (AADK)

- Hepatitis C Talk - Informational Talk and awareness regarding Substance and Hepatitis C among patient by AADK

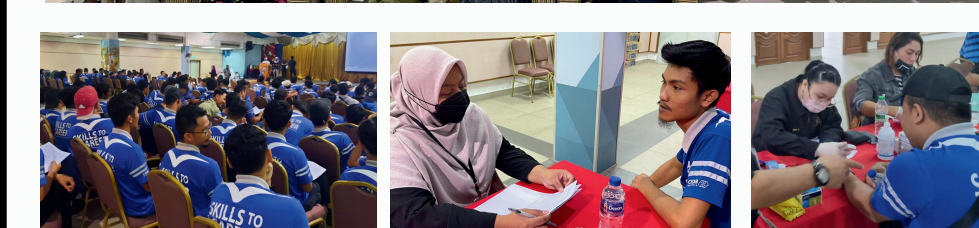


- Enhancement of Hepatitis C screening among drug abusers during drug verification assessment



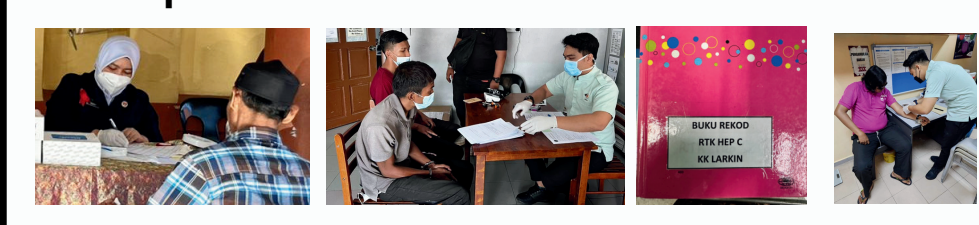
INTAN LIFE ZONE (ILZ) - NGO

- Program Lebih Baik Cegah - Awareness Talk, exhibition, health and HIV/Hepatitis C screening among 200 students and teachers at Akademi Binaan Malaysia (ABM)



5. ENHANCEMENT HEPATITIS C SCREENING PROGRAM

- Yearly screening among high-risk groups patients including methadone clients, HIV and STD patients and others



- World AIDS Day - Awareness Talk and HIV/Hepatitis C screening program



- World Hepatitis C Day - Awareness Talk and Hepatitis C screening program among patients and healthcare workers



6. OTHER AWARENESS AND STIGMA REDUCTION PROGRAM

- Program Kenali Hepatitis C - Awareness Talk, assessment of healthcare workers knowledge regarding Hepatitis C



- Program Aku dan Peluang Kedua - Psychosocial intervention and Awareness Talk regarding Hepatitis C among methadone clients



- Home Visit patient with Hepatitis C in need to demonstrate our commitment to their care

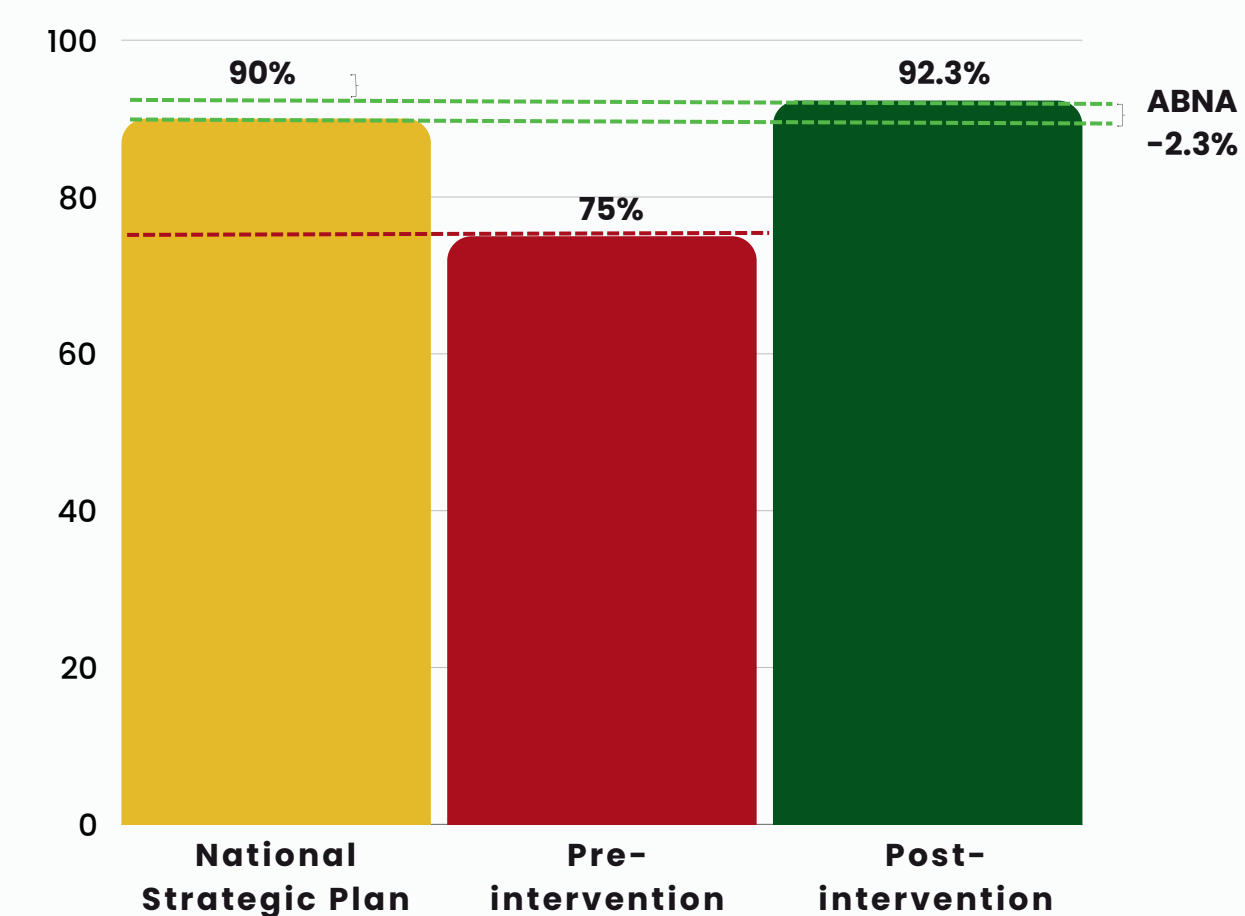


- Awareness posters and banners in the clinic to spread awareness regarding Hepatitis C and reduce stigma to the community

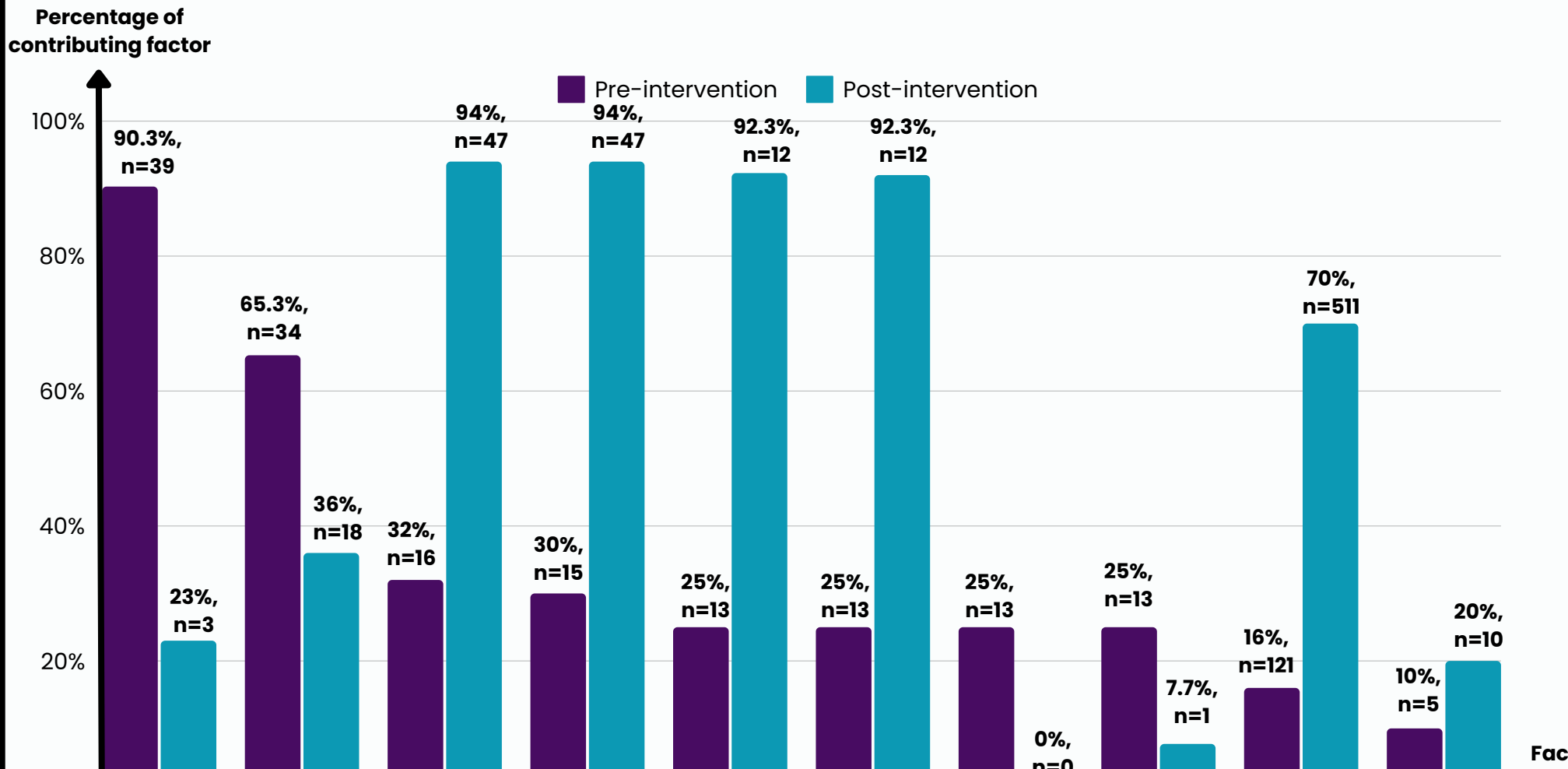


6. EFFECT OF CHANGES

Percentage of patients with Hepatitis C receiving treatment in KK Larkin

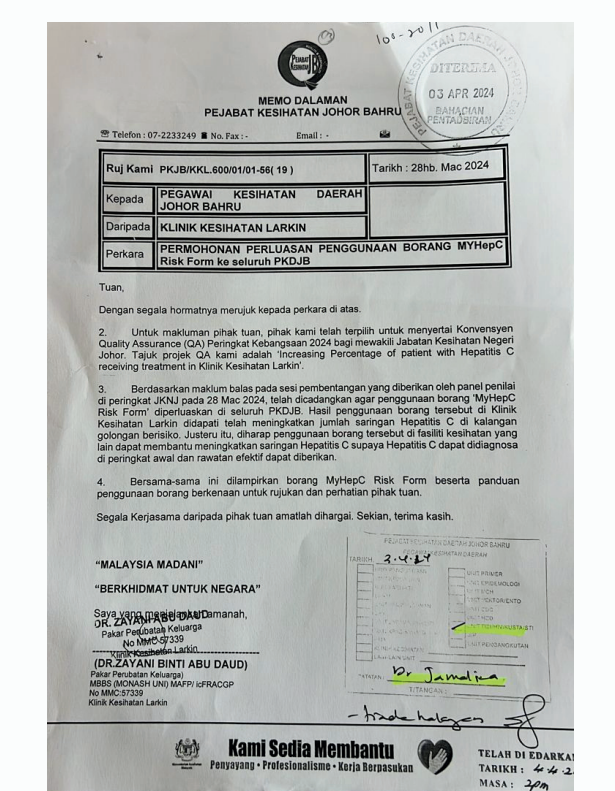


Factor that contribute to low percentage of patients with Hepatitis C receiving treatment in Klinik Kesihatan Larkin



7. THE NEXT STEP

- All of the interventions are still currently being practiced in our clinic. Additionally, the use of our MYHEP Risk Form is in the process of being expanded to all the other clinics in Johor Bahru, and we wish to distribute it to the rest of Malaysia



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