



Ministry of Health & Family Welfare  
Government of India



# USER MANUAL

## National Viral Hepatitis Control Program Management Information System – Hepatitis B (NVHCP – MIS)

Release 1.0





# Acknowledgement

Monitoring and Evaluation framework is the backbone of any program and success of the program is dependent on its robustness. Under the National Viral Hepatitis Control Program (NVHCP), one of the key strategies is a web-based Management Information System (MIS). Based on the patient flow, a web and android application has been developed so that all stakeholders involved in managing the activities of NVHCP can fill in the information directly into the software. It is envisaged that the entire recording and reporting system is paperless through this computerised data management system for users to capture clinical records of patients in a systematic way, based on standardised formats.

This manual has been formulated to guide step by step use of the application. This will enable all users working for the program to understand how to begin and complete a patient record, access data captured under the program and share automated data dashboards and reports.

The program division is immensely grateful to the Hon'ble Minister, Ministry of Health and Family Welfare, Dr Harsh Vardhan for supporting the program. We are also indebted to the Hon'ble Minister of State, Shri Ashwini Kumar Choubey for his guidance and the Secretary Health and Family Welfare, Smt. Preeti Sudan who has stood like a pillar of support and strength throughout the journey of the program. The program division would also like to acknowledge the contribution of the Additional Secretary & Mission Director Smt. Vandana Gurnani and Joint Secretary Smt. Rekha Shukla who have painstakingly helped in providing inputs for developing the web and android applications and formulating the user manual. A special mention to the NIC team for helping with hosting the web and android application on the NIC server with full verve and enthusiasm.

NVHCP team is highly grateful to all the resource persons of the working group of Monitoring and Evaluation for guiding the program in developing the monitoring and evaluation framework. We are also thankful to the experts of the IT subgroup for providing key inputs in digitalising the framework. The program division would also want to acknowledge the tremendous efforts of the partner agencies including Clinton Health Access Initiative and the country office of the World Health Organisation, who have worked tirelessly to contribute technically towards bringing about this software and user manual within a short time frame.

This is a great reflection of the importance that is attached to the united commitment of all the stakeholders in the country to reduce the morbidity and mortality associated with hepatitis. The program is confident that this web and android based application will be hugely beneficial to the service providers, program implementers and provide meaningful data to the policy makers.



# Acronyms

<b>APRI</b>	AST to Platelet Ratio Index
<b>AST</b>	Aspartate aminotransferase
<b>AST (ULN)</b>	Aspartate aminotransferase (Upper limit of normal)
<b>CKD</b>	Chronic Kidney Disease
<b>DNA</b>	Deoxyribonucleic acid
<b>EGFR</b>	Estimated Glomerular Filtration Rate
<b>HBV (or Hep-B)</b>	Hepatitis-B
<b>HCV (or Hep-C)</b>	Hepatitis-C
<b>MTC</b>	Model Treatment Centre
<b>NVHCP</b>	National Viral Hepatitis Control Program
<b>NVHMU</b>	National Viral Hepatitis Management Unit
<b>OPD ID</b>	Out Patient Department Identifier
<b>PPP</b>	Public-Private Partnership
<b>SVHMU</b>	State Viral Hepatitis Management Unit
<b>SVR</b>	Sustained Virologic Response
<b>TC</b>	Treatment Centre
<b>UID (or NVHCP ID)</b>	Unique Identifier
<b>VL</b>	Viral Load



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## Index for various pages of application:

Sr No.	Screen	Screen name	Use	Page no.
	1	Registration homepage	Add new record or edit existing records.	15
<b>A</b>	2.1 – 2.4	Patient registration	Enter patient registration information such as name, address, gender, etc.	19 – 21
<b>B</b>	3.1 – 3.2	Screening	Enter screening information such as date of screening test, result, etc.	22 – 23
<b>C</b>	4.1 – 4.4	Baseline Tests	Enter baseline testing such as ALT, AST, etc. and cirrhosis status.	24 – 25
<b>D</b>	5.1 – 5.4	Known History	Enter known history information such as co-morbidities and referral information.	26 – 28
<b>E</b>	6.1	Prescription	Enter prescription information such as regimen, duration, prescribing doctor, etc.	29
<b>F</b>	7.1 – 7.3	Dispensation	Enter drug dispensation information such as date of dispensation, pills left, etc.	30 – 31
<b>G</b>	8.1 – 8.4	HBV DNA	Enter HBV DNA test details such as sample collection and transport, DNA count, etc.	32 – 34
<b>H</b>	9.1	Interrupted Patient	Recording interruption status and reasons	35
<b>I</b>	10.1	Patient Transfer	Transferring in/out patients from a facility	36

## Index for various pages of web portal:

Sr No.	Screen	Screen name	Use	Page no.
	1	Registration homepage	Add new record or edit existing records.	50
<b>A</b>	2.1 – 2.3	Patient registration	Enter patient registration information such as name, address, gender, etc.	54 – 56
<b>B</b>	3.1	Screening	Enter screening information such as date of screening test, result, etc.	57
<b>C</b>	4.1 – 4.2	Baseline Tests	Enter baseline testing such as ALT, AST, etc. and cirrhosis status.	58 – 59
<b>D</b>	5.1 – 5.3	Known History	Enter known history information such as co-morbidities and referral information.	60 – 61
<b>E</b>	6.1	Prescription	Enter prescription information such as regimen, duration, prescribing doctor, etc.	62
<b>F</b>	7.1 – 7.2	Dispensation	Enter drug dispensation information such as date of dispensation, pills left, etc.	63 – 64
<b>G</b>	8.1 – 8.2	HBV DNA	Enter HBV DNA test details such as sample collection and transport, DNA count, etc.	65 – 66
<b>H</b>	9.1 – 9.2	Interrupted Patient	Recording interruption status and reasons	67 – 68
<b>I</b>	10.1 – 10.4	Patient Transfer	Transferring in/out patients from a facility	69 – 71
<b>J</b>	11.1 – 11.2	LTFU module	Contacting patients who missed treatment	72 – 73

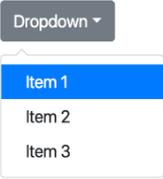
# Data Entry Conventions



## 1. Data Entry Conventions

### Field Type

The MIS uses the following field types

Field type	Data entry rules	Example
Alpha-numeric/Text	Both numbers and alphabets allowed	7,Lok Marg
Numeric	Only numbers allowed	7
Alphabetical	Only alphabetical text allowed	Lok Marg
Date	Only date entry allowed	20-05-2019
Toggle	Single selection among displayed options; selection of an option leads to further fields linked to selection made	
Drop-down	Single selection among multiple options in drop-down format	
Check-box	Single selection among multiple options	
Check-list	Multiple selection among displayed options	
<field>* *	A field with a * mark has to be compulsorily filled with required information	<b>Name* : _____</b> i.e. the 'Name' of the person has to be mandatorily entered



# Android Application

## User Manual Guide





# 1.

How to access the application and login?

## 1. Accessing the App

NVHCP - MIS App can be accessed using an android smart-phone or tablet with android version 6.0 and above. The android version of a smart-phone or tablet can be checked in the settings section.

The app can be downloaded by logging into <http://nvhcp.gov.in/>

## 2. First Page of the System/Log-in Page

The first page of the system can be accessed by downloading and installing the app.

The page opens and looks like the following:

Patient registration home	Option	Description
	<p>Username</p> <p>Password</p> <p>Login</p> <p>T&amp;C checkbox</p>	<ul style="list-style-type: none"> <li>• Enter username</li> <li>• Enter password</li> <li>• Click login after entering above details</li> <li>• Select checkbox to accept terms and conditions</li> </ul>

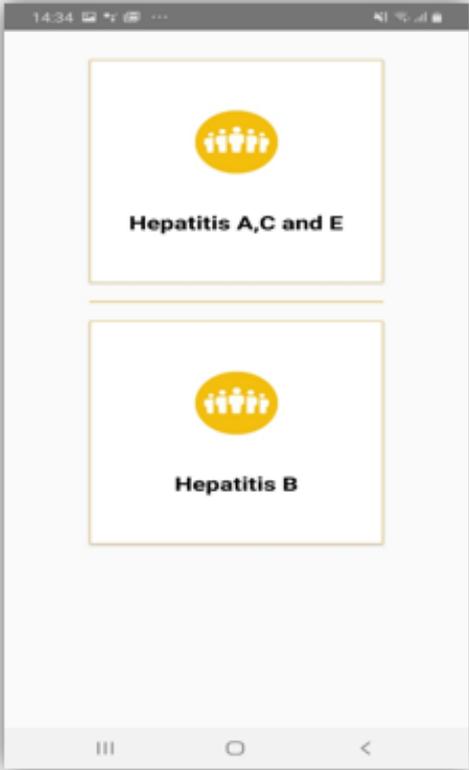
Steps for logging in:

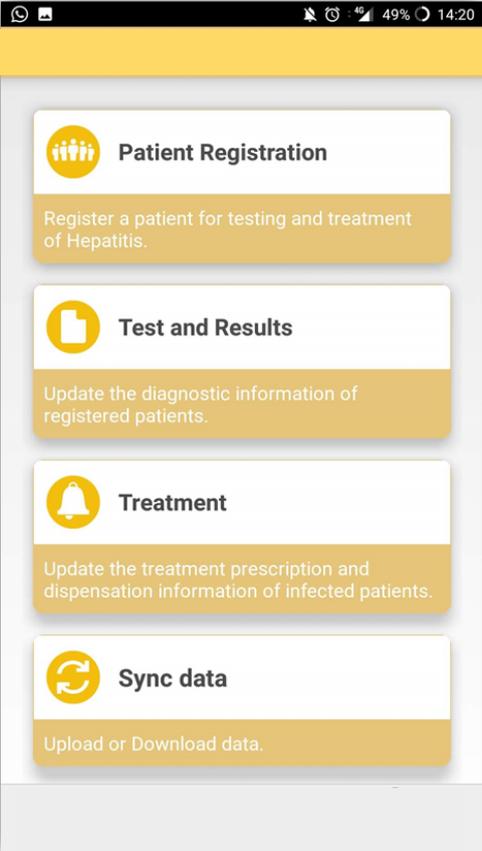
- a) Enter “Username” provided by NVHCP (NVHMU/SVHMU) which will be unique for each user
- b) Enter “Password” provided by NVHCP (NVHMU/SVHMU); password should be changed by the user on first login on web
- c) Select checkbox – “I accept terms and conditions”
  - a. To view terms and conditions (listed below), click on the hyperlinked text
  - b. Terms and conditions
    - i. I will make the entries myself

- ii. I will not intentionally enter incorrect data
  - iii. I will ensure the data which I have access to is kept confidential at all times
  - iv. I will not share the data I have access to with anyone in any format
  - v. I will complete my work on time and diligently
- d) Click on “Login” to enter the App

### 3. Home Page

Following pages will appear after logging-in:

Patient registration home	Option	Description
	<p>Hepatitis A,C and E</p> <p>Hepatitis B</p>	<ul style="list-style-type: none"> <li>• Choose to register Hep-A, C and E patients</li> <li>• Choose to register Hep-B patients</li> </ul>

Homepage	Option	Description
 <p><b>Patient Registration</b> Register a patient for testing and treatment of Hepatitis.</p> <p><b>Test and Results</b> Update the diagnostic information of registered patients.</p> <p><b>Treatment</b> Update the treatment prescription and dispensation information of infected patients.</p> <p><b>Sync data</b> Upload or Download data.</p>	Patient registration	<ul style="list-style-type: none"> <li>Use this option to register a new patient or edit registration information of existing patients</li> </ul>
	Testing information	<ul style="list-style-type: none"> <li>Use this option to edit testing information of existing patients</li> </ul>
	Treatment information	<ul style="list-style-type: none"> <li>Use this option to edit treatment and drug dispensation information of existing patients</li> </ul>
	Syncing data	<ul style="list-style-type: none"> <li>Use this option to download or upload data to and from the database</li> </ul>

When initiating data entry, data downloading may be required by the user. Rules for data downloading are detailed in section 3 of this document – “How to download or upload data”.



# 2.

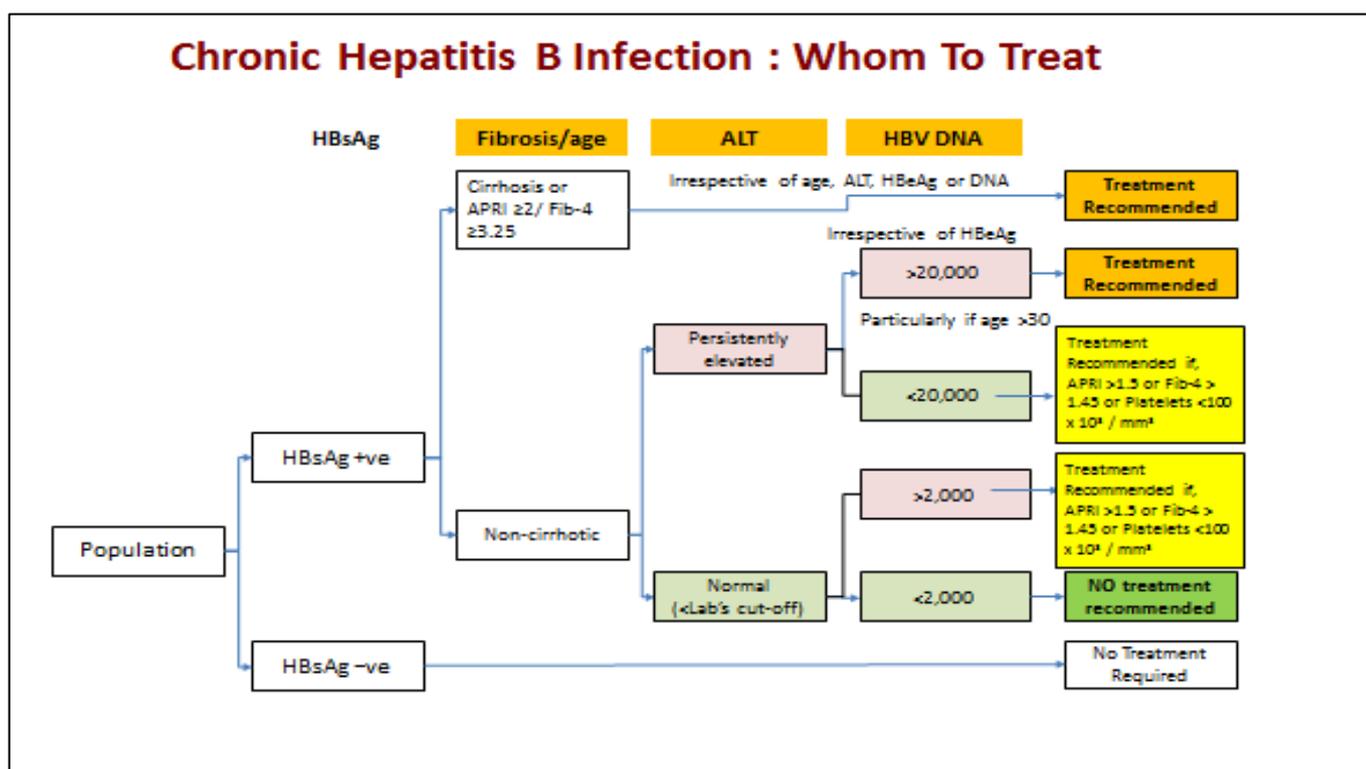
How to create a new patient record or view/add information to an existing patient record?

### 1. Index for navigating various screens of the application:

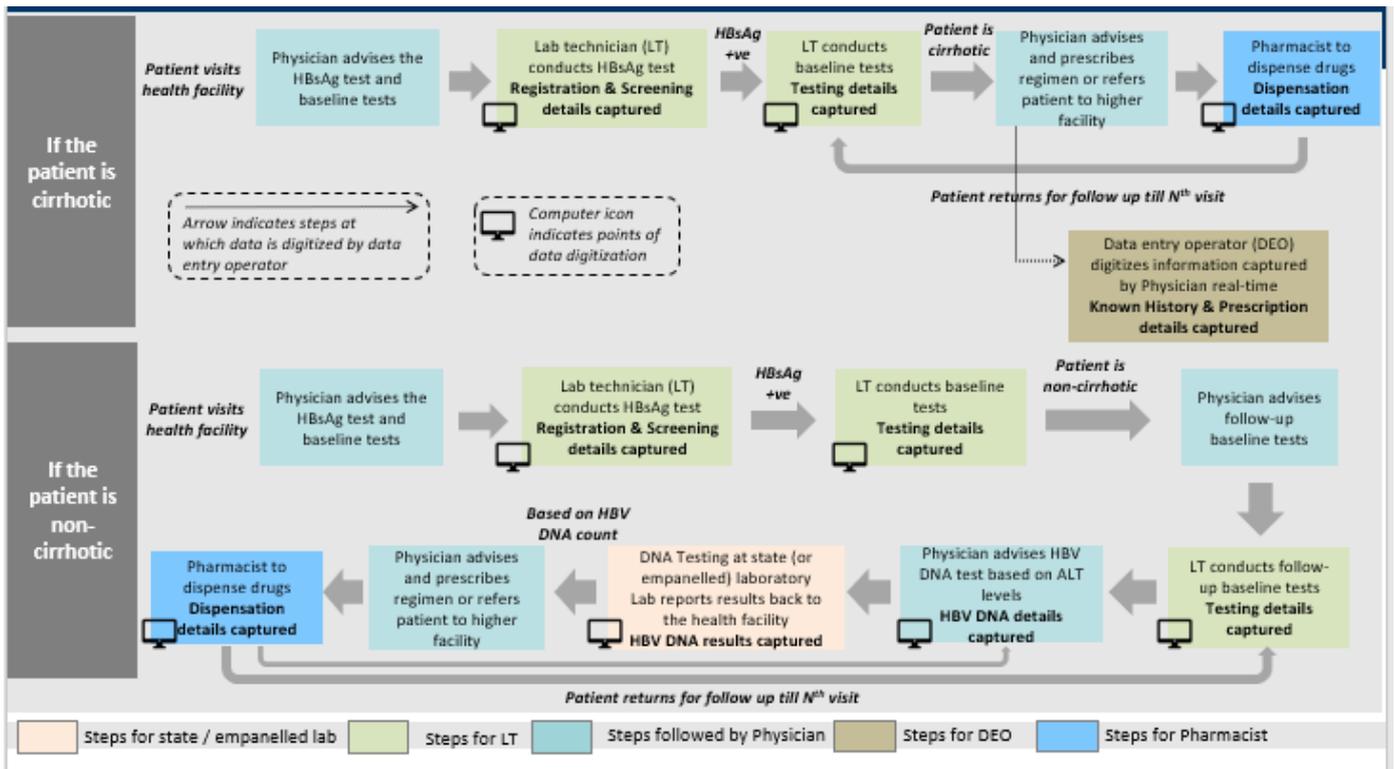
Sr No.	Screen	Screen name	Use	Page no.
	1	Registration homepage	Add new record or edit existing records.	15
After clicking on "Add new patient" on registration homepage				
Patient differentiation				18
<b>A</b>	2.1 – 2.4	Patient registration	Enter patient registration information such as name, address, gender, etc.	19 – 21
<b>B</b>	3.1 – 3.2	Screening	Enter screening information such as date of screening test, result, etc.	22 – 23
<b>C</b>	4.1 – 4.4	Baseline Tests	Enter baseline testing such as ALT, AST, etc. and cirrhosis status.	24 – 25
<b>D</b>	5.1 – 5.4	Known History	Enter known history information such as co-morbidities and referral information.	26 – 28
<b>E</b>	6.1	Prescription	Enter prescription information such as regimen, duration, prescribing doctor, etc.	29
<b>F</b>	7.1 – 7.3	Dispensation	Enter drug dispensation information such as date of dispensation, pills left, etc.	30 – 31
<b>G</b>	8.1 – 8.4	HBV DNA	Enter HBV DNA test details such as sample collection and transport, DNA count, etc.	32 – 34
<b>H</b>	9.1	Interrupted Patient	Recording interruption status and reasons	35
<b>I</b>	10.1	Transfer module	Transferring in/out patients from a facility	36

### 2. Patient flow for understanding the above details:

The decision to identify the people who need treatment for HBV rely upon the presence of cirrhosis, fibrosis, levels of liver enzymes and platelet count. Please follow the below algorithm while registering patients for HBV treatment:



### 3. Information flow for entering the above details:



Above data flow may vary among facilities depending upon availability of HR and infrastructure

#### 4. Creating a new record or view/add information to an existing record

After clicking on patient registration on the home page, you will be able to view the patient registration page, as shown below:

1	Patient registration home	Option	Description
		Add new patient	<ul style="list-style-type: none"> <li>Use this option to add a new patient record</li> </ul>
		Search by UID or phone #	<ul style="list-style-type: none"> <li>Use this option to search for a patient record by UID</li> </ul>
		Search by status	<ul style="list-style-type: none"> <li>Use this option to search for all patient records having a particular status</li> </ul>
			Shortlisted records will be displayed here

#### Steps for adding a new record or editing an existing record

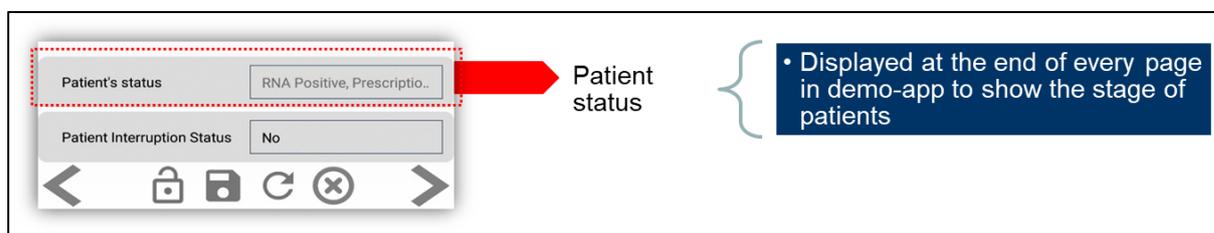
- a) Click on “Add new patient” to initiate the data entry for a patient
- b) For editing existing records, following options can be used:
  - a. If you know the NVHCP ID or phone number of a particular patient, then enter the same in the space provided below “Update/Search record by UID/contact number”
  - b. If you want to list down the records for a facility based on the patient status, then select the “Patient status” from the drop-down below “Update/Search patient record by Status”
  - c. Shortlisted records will be displayed in the space highlighted in grey above
- c) Once a record is displayed, click on the record to view or add details

*Test and Result page or Treatment page, accessible by the homepage, will only have the ‘Search By’ option to find patient records for editing or viewing.*

*Patient Status’ have been explained below:*

### Patient Status'

Patient's status bar, as shown below, is displayed at the end of every data entry page of the demo-app to guide the user.



The following patient statuses appear in the 'Search by Patient Status' option:

Sr. No	Patient status	Situation	Change at
<b>Patient Status' appearing in the Patient Registration Module</b>			
1	Diagnosis Pending	HBsAg test yet to be done	Screening page
2	Not infected	HBsAg test negative	Screening page
3	HBsAg Positive, Baseline Testing Pending	HBsAg test is positive, baseline testing pending	Testing page
4	Treatment Recommended, Prescription Pending	If testing shows cirrhotic nature or when the doctor recommends treatment on HBV DNA page	Known history page
5	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	1st dispensation page
<b>Patient Status' appearing in the Test and Result Module</b>			
1	Diagnosis Pending	HBsAg test yet to be done	Screening page
2	Not infected	HBsAg test negative	Screening page
3	HBsAg Positive, Baseline Testing Pending	HBsAg test is positive, baseline testing pending	Testing page
4	Treatment Recommended, Prescription Pending	If testing shows cirrhotic nature or when the doctor recommends treatment on HBV DNA page	Known history page
5	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	1st dispensation page
6	Patient on Follow-up Tests	If testing shows non-cirrhotic nature	Testing page
7	Persistently elevated ALT levels, HBV DNA pending	'Yes' to 'Persistently elevated ALT levels?' on testing page	HBV DNA page
8	Non-elevated ALT levels, HBV DNA pending	'No' to 'Persistently elevated ALT levels?' on testing page	HBV DNA page
9	Treatment not Recommended, Follow-up Tests Advised	Treatment not recommended on HBV DNA page	HBV DNA page

10	Indecisive ALT levels, follow-up tests advised	'Indecisive' to 'Persistently elevated ALT levels?' on testing page	Testing page
<b>Patient Status' appearing in the Treatment Module</b>			
1	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	Prescription page
2	On Treatment Dispensation	Nth dispensation done, (N+1)th dispensation pending	(N+1)th dispensation page

## 5. Exploring Page Controls

At the bottom of each patient record page, you will find the following five types of page controls:

Sample	Option	Description
	Close	<ul style="list-style-type: none"> <li>Use this option to close the patient record</li> </ul>
	Refresh	<ul style="list-style-type: none"> <li>Use this option to refresh all information on a particular page</li> </ul>
	Save	<ul style="list-style-type: none"> <li>Use this option to save the information on a particular page</li> </ul>
	Lock / Unlock	<ul style="list-style-type: none"> <li>Use this option to unlock a locked page (subject to login based permission)</li> </ul>
	Arrows to navigate between pages	

There are 5 types of page controls on every page:

- a) **Lock/Unlock** - Use this option to unlock a locked page (subject to login based permission)
  - a. To edit previously entered details of a patient, users are only allowed to edit the last saved page and the pages before that are locked
  - b. Details on a locked page can only be edited using the login credentials of the nodal officer of the facility who will have administrative rights
- b) **Save** - Use this option to save the information on a particular page
- c) **Refresh** - Use this option to refresh all information on a particular page
- d) **Close** - Use this option to close the patient record
- e) **Arrows** - Use front/back arrows to navigate between pages

## 6. Understanding the information provided in this manual

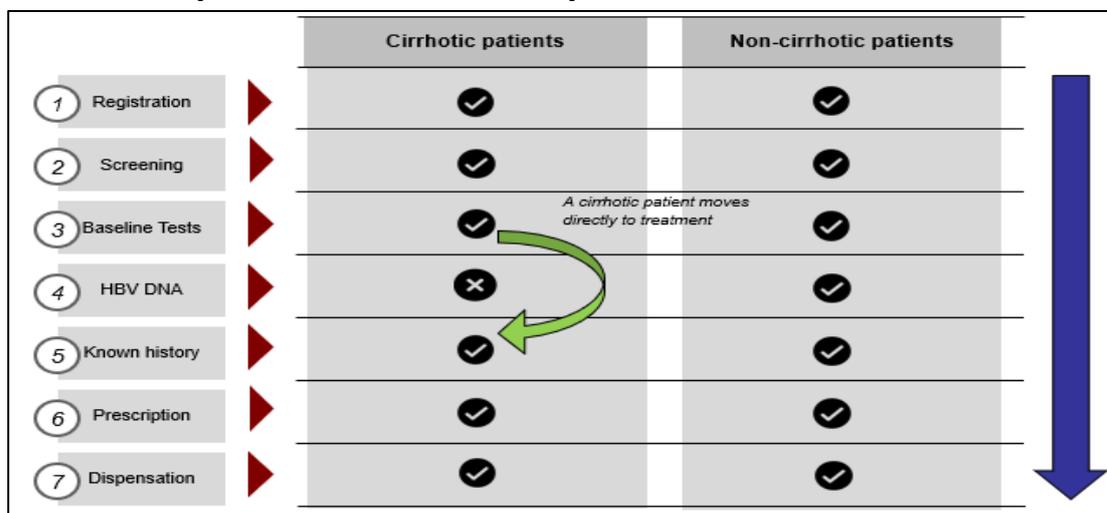
For each data field to be captured by the user, the following information is provided in the sections below to serve as a guide while doing data entry:

- a) **Field use** – Information specifying the use of the field in context to patient specific information
- b) **Field type** – Information specifying the field type as described in the “data entry convention” of this document
- c) **Dependencies** – Information specifying special data entry rules associated with a particular field, for example – some fields need to be filled only if a particular selection has been made in the previous field
- d) **Editable** – Information specifying whether a field can be edited by the user or a field is auto-filled

## 7. Registering a new patient

The decision to identify the people who need treatment for HBV rely upon the presence of cirrhosis, fibrosis, levels of liver enzymes and platelet count. The below mentioned diagram showcases the difference in the patient flow between cirrhotic and non-cirrhotic patients.

### Difference in patient flow with respect to cirrhosis



## Cirrhotic patients

Patients who are identified as cirrhotic during the first baseline test are to be initiated on treatment irrespective of ALT levels and HBV DNA is not required during the first diagnosis.

To register such patients, click on 'Add a new patient' on the Patient Registration page to land on the page described below and enter information in *fields #1 to #19*.

**2.1** Patient Registration Page: Fields #1-#20

### Patient Registration Page (1/4)

Registration homepage	Field use	Field type	Dependencies	Editable
<b>1</b> OPD/IPD ID <input type="text"/>	<b>1</b> Record OPD ID	Alphanumeric	None	Yes
<b>2</b> NVHCP ID <input type="text" value="PB-AMT-GMC-1-20"/>	<b>2</b> Pre-filled UID prefix	Alphanumeric	None	No
<b>3</b> <input type="text" value="000001"/>	<b>3</b> Pre-filled UID suffix	Numeric	One greater than the last UID	Yes
<b>4</b> Patient type <input type="radio"/> New <input checked="" type="radio"/> Experienced	<b>4</b> Record patient type	Toggle	None	Yes
<b>5</b> Date <input type="text"/>	<b>5</b> Record date of registration	Date	None	Yes
<b>6</b> Name <input type="text"/>	<b>6</b> Record patient name	Alphabet	None	Yes
<b>7</b> Is Age between 0 to 1 <input type="radio"/> Yes <input checked="" type="radio"/> No	<b>7</b> Age band selection	Toggle	None	Yes
<b>8</b> Age (in years) <input type="text"/>	<b>8</b> Record age	Numeric	Auto selection of "in years" or "in months" based on (7)	Yes

#### Steps for entering registration information

- a) Enter OPD ID assigned by the hospital in *field #1*. NVHCP Patient Serial Number in *field #3* will be auto-generated
- b) Select Patient Type 'New' or 'Experienced' in *field #4*
  - a. A patient is 'New' if he/she has never received treatment for Hepatitis B.
  - b. A patient is 'Experienced' if he/she has received treatment for Hepatitis B in the past either within the NVHCP programme or outside
- c) Enter date of registration in *field #5*
- d) Enter the person's first and last name in *field #6*, ensure that the name matches the name in a government ID, for e.g., Roop Kumari
- e) If age of person is between 0 to 1 years, select 'yes' in *field #7*, else skip to *field #8*
- f) Enter age of person in *field #8*
  - a. If person's age is between 0-1 years (i.e. less than 12 months), enter age in months in numbers, for e.g., 11

- b. If person’s age is greater than 1 year, enter age in years in numbers, for e.g., 25

**2.2**

**Patient Registration Page (2/4): Registering an experienced patient**

Registration homepage	Field use	Field type	Dependencies	Editable
	<p>4 Below fields will appear only if "Experienced" is selected in patient type:</p> <p>4.1 Record past treatment source</p> <p>4.2 Record past state</p> <p>4.3 Record past facility</p> <p>4.4 Record past treatment year</p> <p>4.5 Record past UID suffix</p> <p>Click "sync" button to import patient data from past NVHCP UID to expedite data entry</p>	<p>Toggle</p> <p>Drop-down</p> <p>Drop-down</p> <p>Drop-down</p> <p>Numeric</p>	<p>Only if "Experienced" in (4)</p> <p>Only if "NVHCP" in (4.1)</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<p><b>Important points to note for "Experienced" patients:</b></p> <ul style="list-style-type: none"> <li>Those patients who have prior exposure to Viral Hepatitis-B treatment will fall under this category</li> <li>Past treatment information will be automatically filled if the sync option is used</li> </ul>				

- g) If the patient is 'Experienced', enter past treatment details in *fields #4.1 - #4.5*, if available, else move to *field #5*

**2.3**

**Patient Registration Page (3/4)**

Registration homepage	Field use	Field type	Dependencies	Editable
	<p>9 Record gender</p> <p>10 Record Guardian's name</p> <p>11 Record street address</p> <p>12 Pre-filled state</p> <p>13 Pre-filled district</p> <p>14 Record block/ward</p> <p>15 Record village/town/city</p> <p>16 Record Pin-code</p> <p>17 Record contact type</p> <p>18 Record contact number</p>	<p>Drop-down</p> <p>Alphabet &amp; Drop-down</p> <p>Alphanumeric</p> <p>Drop-down</p> <p>Drop-down</p> <p>Drop-down</p> <p>Alphabet</p> <p>Numeric</p> <p>Drop-down</p> <p>Numeric</p>	<p>None</p> <p>Choose guardian type from drop-down</p> <p>None</p> <p>Auto-filled through facility login</p> <p>Auto-filled through facility login</p> <p>Based on district selection</p> <p>None</p> <p>8 digits only</p> <p>None</p> <p>10 digits only; based on (17)</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

- h) Select appropriate gender in *field #9*
- i) Enter a relative name (in the following format <First name> <space> <Last name>, for e.g. Manoj Kumar, in *field #10*

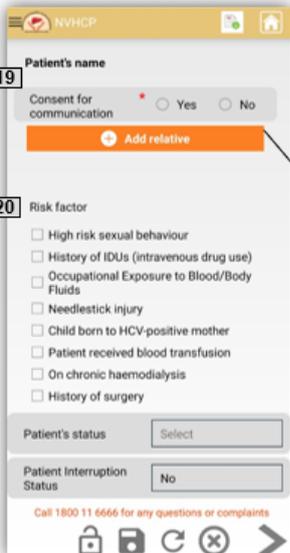
- j) Enter complete address in *fields #11 - #15*
  - a. In *field # 11*, enter home and street address in the following format  

<Home Name/Number, Street Name, Landmark, Area Name>

For e.g., A-32 Sukhda, 11th Road, Near Patwardhan Park, Santacruz
- k) Select contact type, mobile or landline, in *field #17*
  - a. Enter the contact number in *field #18*; you can add more than one by contact by clicking on “Add relative”
  - b. Contact number should only be 10 digits in length without preceding zero

**2.4**

**Patient Registration Page (4/4)**

Registration homepage	Field use	Field type	Dependencies	Editable
	<p><b>19</b> Record patient consent</p>	Toggle	None	Yes
	<p><b>20</b> Record risk factor</p>	Check-list – Select all that apply	None	Yes
<p>Click "Add relative" button to enter communication details of more than one relative of the patient</p>				

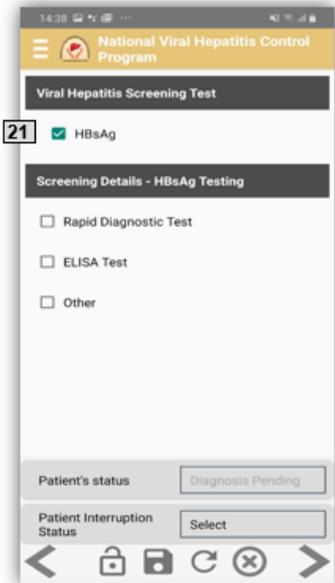
- l) Record patient consent in *field #19*
  - a. User to record consent of the patient for receiving SMS or calls for appointment reminders and counselling related to Viral Hepatitis
- m) Select risk factor in *field #20*
- n) The user has the option to add up to 5 mobile number of relatives of the patient by clicking on the ‘Add Relative’ button.
  - a. The user should enter the name, relationship and mobile number for each of the relatives added
- o) Click on “save” button to go the next page

## 8. Entering Viral Hepatitis Screening Information for registered patients

### 3.1

#### Screening Page: Fields #21-22

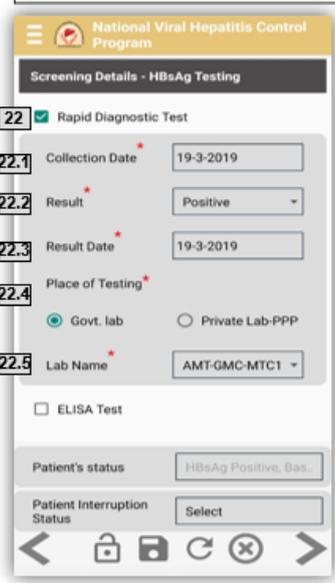
#### Screening Page (1/2)

Screening homepage	Field use	Field type	Dependencies	Editable
	<p><b>21</b> Record Screening tests conducted</p>	<p>Check-list – HBsAg is automatically selected</p>	<p>None</p>	<p>Yes</p>

a) Select the tests conducted in *field #21 – Auto selected at HBsAg*

### 3.2

#### Screening Page (2/2)

Screening homepage	Field use	Field type	Dependencies	Editable
<p>Below fields will appear for each "test" selected in field 20 – "Viral Hepatitis Screening Test":</p>				
	<p><b>22</b> Record screening test type – Rapid Diagnostic Test</p>	<p>Check-box</p>	<p>None</p>	<p>Yes</p>
	<p><b>22.1</b> Record screening date</p>	<p>Date</p>	<p>None</p>	<p>Yes</p>
	<p><b>22.2</b> Record screening result</p>	<p>Drop-down</p>	<p>None</p>	<p>Yes</p>
	<p><b>22.3</b> Record result date</p>	<p>Date</p>	<p>None</p>	<p>Yes</p>
	<p><b>22.4</b> Record place of testing</p>	<p>Toggle</p>	<p>None</p>	<p>Yes</p>
	<p><b>22.5</b> Record Lab Name</p>	<p>Drop-down</p>	<p>Only if "Govt. lab" on (22.4)</p>	<p>Yes</p>
<p><b>Important points to note for Screening page:</b></p> <ul style="list-style-type: none"> <li>• At-least one of the 3 test types –"Rapid Diagnostic Test / ELISA Test / Others" has as to be filled for HBsAg</li> <li>• Same information (22.1 to 22.5) described above for Rapid Diagnostic Test will be asked for each selected test type</li> </ul>				

b) For each test conducted, select at-least one applicable test type – Rapid Diagnostic Test / ELISA Test / Others

- c) For each test type, say “Rapid Diagnostic Test” in *field #22*, enter information from #22.1 - #22.5 which will remain same for all test types
  - a. For *field #22.4*, if “Govt. Lab” is selected, then *field #22.5* – “Lab name” must be entered using drop-down options
- d) If “Other” test type is selected, additional field to record “test name” has to be filled
- e) Click on “save” button to go the next page

## 9. Entering Testing Information for Hepatitis B Patients

**4.1** Testing Page: Fields #23-#46

Testing Page (1/4)

Testing homepage	Field use	Field type	Dependencies	Editable
Click "Add Follow up" button to enter follow up DNA test details				
23	Record date of prescribing tests	Date	None	Yes
24	Record date of last test result	Date	None	Yes
25	Record Haemoglobin	Numeric	None	Yes
26	Record S. Albumin	Numeric	None	Yes
27	Record S. Bilirubin (Total)	Numeric	None	Yes
28	Record ALT	Numeric	None	Yes
29	Record AST	Numeric	None	Yes

### Steps for testing page

- a) Enter Baseline tests details from *field #23 - #34*

**4.2**

Testing homepage	Field use	Field type	Dependencies	Editable
30	Record AST ULN	Numeric	None	Yes
31	Record Platelet Count	Numeric	None	Yes
32	Record Weight (in kgs)	Numeric	None	Yes
33	Record S. Creatinine	Numeric	None	Yes
34	Record eGFR	Numeric	Auto-filled	No
35	Record Ultrasound details	Check-box	None	Yes
35.1	Record Ultrasound Date	Date	Only if (35) is selected	Yes
36	Record Fibro-scan details	Check-box	None	Yes

Testing Page (2/4)

- b) *Field #34* will be auto calculated based on the details captured above such as age, weight, gender and S. Creatinine value

4.3

Testing Page (3/4)

Testing homepage	Field use	Field type	Dependencies	Editable
	Record Fibroscan Date	Date	Only if (36) is selected	Yes
	Record LSM value	Numeric	Only if (36) is selected	Yes
	Record APRI details	Check-box	Auto-filled	No
	Record FIB 4 details	Check-box	Auto-filled	No
	Record Complicated status	Toggle	None	Yes
	Record Persistently elevated ALT levels	Drop-down	Only if "Uncomplicated" in (39)	Yes

c) Enter Criteria for evaluating Cirrhosis from *field #41 - #46*

- a. APRI and FIB-4 score in *field #37 and #38* will be auto-calculated using values inputted for AST, AST (ULN), ALT, age, platelet count

4.4

Testing Page (4/4)

Testing homepage	Field use	Field type	Dependencies	Editable
Below details to be captured only if complicated recorded in (39)				
	Record Variceal Bleed	Drop-down	None	Yes
	Record Ascites	Drop-down	None	Yes
	Record PT INR	Numeric	None	Yes
	Record Encephalopathy	Drop-down	None	Yes
	Record Child Pugh Score	Alphabet	Auto-filled	No
	Record Complicated status	Toggle	None	Yes

d) If "Complicated" is selected in *field #39*, then *fields #41 - #46* can be filled

- b. Above fields are mandatory for complicated cases and non-mandatory for uncomplicated cases; *field #45* i.e. Child Pugh Score will be auto calculated

e) *Field #40* (refer to figure 4.3) must be filled if the ALT levels are or are not persistently elevated, i.e. ALT is above upper limit of normal at least twice 4 weeks apart

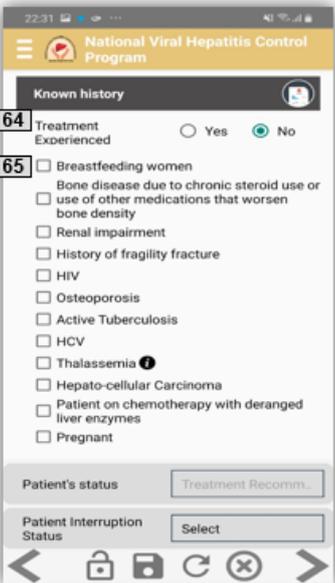
- f) To add follow-up tests, click on the blue button on top right (*refer to figure 4.1*). Click save to move ahead

*Fields #47 to #63 belong to HBV DNA page and have been shown separately in the non-cirrhotic section as it is not recommended as a criteria for evaluation in patients with cirrhosis for initiation of treatment.*

## 10. Entering Known History Information for Hepatitis B Patients

**5.1** Known History (1/3): Field #64-68

### Known History (1/4)

Known history page	Field use	Field type	Dependencies	Editable
	<p><b>64</b> Record if treatment experienced</p>	Toggle	Auto-filled based on registration	No
<p><b>65</b></p> <p>Record known co-morbidities (if any)</p>	Check-list – Select all that apply	None	Yes	

- a) Select all known history in the check-list in *field #65*
  - a. If “HIV” is selected, then *field #65.1* - HIV/ART regimen has to be filled
  - b. If “Renal Impairment” is selected, then *field #65.2* – CKD stage have to be filled

5.2

Known History (2/4)

Known history page	Field use	Field type	Dependencies	Editable
	65.1 Record ART regimen	Drop-down	Only if "HIV" selected in (65)	Yes
	65.2 Record Renal/CKD stage	Drop-down	Only if "Renal ..." selected in (65)	Yes
	66 Record Last Menstrual Period	Date	Only if "Female" selected in (9)	Yes
<p><b>Important points to note for Known History page:</b></p> <ul style="list-style-type: none"> <li>Multiple known co-morbidities can be selected in field (65)</li> <li>If "HIV" and "Renal Impairment" selected in (65), then (65.1) and (65.2) have to be filled respectively</li> </ul>				

5.3

Known History (3/4)

	64 Record Treatment Experience Status	Toggle	Only if "Experienced" in (4) on registration page	No
	64.1 Record treating hospital	Drop-down	If "Yes" in (64)	Yes
	64.2 Record previous regimen	Drop-down	If "Yes" in (64)	Yes
	64.3 Record previous duration	Drop-down	If "Yes" in (64)	Yes
	64.4 Record previous status	Toggle	If "Yes" in (64)	Yes
	64.4.1 Record weeks completed	Drop-down	If "Interrupted" in (64.4)	Yes
	64.4.2 Record last pill date	Date	If "Interrupted" in (64.4)	Yes

b) Field #64 (in known history (2/4)), treatment experienced, will be auto selected based on registration page

- a. If field #64 is Yes, then field #64.1 - #64.4 have to be filled
- b. If field #64.4 is Interrupted, then field #64.4.1 - #64.4.2 must be filled

5.4

Known History (4/4)

Known history page	Field use	Field type	Dependencies	Editable
<b>67</b> Referred	Record Referral details	Toggle	None	Yes
<b>67.1</b> Referring doctor	Record Referring doctor	Drop-down	Only if "Yes" in (67)	Yes
<b>67.2</b> Referred to	Record "Referred to" facility	Drop-down	Only if "Yes" in (67)	Yes
<b>67.3</b> Date of referral	Record Date of referral	Date	Only if "Yes" in (67)	Yes
<b>68</b> Observations	Record Observations (if any)	Alphabet	None	Yes

- c) *Field #67* – “Referred” to be selected as “Yes” if patient has been referred to Model Treatment Centre (MTC)
  - c. If *field #67* is “Yes”, then *field #67.1 - #67.3* must be filled
  - d. If the patient can be referred to more than one MTC in *field #67.2*, the patient should be referred the facility of his/her preference and the preferred facility should be selected from the dropdown options
- d) Additional remarks can be added in *field #68* – Observations
- e) Click on save to save the known history page and go to next page

## 11. Entering Prescription Information for Hepatitis B Patients

### Steps for prescription page

#### 6.1

Prescription page: Field #69-75

#### Prescription page

Prescription page	Field use	Field type	Dependencies	Editable
 <p>The screenshot shows the 'National Viral Hepatitis Control Program' interface. Under 'Prescription details', fields 69-75 are visible: 69 (Prescribing facility), 70 (Prescribing doctor), 71 (Regimen Prescribed), 72 (Pills to be taken as), 73 (Drug dosages for Entecavir), 74 (Prescribing date), and 75 (Place of dispensation). Below these are 'Patient's status' and 'Patient Interruption Status' fields.</p>	<p><b>69</b> Record Prescribing facility</p> <p><b>70</b> Record Prescribing doctor</p> <p><b>71</b> Record Regimen</p> <p><b>72</b> Record mode of dispensation</p> <p><b>73</b> Record drug-wise strength</p> <p><b>74</b> Record Prescribing date</p> <p><b>75</b> Record Place of dispensation</p>	<p>Drop-down</p> <p>Drop-down</p> <p>Drop-down</p> <p>Drop-down</p> <p>Drop-down</p> <p>Date</p> <p>Drop-down</p>	<p>Auto-filled based on login</p> <p>None</p> <p>None</p> <p>None</p> <p>Based on regimen selection in (71)</p> <p>None</p> <p>Auto-filled based on login</p>	<p>No</p> <p>Yes</p> <p>Yes</p> <p>No</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>
<p><b>Important points to note for Prescription page:</b></p> <ul style="list-style-type: none"> <li>• "Place of dispensation" will be "Prescribing facility" by default</li> <li>• In case of "Referral" to other facility, "Place of dispensation" can be changed to referred facility (MTC), referring facility (TC) or both</li> </ul>				

- Record fields from #69 - #75 to capture prescription information of a patient
- Using field #73, capture strength of drugs based on selection in field #71
- Select "Place of dispensation" using field #75, which will be auto filled in case of Treatment Centre (TC)
  - In case of referral to MTC, Place of dispensation can be changed to MTC, TC or both
- Click on save to save the prescription page and go to next page

## 12. Entering Dispensation Information for Hepatitis B Patients

### 7.1

Dispensation Page: Field #76-95

#### 1<sup>st</sup> Dispensation Page (1/1)

1 <sup>st</sup> dispensation page	Field use	Field type	Dependencies	Editable																																													
	<table border="1"> <tr> <td>76</td> <td>Record treatment initiation</td> <td>Date</td> <td>None</td> <td>Yes</td> </tr> <tr> <td colspan="5" style="text-align: center;">Auto-filled from prescription page</td> </tr> <tr> <td>77</td> <td>Record Regimen</td> <td>Drop-down</td> <td>Auto-filled based on (71)</td> <td>No</td> </tr> <tr> <td>78</td> <td>Record Prescribing facility</td> <td>Drop-down</td> <td>Auto-filled based on login</td> <td>No</td> </tr> <tr> <td>79</td> <td>Record mode of dispensation</td> <td>Drop-down</td> <td>Auto-filled based on (72)</td> <td>No</td> </tr> <tr> <td>80</td> <td>Record Days of pills dispensed</td> <td>Drop-down</td> <td>None</td> <td>Yes</td> </tr> <tr> <td>81</td> <td>Record Pills to be dispensed</td> <td>Drop-down</td> <td>Auto-filled</td> <td>No</td> </tr> <tr> <td>82</td> <td>Record Advised next visit date</td> <td>Date</td> <td>None</td> <td>Yes</td> </tr> <tr> <td>83</td> <td>Record Comments</td> <td>Alphabet</td> <td>None</td> <td>Yes</td> </tr> </table>	76	Record treatment initiation	Date	None	Yes	Auto-filled from prescription page					77	Record Regimen	Drop-down	Auto-filled based on (71)	No	78	Record Prescribing facility	Drop-down	Auto-filled based on login	No	79	Record mode of dispensation	Drop-down	Auto-filled based on (72)	No	80	Record Days of pills dispensed	Drop-down	None	Yes	81	Record Pills to be dispensed	Drop-down	Auto-filled	No	82	Record Advised next visit date	Date	None	Yes	83	Record Comments	Alphabet	None	Yes			
76	Record treatment initiation	Date	None	Yes																																													
Auto-filled from prescription page																																																	
77	Record Regimen	Drop-down	Auto-filled based on (71)	No																																													
78	Record Prescribing facility	Drop-down	Auto-filled based on login	No																																													
79	Record mode of dispensation	Drop-down	Auto-filled based on (72)	No																																													
80	Record Days of pills dispensed	Drop-down	None	Yes																																													
81	Record Pills to be dispensed	Drop-down	Auto-filled	No																																													
82	Record Advised next visit date	Date	None	Yes																																													
83	Record Comments	Alphabet	None	Yes																																													

- a) Record *fields* from #76 - #82 to capture first dispensation for a patient
  - a. *Field #76* to be used to record the date of treatment initiation
  - b. *Field #81* to be used to record the number of pills dispensed; according to the guidelines pills can be dispensed for 30, 60 or 90 days
  - c. *Field #82* - advised next visit date, will be auto-calculated
- b) Click on save to save the first dispensation page and go to the next page

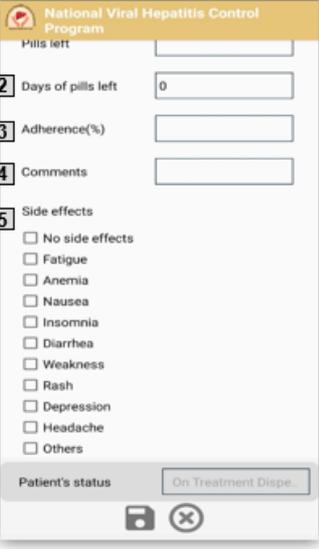
Steps for >1<sup>st</sup> Dispensation (e.g. 2nd Dispensation) page

7.2

>1<sup>st</sup> Dispensation Page (1/2)

n <sup>th</sup> dispensation page	Field use	Field type	Dependencies	Editable
 <p>84 Visit Date 24-04-2019</p> <p>85 Regimen Prescribed Entecavir</p> <p>86 Place of dispensation Select</p> <p>87 Pills to be taken as Tablet</p> <p>88 Days of pills dispensed Select</p> <p>89 Pills to be dispensed</p> <p>90 Advised next visit date</p> <p>91 Pills left</p> <p>Patient's status On Treatment Dispe.</p>	84 Record n <sup>th</sup> dispensation date	Date	None	Yes
	85 Record Regimen	Drop-down	Auto-filled	No
	86 Record Prescribing facility	Drop-down	Auto-filled based on login	No
	87 Record mode of dispensation	Drop-down	Auto-filled	No
	88 Record Days of pills dispensed	Drop-down	None	Yes
	89 Record Pills to be dispensed	Drop-down	Auto-filled	No
	90 Record Advised next visit date	Date	Auto-filled	Yes
	91 Record Pills left	Numeric	None	Yes

7.3

n <sup>th</sup> dispensation page	Field use	Field type	Dependencies	Editable
 <p>92 Days of pills left 0</p> <p>93 Adherence(%)</p> <p>94 Comments</p> <p>95 Side effects</p> <p><input type="checkbox"/> No side effects</p> <p><input type="checkbox"/> Fatigue</p> <p><input type="checkbox"/> Anemia</p> <p><input type="checkbox"/> Nausea</p> <p><input type="checkbox"/> Insomnia</p> <p><input type="checkbox"/> Diarrhea</p> <p><input type="checkbox"/> Weakness</p> <p><input type="checkbox"/> Rash</p> <p><input type="checkbox"/> Depression</p> <p><input type="checkbox"/> Headache</p> <p><input type="checkbox"/> Others</p> <p>Patient's status On Treatment Dispe.</p>	92 Record days of pills left	Numeric	Auto-filled	No
	93 Record adherence	Numeric	Auto-filled	No
	94 Record Comments	Alphabet	None	Yes
	95 Record side-effects	Check-list	None	Yes

>1<sup>st</sup> Dispensation Page (2/2)

- Record fields from #84 - #95 to capture n<sup>th</sup> dispensation for a patient
- There is no limit to record the number of dispensations. All the dispensations will keep on adding in a table
- Field #93 - adherence and #90 – advised next visit date, will be auto-calculated
- Click on save to save the dispensation page
- Further entries will be made as and when patient comes for dispensation, follow-up tests, and/or HBV DNA tests

## Non-cirrhotic patients

For non-cirrhotic patients HBV DNA test is suggested based on ALT levels. The persistently elevated ALT under the program is defined as at least 2 values four weeks apart in the last 6 months, which are above the upper limit of normal.

After that HBV DNA test, it can be decided whether the patient requires treatment.

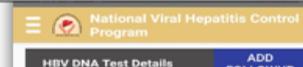
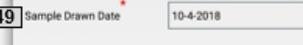
**For such patients, perform the steps in the screenshots 2.1 to 4.4 and follow it by the below HBV DNA page.**

## 13. Entering Virologic Load Information for Hepatitis B

### 8.1

### HBV DNA page (1/2): Sample collection details – fields #47-63

#### Viral Load Page (1/4)

Viral Load homepage		Field use	Field type	Dependencies	Editable
		47 Click "Add Follow up" button to enter follow up DNA test details			
		48 Record Hepatitis type for entering HBV DNA info	Check-box	None	Yes
		Click "Re-enter VL data ...." button to re-enter VL sample collection information if the previous sample was rejected			
		49 Record sample drawn date	Date	None	Yes
		50 Record sample storage	Toggle	None	Yes
		50.1 Record sample storage temp.	Numeric	Only if "Yes" in (50)	Yes
		50.2 Record sample storage	Toggle	Only if "Yes" in (50)	Yes
		50.3 Record sample storage duration	Numeric	Only if "Yes" in (50)	Yes
		<b>Important points to note for VL page:</b> <ul style="list-style-type: none"> <li>Recording time duration of sample storage in "50.3" will depend upon the input in "50.2 – Record sample storage"                             <ul style="list-style-type: none"> <li>If 50.2 is "less than 1 day", then "50.3" will reach as "Duration – in hours"</li> <li>If 50.2 is "more than 1 day", then "50.3" will reach as "Duration – in days"</li> </ul> </li> </ul>			

#### Steps for HBV DNA page

- a) Select viral hepatitis type to enter viral load details in *field #48*
- b) Enter sample collection information from *field #49 - #50* for the HBV DNA test selected
  - a. If *field #50*, "Is sample stored", is selected as "Yes", then fields from *#50.1 - #50.3* have to be filled

8.2

Viral Load Page (2/4)

Viral Load homepage		Field use	Field type	Dependencies	Editable
<b>51</b>	Is Sample Transported <input checked="" type="radio"/> Yes <input type="radio"/> No	Record sample transport	Toggle	None	Yes
<b>51.1</b>	Sample Transport Temperature(C)	Record sample transport temp.	Numeric	Only if "Yes" in (51)	Yes
<b>51.2</b>	Sample Transport Date	Record sample transport date	Date	Only if "Yes" in (51)	Yes
<b>51.3</b>	Sample Transported to Sample Transported By	Record facility where sample is transported	Drop-down	Only if "Yes" in (51)	Yes
<b>51.4</b>	Name	Record name of sample transporter	Alphabet	Only if "Yes" in (51)	Yes
<b>51.5</b>	Designation	Record desig. of sample transporter	Drop-down	Only if "Yes" in (51)	Yes
<b>52</b>	Remarks	Record remarks (if any)	Alphabet	None	Yes

c) If field #51, "Is sample transported", is selected as "Yes", then fields from #51.1 - #51.5 must be filled

a. Click on "save" to partially save the viral load page till sample collection information

8.3

Viral Load homepage		Field use	Field type	Dependencies	Editable
<b>53</b>	Sample Receipt Date	Record sample receipt date	Date	None	Yes
<b>54</b>	Name	Record name for sample receipt	Alphabet	None	Yes
<b>55</b>	Designation	Record desig. for sample receipt	Drop-down	None	Yes
<b>56</b>	Is sample accepted <input type="radio"/> Yes <input checked="" type="radio"/> No	Record sample acceptance	Toggle	None	Yes
<b>56.1</b>	Reason for Rejection*	Record reason for rejection	Drop-down	Only if "No" in (56)	Yes

**Important points to note for VL page:**

- If sample is not accepted in (56), only then will a reason for rejection be asked in (56.1)
- If sample is accepted, subsequent details will have to be entered as detailed on the next page

Viral Load Page (3/4)

d) Enter HBV DNA results information from field #53 - #61

- a. If field #56, "Is sample accepted", is selected as "No" then field #56.1 has to be filled
- b. Click on "save" to save the viral load page and go to the next page

e) If sample is rejected via field #56, then repeat sample collection may take place; in such a case, click on the blue button "Re-enter VL data" (refer to figure 8.1) to re-enter the details of new sample collection

f) Fill *field #63* from the guidelines suggested by a pop-up or otherwise medical officers may use their own discretion

g) Click save to move ahead

**8.4**

Viral Load homepage	Field use	Field type	Dependencies	Editable
	<p>57 Below details to be captured only if sample accepted is "Yes"</p> <p>58 Record HBV DNA test result date</p> <p>59 Record HBV DNA test result</p> <p>60 Record HBV DNA count</p> <p>61 Record HBV DNA count again</p> <p>62 Record Remark (if any)</p> <p>63 Record Treatment recommendation</p>	<p>Date</p> <p>Drop-down</p> <p>Numeric</p> <p>Numeric</p> <p>Alphabet</p> <p>Drop-down</p>	<p>Only if "Yes" in (57)</p> <p>None</p> <p>Only if "Yes" in (57)</p>	<p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p> <p>Yes</p>

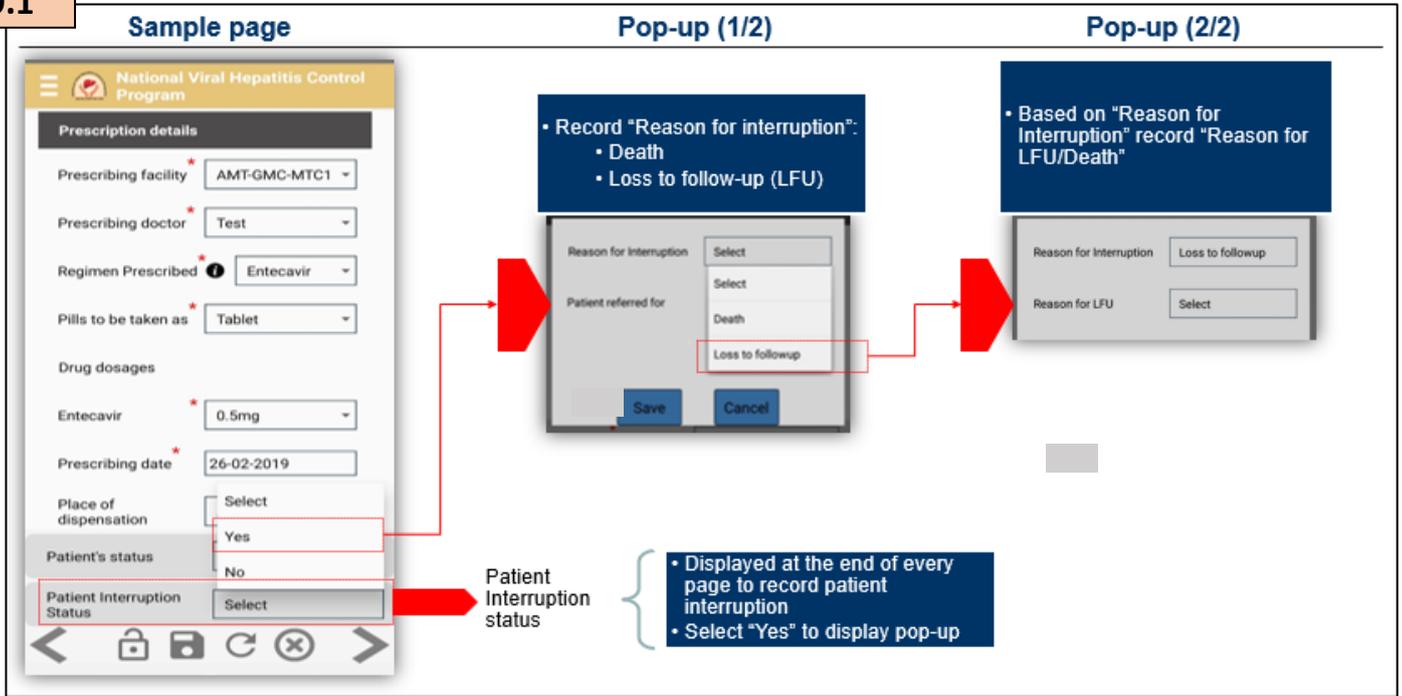
*Viral Load Page (4/4)*

***If treatment is recommended in field #63, repeat the steps in snapshot 5.1 to 7.3 above.***

## 14. Entering Information for an Interrupted Patient

A patient is categorized as “Interrupted” if the patient discontinues the course of Hepatitis diagnosis or treatment due to some reason. In order to capture the information of such patients, the following steps have to be taken:

**9.1**



Steps for reporting an interrupted patient:

- a) Interrupted patient has been defined as one who has discontinued the course of Hepatitis diagnosis or treatment due to some reason
- b) To record information of such patients, on every page there is an option to record the “Patient interrupted status” at the bottom of every page
- c) After selecting “Yes” to the above option, choose reason for interruption and patient referral (if applicable) and click on save

## 15. Patient transfer module

During his/her treatment, a patient may be needed to get transferred to another facility in the country for various reasons. The patient transfer module captures the details of a transfer which could be:

- a. **A transfer out:** where your facility transfers a patient to another outside facility
- b. **A transfer in:** where a patient is transferred to your facility from another outside facility

Please follow the below steps to **transfer out** a patient:

- a) On the registration page, click on the patient transfer icon against the patient you want to transfer out
- b) Fill the details of the facility you want the patient to transfer to, i.e. state, district, facility name, and reasons for transfer and save
- c) To check the status of your transfer out, click on 'Transfer-in/Transfer-out' and go to patient transfer-out requests

Please follow the below steps to **transfer-in** a patient:

- a) Whenever your facility gets a request to transfer-in a patient, a notification will show up on the 'Transfer-in/Transfer-out' module
- b) Click on 'Transfer-in/Transfer-out' and go to 'Transfer-ins' to take action on the patient requests

### 10.1

The diagram illustrates the patient transfer workflow through three sequential screenshots of the NVHCP mobile application:

- Homepage:** Shows the 'Add new Patient' button and search options. A table lists patients with columns for Patient UID, Name, and Status. A blue double-headed arrow icon is visible next to a patient entry. A callout box states: "Use patient transfer module on the homepage by clicking on this icon to transfer/refer any patient".
- Transfer details form:** A form titled "Transfer details" with fields for Patient's name, Test, State (dropdown), District (dropdown), Facility (dropdown), and Transfer Reason (dropdown). A callout box instructs: "Select state, district, facility, to which the patient is to be transferred, and transfer reason and Save".
- Main Menu:** Shows the application's main menu with options: Patient Registration, Test and Results, Treatment, and Transfer-In/Transfer-Out. The 'Transfer-In/Transfer-Out' option is highlighted with a callout box: "After saving your transfer, you can click on the 'Patient Transfer' module to check the status of patients transferred in/out from the facility".

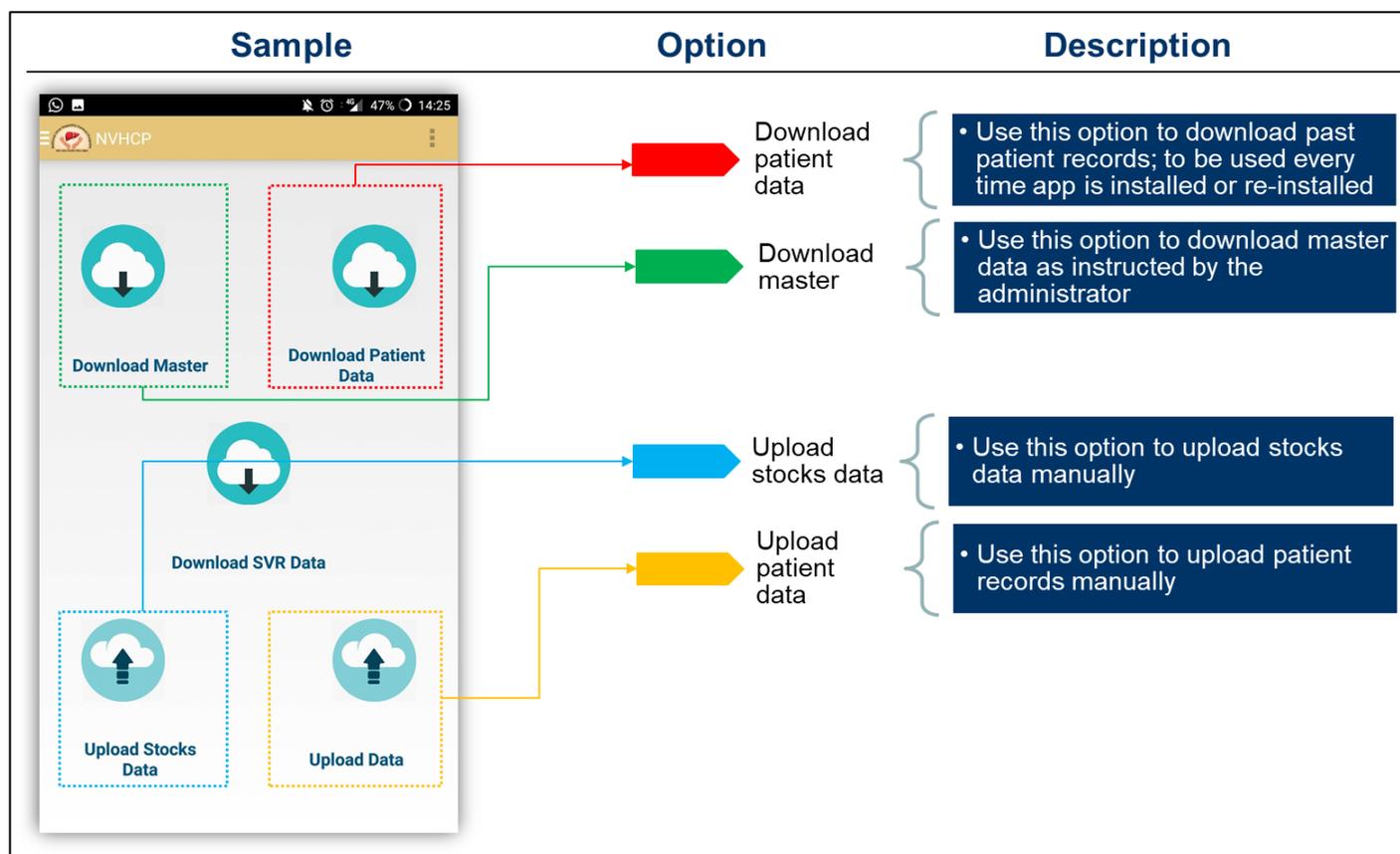


# 3.

How to download or upload data?

### Uploading and downloading data

Users can make data entries even without internet, however, in case of online / offline data entry, data must be manually uploaded from the “Sync Data” section on the home page, as shown in Section 1, Part 3 – “Home-page”.



### Rules for downloading and uploading data

- a) When using the application for the first time or when re-installing the application, always “Download patient data” to ensure that data recorded in the past or data recorded by other users from the same facility is synced to your device
- b) If multiple users from the same facility are using the app, then “Download patient data” option must be selected every-time the app is used by any user
- c) “Download master” option to be used if directed by the SVHMU or NVHCP; this option is used when updating the master information such as list of doctors, facilities, side effects, etc.
- d) “Upload data” option to be used to manually upload patient data, already entered in the app in the offline mode
  - a. Upon clicking “Upload data”, a pop-up will appear listing the number of patient records uploaded to the server



# Web Portal

## User Manual Guide



# 1.

How to access the web-system and login?

## 1. Accessing the System

The system can be accessed by the link: <http://nvhcp.gov.in/login>

MIS can be accessed using any standard web browser like Internet Explorer, Firefox, Chrome, etc.

The session time-out, i.e. the automatic logout due to inactivity is 15 minutes. This means that if the system is left idle for more than 15 minutes, it logs you out of the system, and you have re-login to continue working on the system.

## 2. First Page of the System/Log-in Page

The first page of the system can be accessed by the link given in the previous section.

The page opens and looks like the following.

Steps for logging in:

- a) Enter “Username” provided by the NVHCP (NVHMU/SVHMU) which will be unique to each user
- b) Enter “Password” provided by the NVHCP (NVHMU/SVHMU); password has be changed by the user on the first login (on the web only)

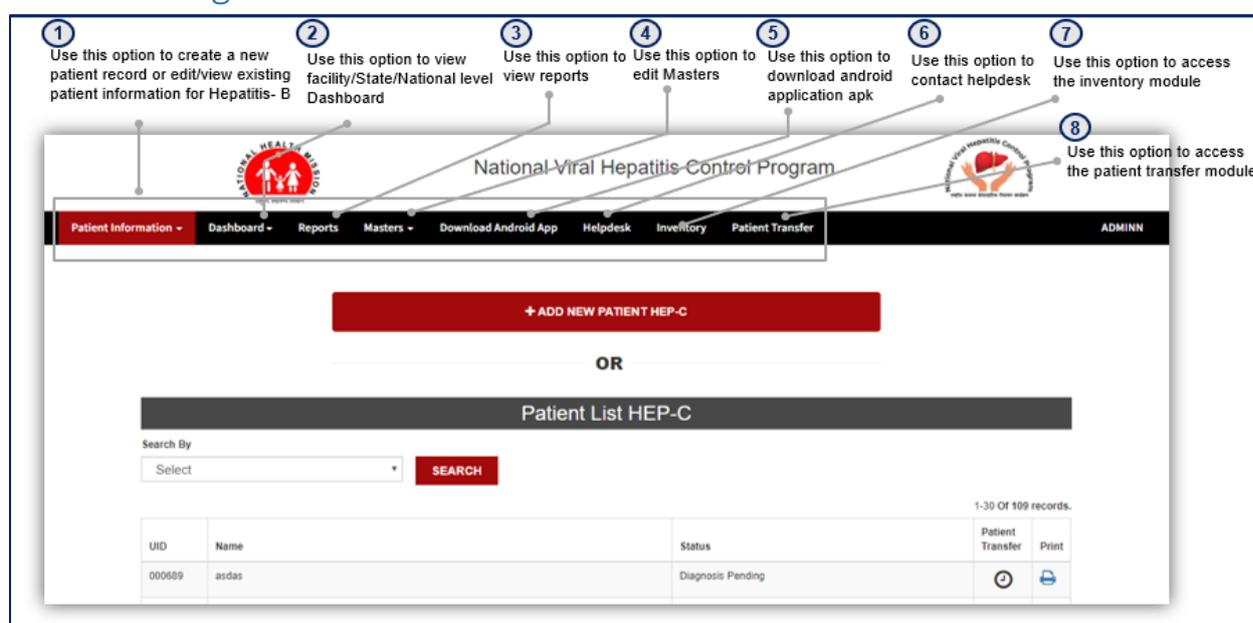
The screenshot shows the login interface for the Program Management System for NVHCP. At the top, there are three logos: the National Health Mission logo on the left, the Government of India emblem in the center, and the National Viral Hepatitis Control Program logo on the right. Below the logos, the text reads 'Ministry of Health & Family Welfare Government of India' and 'Program Management System for NVHCP'. The login form consists of the following elements:

- Username:** A text input field with a blue arrow pointing to it and the placeholder text 'Type your username'.
- Password:** A text input field with a blue arrow pointing to it, the placeholder text 'Type your password', and a small eye icon on the right to toggle visibility.
- Captcha:** A captcha image showing a grid of numbers and a refresh icon, with a blue arrow pointing to the input field and the text 'Type the captcha'.
- Terms and Conditions:** A checkbox with a blue arrow pointing to it and the text 'Click on the checkbox' and 'I accept the terms and conditions'.
- Login Button:** A black button with the text 'Login', with a blue arrow pointing to it and the text 'Click to enter'.

- c) Select checkbox – “I accept terms and condition”
  - i. To view terms and conditions (listed below), click on the hyperlinked text

- ii. Terms and conditions
  - a. I will make the entries myself
  - b. I will not intentionally enter incorrect data
  - c. I will ensure the data which I have access to is kept confidential at all times
  - d. I will not share the data I have access to with anyone in any format
  - e. I will complete my work on time and diligently
- d) Fill the numeric captcha
- e) Click on “Login” to enter the web portal

### 3. Home Page



After logging in, you will land on the Home Page below. The Home Page is also the ‘Patient Registration’ page.

There are 6 options on the top of the Home Page. Choose from one of the following options:-

- a) Patient Information - To register a new patient or add records of registered patients or view records of a registered patient
- b) Dashboard – To view and download data analysis
- c) Reports – To view and download monthly report, HBV vaccination report, LTFU report, etc.
- d) Masters – to manage users, enter names of doctors and sample transporter designations
- e) Download Android App – to download the android application
- f) Helpdesk – option to contact helpdesk
- g) Inventory – access to inventory management system
- h) Patient transfer – access to patient transfer module to transfer in/out a patient



# 2.

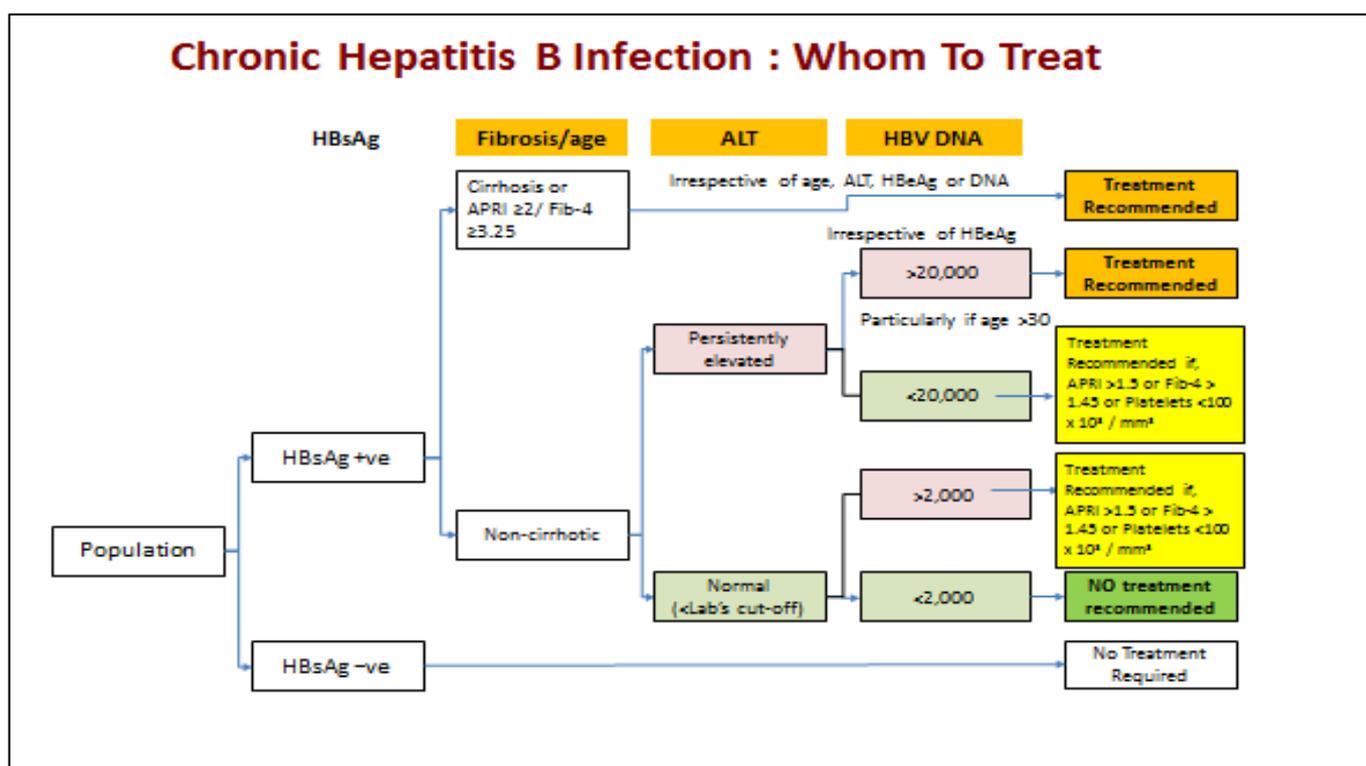
How to create a new patient record or view/add information to an existing patient record?

### 1. Index for navigating various screens of the web portal:

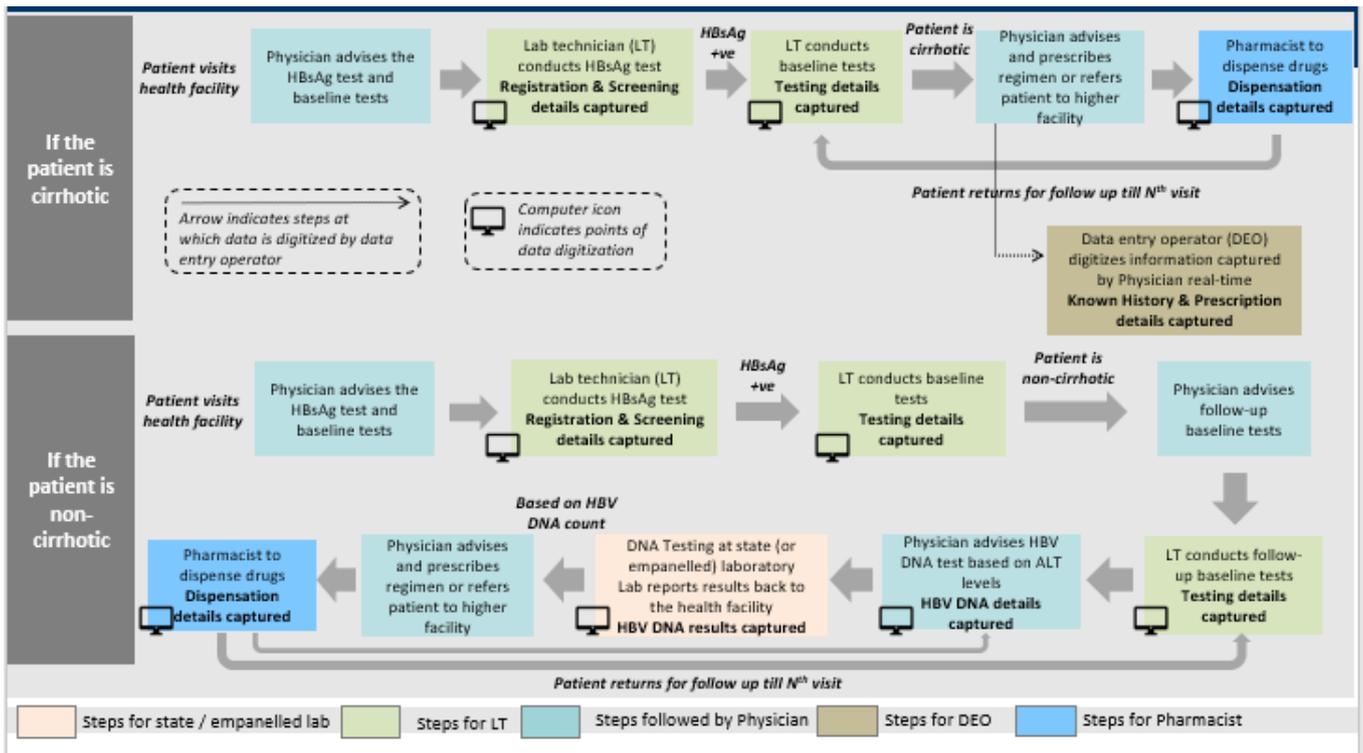
Sr No.	Screen	Screen name	Use	Page no.
	1	Registration homepage	Add new record or edit existing records.	50
After clicking on "Add new patient" on registration homepage				
Patient differentiation				53
<b>A</b>	2.1 – 2.3	Patient registration	Enter patient registration information such as name, address, gender, etc.	54 – 56
<b>B</b>	3.1	Screening	Enter screening information such as date of screening test, result, etc.	57
<b>C</b>	4.1 – 4.2	Baseline Tests	Enter baseline testing such as ALT, AST, etc. and cirrhosis status.	58 – 59
<b>D</b>	5.1 – 5.3	Known History	Enter known history information such as co-morbidities and referral information.	60 – 61
<b>E</b>	6.1	Prescription	Enter prescription information such as regimen, duration, prescribing doctor, etc.	62
<b>F</b>	7.1 – 7.2	Dispensation	Enter drug dispensation information such as date of dispensation, pills left, etc.	63 – 64
<b>G</b>	8.1 – 8.2	HBV DNA	Enter HBV DNA test details such as sample collection and transport, DNA count, etc.	65 – 66
<b>H</b>	9.1 – 9.2	Interrupted Patient	Recording interruption status and reasons	67 – 68
<b>I</b>	10.1 – 10.4	Patient Transfer	Transferring in/out patients from a facility	69 – 71
<b>J</b>	11.1 – 11.2	LTFU module	Contacting patients who missed treatment	72 – 73

### 2. Patient flow for understanding the above details:

The decision to identify the people who need treatment for HBV rely upon the presence of cirrhosis, fibrosis, levels of liver enzymes and platelet count. Please follow the below algorithm while registering patients for HBV treatment:



### 3. Information flow for entering the above details:

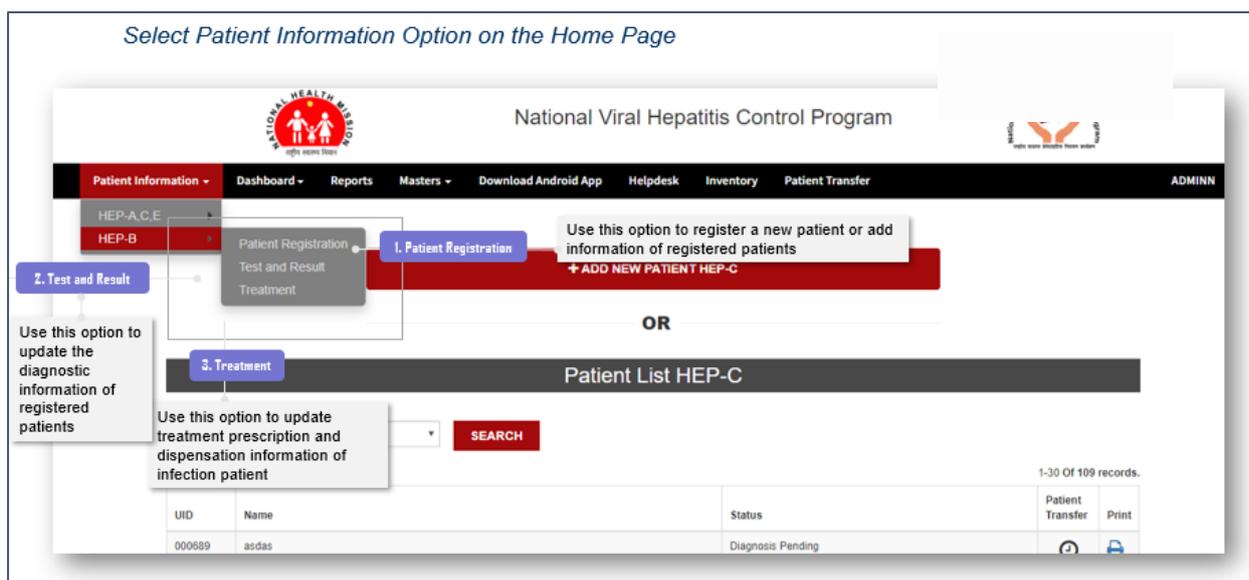


Above data flow may vary among facilities depending upon availability of HR and infrastructure

#### 4. Creating a new record or view/add information to an existing record

On the Home Page, select the *Patient Information* option and select Hep-B to register patients for Hep-B treatment and choose which stage is the patient at viz.

- a) *Patient Registration* – To register a new patient (this is also the home page, so no selection is required)
- b) *Test and Result* – To add information or view records of patients who have been registered
- c) *Treatment* – To add information or view records of patients who have undergone treatment



Once the appropriate selection has been made, follow the steps below to add new record or editing an existing record (see picture below):

- a) Click on “+ Add new patient” to initiate the data entry for a patient
- b) For editing existing records, following options can be used
  - a. If you know the NVHCP UID or phone number of a particular patient, then enter the same in the space provided below “Update/Search record by UID/contact number”
  - b. If you want to list down the records for a facility based on the patient status, then select the “Patient status” from the drop-down below “Update/Search patient record by Status”. (Patient Status’ have been explained below.)
- c) Shortlisted records will be displayed in the space below the grey tab “Patient List HEP-B”
- d) Once a record is displayed, click on the record to view or add new details

**1** Creating a new patient record

Remain on the Home page to add/register a new patient or view/edit the records of a newly registered patient  
 To edit or view records of other patients, choose the required option under 'Patient Information' to

Patient Status'

The following patient status' appear in the 'Search by Patient Status' option

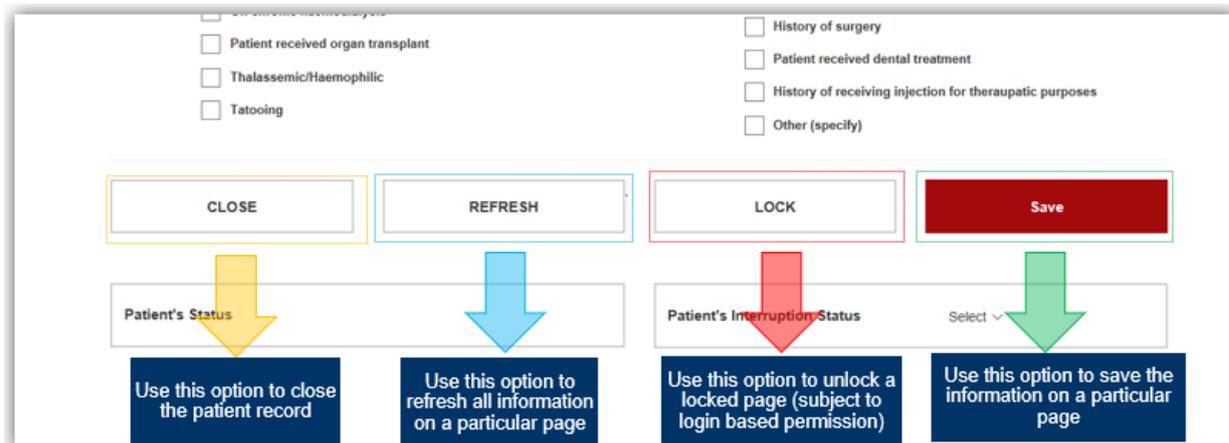
Sr. No	Patient status	Situation	Change at
<b>Patient Status' appearing in the Patient Registration Module</b>			
1	Diagnosis Pending	HBsAg test yet to be done	Screening page
2	Not infected	HBsAg test negative	Screening page
3	HBsAg Positive, Baseline Testing Pending	HBsAg test is positive, baseline testing pending	Testing page
4	Treatment Recommended, Prescription Pending	If testing shows cirrhotic nature or when the doctor recommends treatment on HBV DNA page	Known history page
5	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	1st dispensation page
<b>Patient Status' appearing in the Test and Result Module</b>			
1	Diagnosis Pending	HBsAg test yet to be done	Screening page
2	Not infected	HBsAg test negative	Screening page
3	HBsAg Positive, Baseline Testing Pending	HBsAg test is positive, baseline testing pending	Testing page
4	Treatment Recommended, Prescription Pending	If testing shows cirrhotic nature or when the doctor recommends treatment on HBV DNA page	Known history page
5	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	1st dispensation page

6	Patient on Follow-up Tests	If testing shows non-cirrhotic nature	Testing page
7	Persistently elevated ALT levels, HBV DNA pending	'Yes' to 'Persistently elevated ALT levels?' on testing page	HBV DNA page
8	Non-elevated ALT levels, HBV DNA pending	'No' to 'Persistently elevated ALT levels?' on testing page	HBV DNA page
9	Treatment not Recommended, Follow-up Tests Advised	Treatment not recommended on HBV DNA page	HBV DNA page
10	Indecisive ALT levels, follow-up tests advised	'Indecisive' to 'Persistently elevated ALT levels?' on testing page	Testing page
<b>Patient Status' appearing in the Treatment Module</b>			
1	Treatment Prescribed, Initiation Pending	Treatment prescribed, 1st dispensation pending	Prescription page
2	On Treatment Dispensation	Nth dispensation done, (N+1)th dispensation pending	(N+1)th dispensation page

## 5. Exploring Page Controls

Once a record has been opened, at the bottom of each patient record page, you will find the following four options. The meaning of these options is explained below:-

2. **Lock/Unlock** - Use this option to unlock a locked page (subject to login based permission)



- a. To edit previously entered details of a patient, users are only allowed to edit the last saved page and the pages before that are locked
- b. Details on a locked page can only be edited using the login credentials of the nodal officer of the facility who will have administrative rights

3. **Save** - Use this option to save the information on a particular page

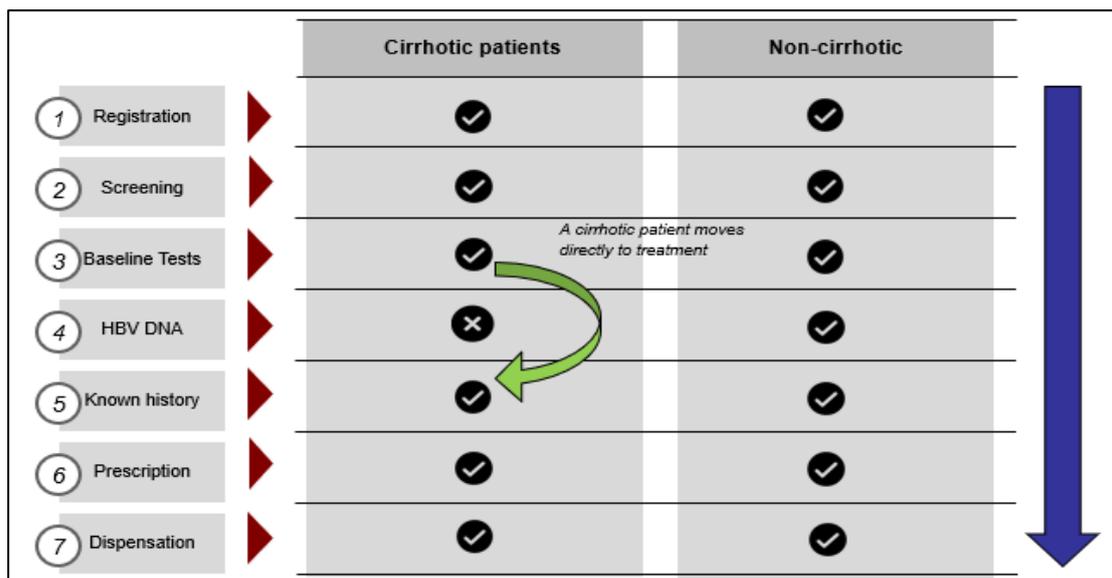
4. **Refresh** - Use this option to refresh all information on a particular page

5. **Close** - Use this option to close the patient record

## 6. Registering a new patient

The decision to identify the people who need treatment for HBV rely upon the presence of cirrhosis, fibrosis, levels of liver enzymes and platelet count. The below mentioned diagram showcases the difference in the patient flow between cirrhotic and non-cirrhotic patients.

### Difference in patient flow with respect to cirrhosis



## Cirrhotic patients

Patients who are identified as cirrhotic during the first baseline test are to be initiated on treatment irrespective of ALT levels and HBV DNA, which is not required during the first diagnosis.

To register such patients click on 'Add a new patient' on the Patient Registration page to land on the page described below and enter information in *fields #1 to #20*.

### 2.1

### Patient Registration Page (1/3): Fields #1-#20

The screenshot shows the 'Patient Registration Module (HEP-B)' form. At the top, there is a navigation bar with steps: 1. Registration (highlighted), 2. Screening, 3. Baseline Tests, 4. HBV DNA, 5. Known History, 6. Prescription, 7. Dispensation. A tooltip on the right indicates 'A patient record may have up to 7 modules'. The form fields are numbered 1 through 20:

- 1. OPD/IPD \*
- 2. NVHCP ID \*
- 3. 000275
- 4. Date of patient registration \* (dd-mm-yy)
- 5. Patient Type \* (New, Experienced)
- 6. Name \*
- 7. Age between 0 and 1 Year? (No)
- 8. Age (in years) \*
- 9. Gender \* (Select)
- 10. Select Relative \* (Father)
- 11. Relative's Name \*
- 12. Home & Street Address \*
- 13. State \* (Punjab)
- 14. District \* (Amritsar)
- 15. Block/Ward (Select Block)
- 16. Village/Town/City
- 17. Pincode \*
- 18. Contact Type (Mobile)
- 19. Mobile No. \*
- 20. Consent for Receiving Communication \* (Select Consent)

### Steps for Registration Page

- Enter OPD/IPD ID assigned by the hospital in *field #1*
- NVHCP ID in *field #2* is auto-generated and cannot be edited. NVHCP 6 digit Patient Serial Number, for e.g. 000453, in *field #3* will be auto-generated but can be edited
  - If it needs to be edited, type only non-zero beginning digits, for e.g., 453 and not 000453
- Enter Date of patient registration in *field #4*
- Select Patient Type 'New' or 'Experienced' in *field #5*
  - A patient is 'New' if he/she has never received treatment for Hepatitis B
  - A patient is 'Experienced' if he/she has received treatment for Hepatitis B in the past either within the NVHCP program or outside

- e) If the patient is 'Experienced', enter past treatment details in *fields #5.1 - #5.5* shown below, if available, else move to *field #6*

## 2.2

## Patient Registration Page (2/3): Registering an experienced patient in Field #5

The screenshot displays the 'Patient Registration Module' interface. At the top, there is a navigation bar with 'Patient Information', 'Dashboard', 'Reports', 'Masters', 'Download Android App', and 'Helpdesk'. Below this is a progress indicator with steps: 1. Registration (highlighted in red), 2. Screening, 3. Testing, 4. HBV DNA, 5. Known History, 6. Prescription, and 7. Dispensation. The main form area is titled 'Patient Registration Module' and contains several fields:

- OPD/IPD \* (empty)
- NVHCP ID \* (PB-AMT-GMC-01-20)
- Date of patient registration \* (dd-mm-yy)
- 5 Patient Type \* (Radio buttons for New and Experienced; Experienced is selected)
- 5.1 NVHCP (Radio buttons for NVHCP and Outside; NVHCP is selected)
- 5.2 State \* (Dropdown menu showing Punjab)
- 5.3 Facility \* (Dropdown menu showing Amritsar)
- 5.4 Treatment Year (Dropdown menu showing Select)
- 5.5 Past Treatment UID (Text input field)

At the bottom right, there is a red 'SYNC' button and a tooltip that reads: 'Click "sync" button to import patient data from past NVHCP UID to expedite data entry'.

- f) Enter the person's first and last name in *field #6* in the following format <First name> <space> <Last name>, for e.g., Roop Kumari, ensure that the name matches the name in a government ID
- g) If age of person is between 0 to 1 years, select 'yes' in *field #7*, else skip to *field #8*
- h) Enter age of person in *field #8*
- If person's age is between 0-1 years (i.e. less than 12 months), enter age in months in numbers, for e.g., 11
  - If person's age is greater than 1 year, enter age in years in numbers, for e.g., 25
- i) Select appropriate gender in *field #9*, by observation
- j) Enter a relative name in the following format <First name> <space> <Last name>, for e.g. Manoj Kumar, in *field #11* and select relation to the relative in *field #10*
- k) Enter complete address in *fields #12 - #17*
- In *field # 12*, enter home and street address in the following format  
<Home Name/Number, Street Name, Landmark, Area Name>  
  
For e.g., A-32 Sukhda, 11th Road, Near Patwardhan Park, Santacruz

- l) Select contact type, mobile or landline, in *field #18*
  - a. Enter the contact number in *field #19*; you can add more than one contact numbers by clicking on '+Add More' (up to 5 mobile numbers). The user should enter the name, relationship and mobile number for additional number
  - b. Contact number should only be 10 digits in length without preceding zeroes
- m) Record consent for communication in *field #20*
- n) Select risk factor in *field #21*, more than one risk factor can be selected

**2.3****Patient Registration Page (3/3): Adding risk factors in field #21**

State \*  
PUNJAB

District \*  
Amritsar

Block/Ward  
Select Block

Village/Town/City

Pincode \*

Contact Type  
Mobile

Mobile No. ⓘ

Consent for Receiving Communication \*  
Select Consent

**21** Risk Factors

- High risk sexual behaviour
- Occupational Exposure to Blood/Body Fluids
- Child born to HBV-positive mother
- On chronic haemodialysis
- Patient received organ transplant
- Thalassaemic/Haemophilic
- Tattooing
- History of IDUs (intravenous drug use)
- Needlestick injury
- Patient received blood transfusion
- History of surgery
- Patient received invasive dental treatment
- History of receiving injection for Therapeutic purposes
- Other (specify)

CLOSE REFRESH LOCK Save

Patient's Status -

Patient's Interruption Status Select

- o) Click on "Save" button to go the next page

## 7. Entering Viral Hepatitis Screening Information for registered patients

### 3.1

#### Screening Page (1/1): Selection of screening Test Type in field #22

The screenshot displays the 'Patient Screening Module' interface. At the top, there is a navigation bar with options: Patient Information, Dashboard, Reports, Masters, Download Android App, and Helpdesk. Below this is a progress indicator with steps: 1. Registration, 2. Screening (highlighted), 3. Testing, 4. HBV DNA, 5. Known History, 6. Prescription, and 7. Dispensation. The patient name is 'Fdgdfgdf (PB-AMT-GMC-01-20-000115)'. The main section is titled 'Patient Screening Module' and contains a 'TEST TYPES' section with a checked checkbox for 'HBsAg'. Underneath, there is a 'Screening Details - HBsAg Testing' section. It lists three test types: 'Rapid Diagnostic Test' (checked), 'ELISA Test', and 'Other Test'. Each test type has associated input fields for 'Collection Date', 'Date of result', 'Result', and 'Place Of Testing'. Field numbers 22, 23, 23.1, 23.2, 23.3, 23.4, 24, 25, and 25.1 are marked with red boxes to indicate their locations in the form.

#### Steps for Screening Page

- Field #22 can be selected for HBsAg test
- For each test conducted, select *at-least one* applicable test type – Rapid Diagnostic Test / ELISA Test / Others
- For each test type, say “Rapid Diagnostic Test” in field #23, enter information from field #23.1 - #23.4
  - If “Govt. Lab” is selected in field #23.4 – Lab name must be entered using drop-down options
- If “Other” test type (field #25) is selected, additional field to record “test name” (field #25.1) has to be filled
- Click on “Save” button to go to the next page

## 8. Entering Testing Information for Hepatitis B patients

### Steps for Testing page

#### 4.1 Testing Page (1/2): Fields #26-#38

The screenshot shows the 'Patient Testing Module' interface for patient 'Fdgdgdf' (PB-AMT-GMC-01-20-000115). The 'Testing' step is highlighted in the navigation bar. The 'BASELINE TEST DETAILS' section includes fields for:
 

- Date of Prescribing Tests (26) and Date of issue of last investigation report (27), both with 'dd-mm-yy' format.
- Haemoglobin (28), S. Albumin (29), and Serum Bilirubin Total (mg/dL) (30).
- ALT (31), AST (32), AST ULN (Upper Limit of Normal) (33), and Platelet Count (34).
- Weight (in Kgs) (35) and GFR (estimated glomerular filtration rate) (35.1).

 The 'Criteria for Evaluating Cirrhosis' section includes checkboxes for Ultrasound (36), Fibroscan (37), and APRI (38, checked). The APRI Score (38.1) is shown as a text input field. A red 'Add FollowUp Visit' button is present, with a callout box stating: 'Use this option record testing details when the patient comes for follow up visits'.

#### 4.2 Testing Page (2/2): Fields #39-#47

The screenshot shows the continuation of the 'Patient Testing Module' interface. The 'FIB 4 Score' (39) is checked, and the score (39.1) is 0.02. A note below states: 'Patient may be a non-complicated Hepatitis C patient/Non-cirrhotic'. The 'Complicated/Uncomplicated' section includes a dropdown menu (40) set to 'Complicated'. Other fields include:
 

- Variceal Bleed (41), Ascites (42), and Encephalopathy (43), all with 'Select' dropdown menus.
- PT INR (44) with a value of 0.00.
- Child Pugh Score (45) with a value of 'B'.
- Severity of Hep-B (46) with a 'Select' dropdown menu.
- Persistently elevated ALT levels? (47) with a value of 'Yes'.

 At the bottom, there are four buttons: 'CLOSE', 'REFRESH', 'LOCK', and 'SAVE'.

a) Enter Baseline tests details from field #26 - #35

- 
- a. *Field #35.1* will be auto calculated based on the details captured above such as age, weight, gender and S. Creatinine value
  - b. Select “Complicated Status” in *field #40*; If “Complicated” is selected, then severity of Hep-B has to be selected in *field #46* as either compensated or decompensated
- b) Enter criteria for evaluating Cirrhosis from *field #41 - #44*
- a. APRI and FIB-4 score in *field #38.1 and #39.1* will be auto-calculated using values inputted for AST, AST (ULN), ALT, age, platelet count
- c) If “Complicated” is selected in *field #40*, then *fields #41 - #44* can be filled
- a. *Fields #41-#44* are mandatory if decompensated cirrhosis is selected and non-mandatory if compensated cirrhosis is selected
- d) *Field #45* i.e. Child Pugh Score will be auto calculated
- e) *Field #47* must be filled if the ALT levels are or are not persistently elevated, i.e. ALT is above upper limit of normal at least twice 4 weeks apart – this field will be asked only if “Uncomplicated” in *#40*
- f) To add follow-up tests, click on the red bar on top right
- g) Click on ‘Save’ to save the testing page and go to the next page

***Fields #48 to #55 belong to HBV DNA page and have been shown separately in the non-cirrhotic section.***

## 9. Entering Known History Information for Hepatitis B Patients

### Steps for Known History page

#### 5.1 Known History (1/3): Field #56

The screenshot displays the 'Patient Known History Module' for a patient named 'Fdgdfgdf (PB-AMT-GMC-01-20-000115)'. At the top, a progress bar shows steps 1 through 7, with '5. Known History' highlighted in red. Below the patient name, the module title is shown. Field #56, 'Treatment Experienced', has radio buttons for 'Yes' and 'No'. A callout box points to the 'No' button with the text 'Use this option to view testing results dashboard'. Below field #56, there are two rows of conditional fields. The first row contains fields #56.1 (Treating Hospital/health facility), #56.2 (Previous Regimen), #56.3 (Previous Duration), and #56.4 (Previous Status). The second row contains fields #56.4.1 (No. Of Weeks Completed), #56.4.2 (Last Pill Taken On), and #56.4.3 (Past Treatment Outcome). Callout boxes explain that fields #56.1-#56.4 are only shown if 'Treatment Experienced' is 'Yes', and fields #56.4.1-#56.4.2 are only shown if 'Previous Status' is 'Interrupted'. Field #56.4.3 is only shown if 'Previous Status' is 'Completed'. A 'Previous Status' dropdown menu is shown with 'Interrupted' and 'Completed' options.

- a) Field #56, treatment experienced, will be auto-selected based on information capture on registration page
  - a. If field #56 is Yes, then fields #56.1 - #56.4 have to be filled
  - b. If field #56.4 is Interrupted, then fields #56.4.1 - #56.4.2 have to be filled

#### 5.2 Known History (2/3): Field #56-#58

The screenshot shows the continuation of the 'Patient Known History Module'. Field #56 is now set to 'Yes'. Field #57, 'Breast Feeding Woman', is a checkbox. Below it is a list of medical conditions with checkboxes: Bone disease due to chronic steroid use or use of other medications that worsen bone density, HIV (checked), Active Tuberculosis, Thalassemia, Patient on chemotherapy with deranged liver enzymes, Diabetes, History of alcohol consumption, Chronic obstructive pulmonary disease, Haemoglobinopathies, Anaemia <9, Renal impairment (checked), History of fragility fracture, Osteoporosis, HCV, Hepato-cellular Carcinoma, Pregnant, Hypertension, Poorly controlled cardiac failure, Previous ribavarin hypersensitivity, and Coronary artery disease. At the bottom, field #57.1 (HVIART Regimen) and field #57.2 (Renal/CKD Stage) are dropdown menus. Field #58 (Last Menstrual Period) is a date input field with the format 'dd-mm-yy'.

- c. If field #56.4 is Completed, then *field #56.4.3* has to be filled
- b) Select all known history in the check-list in *field #57*
  - a. If “HIV” is selected, then *field #57.1* - HIV/ART regimen have to be filled
  - b. If “Renal Impairment” is selected, then *field #57.2* – CKD stage have to be filled
  - c. If the patient is a female, options are available for recording pregnancy status and last menstrual period date

**5.3**

## Known History (3/3): Field #59-#60

- c) *Field #59* – “Referred” to be selected as “Yes” if patient has been referred to MTC
  - a. If *field #59* is “Yes”, then *field #59.1* - #59.3 has to be filled
  - b. If the patient can be referred to more than one MTC in *field #59.2*, the patient should be referred the facility of his/her preference and the preferred facility should be selected from the dropdown options
- d) Additional remarks can be added in *field #60* – Observations
- e) Click on ‘Save’ to save the known history page and go to next page

## 10. Entering Prescription Information for Hepatitis B Patients

### 6.1

#### Patient Prescription Page: Field #61-#66

The screenshot displays the 'Patient Prescription Module' interface. At the top, a navigation bar includes steps: 1. Registration, 2. Screening, 3. Testing, 4. HBV DNA, 5. Known History, 6. Prescription (highlighted in red), and 7. Dispensation. Below this, the patient name is shown as 'Patient Name - Fdgdgdf (PB-AMT-GMC-00-20-000115)'. The main form area contains several fields: '61 Prescribing Facility \*' (dropdown menu with 'AMT-GMC-MTC1'), '62 Prescribing Doctor \*' (dropdown menu with 'Select'), '63 Regimen prescribed \*' (dropdown menu with 'Tenofovir disoproxil fumarate (TDF)'), and '63.1 Pills to be taken as \*' (dropdown menu with 'Tablet'). A blue callout box points to the '63.1' field with the text 'Use this option to view recommended regimens'. Below these are '64 Drugs dosages (Tenofovir disoproxil fumarate (TDF)) \*' (dropdown menu with '300mg'), '65 Prescribing Date \*' (text input with 'dd-mm-yy' placeholder), and '66 Place Of Dispensation' (dropdown menu with 'AMT-GMC-MTC1'). At the bottom of the form are buttons for 'CLOSE', 'REFRESH', 'LOCK', and 'SAVE' (highlighted in red). The footer shows 'Patient's Status - Treatment Recommended, Prescription Pending' and 'Patient's Interruption Status' (dropdown menu with 'No').

### Steps for Prescription Page

- Record *fields* from #61 - #66 to capture prescription information of a patient
- Using *field #64*, capture strength of drugs based on selection in *field #63*
- Select "Place of dispensation" using *field #66*, which will be auto-filled in case of TC
  - In case of referral to MTC, Place of dispensation can be changed to MTC, TC or both
- Click on 'Save' to save the prescription page and go to next page

## 11. Entering Dispensation Information for Hepatitis B

### Steps for 1<sup>st</sup> dispensation page

7.1

Patient Dispensation Page: Field #67-#74 (1<sup>st</sup> Dispensation)

The screenshot displays the 'Patient Dispensation Module' interface. At the top, a navigation bar includes steps: 1. Registration, 2. Screening, 3. Testing, 4. HBV DNA, 5. Known History, 6. Prescription, and 7. Dispensation (highlighted in red). Below this, the patient name is shown as 'Fdgdfgdf (PB-AMT-GMC-00-20-000115)'. The main header reads 'Patient Dispensation Module' and 'Treatment Initiation Date -'. A table below the header shows columns for 'Dispensation Number', 'Visit Date', 'Pills Dispensed', 'Advised Next visit Date', and 'Action', with the message 'No Data Found'. An 'Add New Visit' button is present. The form contains several fields:
 

- 67** Dispensation number\*: Input field with value '1'.
- 68** Date Of Treatment Initiation\*: Date picker showing 'dd-mm-yy'.
- 69** Regimen prescribed: Dropdown menu with 'Tenofovir disoproxil fumarate (TDF)' selected.
- 70** Place Of Dispensation: Dropdown menu with 'AMT-GMC-MTC1' selected.
- 71** Days Of Pills Dispensed\*: Dropdown menu with '30' selected.
- 72** Pills to be taken as\*: Dropdown menu with 'Tablet' selected.
- 73** Pills To Be Dispensed\*: Input field with value '30'.
- 74** Advised Next Visit Date\*: Date picker showing 'dd-mm-yy'.

- Record fields from #67- #74 to capture first dispensation for a patient
- Field #68 to be used to record the date of treatment initiation
- Field #71 to be used to record the days of pills dispensed; according to the guidelines pills can be dispensed for 30, 60 or 90 days
- Field #74 Advised Next Visit Date will be auto-generated and does not need to be filled
- Click on save to save the first dispensation page and go to the next page

## 7.2

Patient Dispensation Page: Field #75-#87 (>1<sup>st</sup> Dispensation)

**Patient Dispensation Module** **Treatment Initiation Date - 09-01-2020**

Dispensation Number	Visit Date	Pills Dispensed	Advised Next visit Date	Action
1	09-01-2020	30	03-02-2020	

**75** Add New Visit

---

**76** Dispensation number\*  **77** Visit date\*

**78** Regimen prescribed  **79** Place Of Dispensation  **80** Days Of Pills Dispensed\*

**81** Pills to be taken as\*  **82** Pills To Be Dispensed\*

**83** Pills left\*  **84** Days of Pills Left  **85** Adherence(%)  **86** Advised Next Visit Date\*

**87** Presence of Side Effects

No side effects

Fatigue  Anemia  Nausea  Insomnia  Diarrhea  Weakness

Rash  Depression  Headache  Others

**Steps for >1<sup>st</sup> dispensation (i.e. 2<sup>nd</sup> dispensation onwards) page**

- a) Record fields from #76 - #87 to capture nth dispensation for a patient
- b) There's no limit to the number of dispensations that can be entered. All the dispensations will be recorded in a table at the top of this page
- c) Record *field #77* to capture date of the visit, *field #79* to capture the place of dispensation, *field #80* to capture the days of pills dispensed and *field #83* to capture pills left from previous visit
- d) *Field #85* - adherence and *#86* – advised next visit date, will be auto-calculated
- e) Click on save to save the dispensation page and go to the next page

## Non-cirrhotic patients

For **non-cirrhotic** patients HBV DNA test is suggested based on ALT levels. The persistently elevated ALT under the program is defined as at least 2 values four weeks apart in the last 6 months, which are above the upper limit of normal.

After that HBV DNA test, it can be decided whether the patient requires treatment.

For such patients, perform the steps in the screenshots **2.1 to 4.2** and follow it by the below HBV DNA page

## 12. Entering HBV DNA test Information for Hepatitis B patients

8.1

HBV DNA page (1/2): Sample collection details – fields #48-#51

The screenshot displays the 'Patient HBV DNA Module' interface. At the top, a navigation bar shows steps: 1. Registration, 2. Screening, 3. Testing, 4. HBV DNA (highlighted), 5. Known History, 6. Prescription, 7. Dispensation. Below this, the patient name is 'Fdgdfgdf (PB-AMT-GMC-01-20-000115)'. A red button 'Add FollowUp Visit' is visible. The main section is 'HEP-B HBV DNA TEST DETAILS' with a checked 'HEP-B' checkbox. A red callout box says 'Re-enter HBV DNA data HEP-B in case of sample rejection' with a blue callout explaining: 'Use this option re-enter VL sample collection information if the previous sample was rejected'. Another blue callout points to the 'Add FollowUp Visit' button: 'Use this option record testing details when the patient comes for follow up visits'. The 'HEP-B HBV DNA - Sample Collection' section contains the following fields:

- 48** Sample Drawn On Date\* (dd-mm-yy)
- 49** Is Sample Stored (Yes/No dropdown)
- 49.1** Temperature Sample Storage (°C) (Select Temperature dropdown)
- 49.2** Sample Storage Duration (Select dropdown)
- 49.3** Duration (in hours) (text input)
- 50** Is Sample Transported (Yes/No dropdown)
- 50.1** Sample Transport Temperature (°C) (Select Temperature dropdown)
- 50.2** Sample Transport Date (dd-mm-yy)
- 50.3** Sample Transported To (Select dropdown)
- 50.4** Sample Transported By : Name (text input)
- 50.5** Designation (Select dropdown)
- 51** Remarks (text area)

### Viral Load Sample Collection Section

- a) Enter sample collection information from *field #48 -#50*
  - a. If *field #49*, "Is sample stored", is selected as "Yes", then fields from *#49.1 - #49.3* have to be filled
  - b. If *field #50*, "Is sample transported", is selected as "Yes", then fields from *#50.1 - #50.5* have to be filled
- b) Enter any remarks in *field #51*

- c) Click on “Save” to *partially save* the viral load page till sample collection information is available

## 8.2

## HBV DNA page (2/2): Sample collection details –fields #52-#55

HEP-B Confirmatory HBV DNA Details - Result

52 Sample Receipt Date (52.1) Sample Received By : Name (52.2) Designation

53 Is Sample Accepted \* (53.1) Test Result Date \* (53.2) Result \* (53.3) HBV DNA \* (53.4) Re-enter HBV DNA \* } These fields are shown only if sample is accepted

54 Treatment recommended\*

55 Remarks

CLOSE REFRESH LOCK SAVE

53 Is Sample Accepted \* (53.5) Reason for Rejection

### Viral Load Sample Result Section

- a) Enter HBV DNA results information from *field #52 - #53.4*
  - a. If *field #53*, “Is sample accepted”, is selected as “Yes” then *fields #53.1 - #53.4* have to be filled
  - b. If *field #53*, “Is sample accepted”, is selected as “No” then *field #53.5* has to be filled
- b) If sample is rejected via *field #53*, then repeat sample collection may take place; in such a case, click on the red button “Re-enter VL data” to re-enter the details of new sample collection
- c) Fill *field #54* from the guidelines suggested by a pop-up or otherwise medical officers may use their own discretion
- d) To add follow-up HBV DNA test, click on the red bar at top right in **figure 8.1**
- e) Enter any remarks in *field #55*, for e.g., Viral Load value is below 1000 but has been detected
- f) Click on “Save” to save the viral load page and go to the next page

*If treatment is recommended in field #54, the module will repeat from screenshots 5.1 to 7.2 above.*

### 13. Entering Information for an Interrupted Patient

A patient is categorized as “Interrupted” if the patient discontinues the course of Hepatitis diagnosis or treatment due to some reason. In order to capture the information of such patients, the following steps have to be taken.

**Steps for reporting an interrupted patient:**

- a) Interrupted patient has been defined as one who has discontinued the course of Hepatitis diagnosis or treatment due to some reason

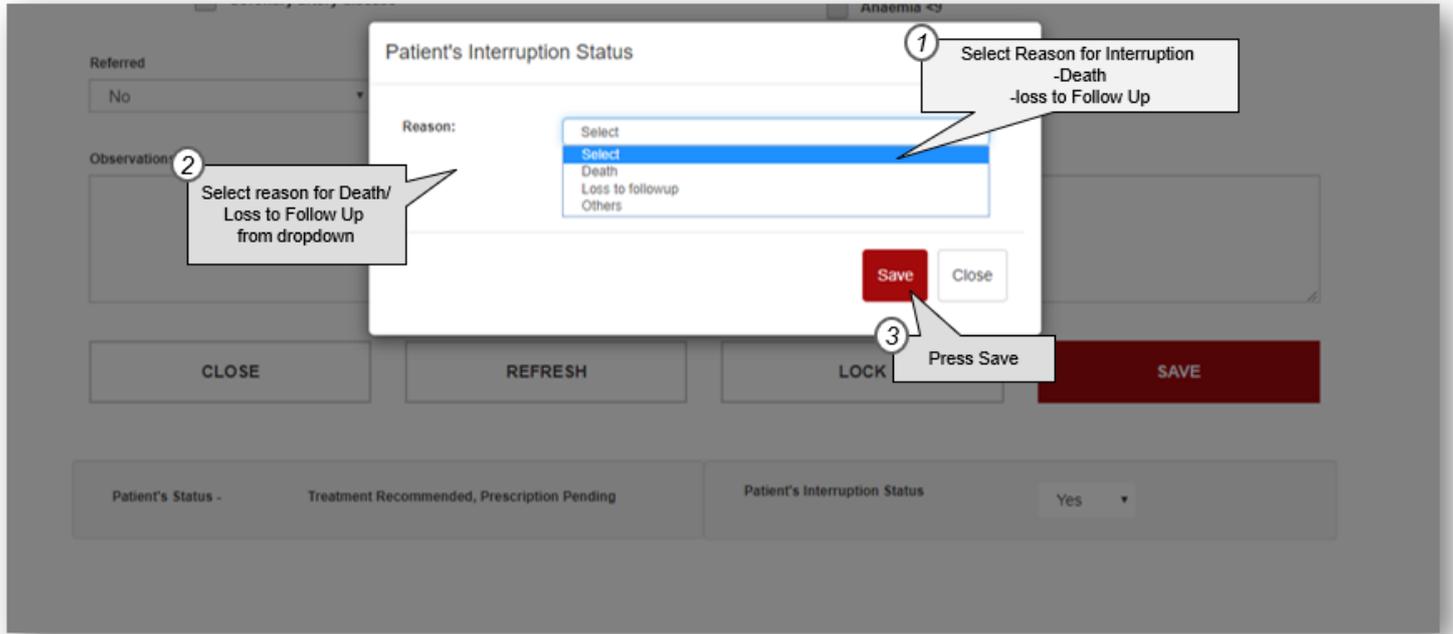
**9.1** Interrupted Patient (1/2): Recording Interruption Status

The screenshot shows a web-based form for recording patient information. At the top left, there is a yellow highlighted field for 'Adherence(%)' with the value '100.00'. Below it is the 'Advised SVR Date' field with the value '22-02-2019'. To the right is the 'Doctor' dropdown menu showing 'Dr. Amandeep'. Further right are 'Side Effects' checkboxes for Headache, Fatigue, Anemia, Nausea, Insomnia, Diarrhea, Weakness, Rash, Depression, Others, and No side effects (which is checked). A large red 'SAVE' button is on the right side. At the bottom, there is a 'Patient's Interruption Status' dropdown menu with options 'Select', 'Yes', and 'No'.

- b) To record information of such patients, on every page there is an option to record the “Patient interrupted status” at the bottom of every page
- c) After selecting “Yes” to the above option, choose reason for interruption and patient referral (if applicable) and click on save (see picture below)

9.2

Interrupted Patient (2/2): Recording Reasons for Interruption



## 14. Patient transfer module

During his/her treatment, a patient may be needed to get transferred to another facility in the country for various reasons. The patient transfer module captures the details of a transfer which could be:

- a. **A transfer out:** where your facility transfers a patient to another outside facility
- b. **A transfer in:** where a patient is transferred to your facility from another outside facility

Please follow the below steps to **transfer out** a patient:

- d) On the registration page, click on the patient transfer icon against the patient you want to transfer out
- e) Fill the details of the facility you want the patient to transfer to, i.e. state, district, facility name, and reasons for transfer and save
- f) To check the status of your transfer out, click on 'Patient Transfer' and go to patient transfer-out requests

### 10.1

#### Patient transfer (1/4): Transferring out a patient

The screenshot shows the NVHCP MIS homepage. At the top, there are logos for the National Health Mission and the National Viral Hepatitis Control Program. Below the logos is a navigation bar with the following items: Patient Information, Dashboard, Reports, Masters, Download Android App, Helpdesk, Inventory, and Patient Transfer. A large red button in the center says '+ ADD NEW PATIENT HEP-C'. Below this is a section titled 'Patient List HEP-C' which includes a search bar and a 'SEARCH' button. A table displays patient records with the following columns: UID, Name, Status, Patient Transfer, and Print. The table contains three rows of data. A tooltip points to the 'Patient Transfer' icon in the table, stating: 'Use patient transfer module on the homepage by clicking on this icon to transfer/refer any patient'.

UID	Name	Status	Patient Transfer	Print
000689	asdas	Diagnosis Pending		
000300	asdasd	Diagnosis Pending		
000301	wqee	Diagnosis Pending		

Please follow the below steps to **transfer-in** a patient:

- c) Whenever your facility gets a request to transfer-in a patient, a notification will show up on the 'Patient Transfer' module
- d) Click on 'Patient Transfer' and go to 'Patient transfer-in requests' to take action on the patient requests

**10.2** Patient transfer (2/4): Transferring out a patient

**National Viral Hepatitis Control Program**

Patient Information | Dashboard | Reports | Masters | Download Android App | Helpdesk | Inventory | Patient Transfer

**Patient Transfer out Module**

Patient Name - Asdasd | NVHCP ID - PB-AMT-GMC-01-20-000300

State: All States  
 District: Select District  
 Facility: All Facilities  
 Reason for transfer: Select Reason

Save

1 Select State where the patient is transferred to  
 2 Select District where the patient is transferred to  
 3 Select the facility in the district  
 4 Select Reason for transfer from dropdown and click 'Save'

**10.3** Patient transfer (3/4): Checking status

**National Viral Hepatitis Control Program**

Patient Information | Dashboard | Reports | Masters | Download Android App | Helpdesk | Inventory | Patient Transfer

+ ADD NEW PATIENT HEP-C

OR

**Patient List HEP-C**

Search By: Select [SEARCH]

1-30 Of 109 records.

UID	Name	Status	Patient Transfer	Print
000689	asdas	Diagnosis Pending	🔄	🖨️
000300	asdasd	Diagnosis Pending	🔄	🖨️
000301	wqeqe	Diagnosis Pending	🔄	🖨️

After saving your transfer, you can click on the 'Patient Transfer' module to check the status of patients transferred in/out from the facility

10.4

Patient transfer (4/4): Transferring in a patient to your facility

The screenshot shows the 'National Viral Hepatitis Control Program' interface. The top navigation bar includes 'Patient Information', 'Dashboard', 'Reports', 'Masters', 'Download Android App', 'Helpdesk', 'Inventory', and 'Patient Transfer'. The 'Patient Transfer' menu is active, showing two options: 'Patient transfer-in requests' (highlighted) and 'Patient transfer-out requests'. Below this is a search section with a dropdown menu set to 'Select' and a 'SEARCH' button. A table with columns for UID, Name, State, District, Facility, Date(DD-MM-YY), Status HCV, Status HBV, and Action is displayed. The table is currently empty, with a message stating 'No patients have been transferred to this facility.' and 'Showing 0 results'. Callouts provide instructions: 'To transfer-in a patient, go to 'Patient transfer-in requests' to take an action on the patient asked to transfer to your facility' and 'The patient details will show up in this table'.

## 15. Loss to follow-up (LTFU) module

The LTFU module can be used to follow up with the patients who did not show up for next dispensation 7 days after the advised visit date. The module reminds you to contact the patients and save any remarks which may further assist in patient management.

Please follow the below steps for the LTFU module:

- To view the LTFU patients list, click on the LTFU module at the top bar
- Select the disease area (Hep-B or Hep-C) for which you want to view the patients
- You can also search the patients by name, UID, contact number, etc.
- Once you contact the patient for LTFU, click on “Yes” and add remarks, if any, and save
- If for some reason, the contact wasn't established with the patient, click on “No” and add remarks and save

### 11.1

#### LTFU module (1/2): Checking the LTFU list

The screenshot displays the NVHCP web application interface. At the top, there are logos for the National Health Mission and the National Viral Hepatitis Control Program. The main navigation bar includes: Patient Information, Dashboard, Reports, Masters, Download Android App, Helpdesk, Inventory, LTFU, Patient Transfer, and ADMIN. The LTFU module is highlighted with a callout box that says: "Click on the 'LTFU' module to follow-up with the patients who missed a dispensation during treatment". Below the navigation bar, there is a red button labeled "+ ADD NEW PATIENT HEP-C" and a dark grey button labeled "Patient List HEP-C". A search section is visible with a "Search By" dropdown menu (set to "Select") and a red "SEARCH" button. At the bottom right, it indicates "1-30 Of 109 records." Below this is a table with columns for UID, Name, Status, Patient Transfer, and Print.

UID	Name	Status	Patient Transfer	Print
-----	------	--------	------------------	-------

**11.2** LTFU module (2/2): Taking an action



### National Viral Hepatitis Control Program



Patient Information - Dashboard - Reports Masters - Download Android App Helpdesk Inventory **LTFU** Patient Transfer
ADMINN

LTFU Patient List HEP-C
LTFU Patient List HEP-B

You can search the patients by name, contact number, UID, or contact status

#### LTFU Patient List HEP-C

Select the disease for which you want to see LTFU patients

Search By

Select

Select

**UID/Contact No.**

Contacted

Name

SEARCH

		District of the patient	Last Visit Date	Next Visit Date	Last Status	Contacted?	Contact date	Remarks	Action	
PB-AMT-GMC-01-20-000268		Asdasd	AMRITSAR	01-01-2020	26-01-2020	On Treatment 1/3	<input checked="" type="radio"/> Yes <input type="radio"/> No	15-06-2020	Fsdasf	
PB-AMT-GMC-01-20-000269		Toat	AMRITSAR	01-01-2020	22-03-2020	On Treatment 3/6	<input checked="" type="radio"/> Yes <input type="radio"/> No	12-06-2020	Switched-off	

1-8 Of 8 records.



# Troubleshooting

## Application and Web Portal



## Instructions for App and Web:

a) Patient Registration should always be done only on one platform i.e. either on the MIS web portal or on the MIS Android application. Since the Android application can work in the offline mode, allowing Patient Registration on multiple platforms runs the risk of creating multiple patient records with the same UID.

b) Facilities should identify a dedicated hardware for the Patient Registration module, either a desktop (*for MIS web portal*) or tablet/mobile (*for MIS Android App*) that will be used at all times for registering a new patient

## Instructions for App:

- a) Do not update tablet or mobile android version unless informed by SVHMU
- b) Ensure the application version, while logging in, is correct
- c) While entering from two sources/devices, make sure that data is uploaded post data-entry on one device and data is downloaded before making any new entries on another device
- d) Tablet or mobile must have free space of at-least 1 GB
  - a. Keep deleting cached data periodically to ensure availability of free space
- e) While uploading or downloading data on NVHCP app, don't open any other app during this process and retry if interrupted due to any reason

## Frequently asked questions for App:

### **Q1 - Data uploaded but showing more entries than entered in the tablet or mobile.**

A1 - Several fields such as advised visit dates, End of Treatment date, etc. are auto-calculated and, hence, the #records uploaded may be more than the #records manually entered by the user.

### **Q2 - Data not getting uploaded and showing error.**

A2 - Check your internet connection; if the problem persists, then re-start the tablet.

### **Q3 - Getting error related to Application permission.**

A3 - Go to app permissions and allow all Permissions for the app.

### **Q4 - Not able to download data.**

A4 - Check your internet connection; in case problem persists, then restart tablet. If problem persists after re-starting tablet, then reinstall the application.

### **Q5 - App crashing or working slow.**

A5 - Clear cached data from phone storage; If problem persists, restart the tablet and reinstall the application

## Frequently asked questions for App and Web:

### **Q1 - How to edit previously filled data in a patient record?**

A1 - All users can edit information of the last saved page. For pages before that, data can only be edited by the nodal officer of treatment facility (NOTR) via unlocking the page. Rights to unlock previous pages can only be accessed through the login details of the nodal officer of treatment facility (NOTR).

### **Q2 – Not able to login – forgot password or username.**

A2 – In such a situation, the user should contact the nodal officer for retrieving the login details and changing password

### **Q3 – Internet got disconnected during data entry, what should I do?**

A3 – If using the app, you can continue making data entry and sync data online when internet is available. If using the web, unsaved data will have to be re-entered.



# Case Studies



# Case Study 1

*(You may assume information that is not provided)*

Person named Ram Kumar who is 26-year-old man (weighing 65 kgs) visits your model treatment centre (MTC) on 15 February 2018 with an OPD Registration Number as 1923562. *For the purpose of the case study, please assume the address of your facility as the address of the patient. (Kindly note that it is always recommended to use the national ID of the patient for filling in the patient address.)*

After initial discussions, he has confirmed history of IV drug use from age 17 to 23. He is now complaining of fatigue, affecting his work as a painter. Otherwise he is doing well, is not on any regular medications.

He was screened using **ELISA test (HBsAg) on 15 February 2018** and found to be **positive**. He was advised to get his baseline test done at the State Lab on **16 February 2018**. He reached the state lab on 16 February 2018 and the Lab Technician drew his sample on the same day.

On 18 February 2018, he visited the MTC to collect his results which were as follows:

Test	Result
AST	49
AST (Normal)	40
ALT	39
Albumin	4
Bilirubin	1
INR	1
Baseline Haemoglobin	12
S. Creatinine	0.8
Platelet Count	50000

The patient came back on 20 February 2018 and met the Treating Physician.

*Q1. Is the patient complicated/non-complicated?*

*Q2. What should be next step after the first baseline test?*

*Q3. Should the patient be treated? If yes, what is the duration of prescription for the patient?*

*Q4. How often is he recommended to come up for follow-up baseline and HBV DNA tests?*

Hint: Fibroscan test date was done on 22 March 2018 and Encephalopathy was "Severe"; Ascites was 'Severe' and Variceal Bleed was 'Yes'

Make a schedule for first **4 dispensations** (assuming 100% adherence), **2 follow-up tests and 2 HBV DNA tests** for this patient.

## Case Study 2

*(You may assume information that is not provided)*

Person named Kishen Kumar who is 40 year-old man (who is 70 kgs in weight) visits your treatment centre (TC) on 30 January 2018 with an OPD Registration Number as 1028759. *For the purpose of the case study, please assume the address of your facility as the address of the patient. (Kindly note that it is always recommended to use the national ID of the patient for filling in the patient address.)*

After initial discussions, he has confirmed of getting injections from local medical practitioner (unauthorised) 7 months ago and has experienced syringe use when he was 20 years old. He is having abdomen pain and is not on any other regular medications.

He was screened using **Rapid diagnostic test (HBsAg)** on 30 January 2018 and found to be **positive**. He was advised to get his baseline test done at the State Lab on 30 January 2018. He reached the state lab on 2 February 2018 and the Lab Technician drew his sample on the same day.

The results came on the 9 February 2018 as follows:

Test	Result
AST	45
AST (Normal)	40
ALT	42
Albumin	4
Bilirubin	1
INR	1
Baseline Haemoglobin	13
S. Creatinine	1
Platelet Count	193000

Q1. *Is the patient complicated/non-complicated?*

Q2. *What should be next step after the first baseline test?*

The patient was advised for follow-up tests for which his sample was drawn on 1<sup>st</sup> April, 2018 and the results came on 3<sup>rd</sup> April, 2018 as follows:

Test	Result
AST	45
AST (Normal)	40
ALT	42
Albumin	3
Bilirubin	1
INR	1
Baseline Haemoglobin	12
S. Creatinine	0.9
Platelet Count	160000

*Q3. What is the next step to be taken after the above results?*

He was advised to get his **HBV DNA** test done at the State Lab on **5<sup>th</sup> April 2018**. He reached the state lab and the Lab Technician drew his sample on the same day. Since, the facility had the DNA platform the sample was not stored and no transportation was required.

The DNA result came on 8<sup>th</sup> April 2018 and the result mentioned 'Detected' with DNA count of 21,000.

*Q4. Is the treatment recommended? If yes, what is the regimen prescribed?*

*Q5. If treatment is recommended, what is the duration of prescription?*

Make a schedule for first **4 dispensations** (*assuming 100% adherence*), **2 follow-up tests and 2 HBV DNA** tests for this patient.

## Case Study 3

*(You may assume information that is not provided)*

Person named Mohan who is 29 year-old man (weighing 67 kgs) visits your treatment centre (TC) on 15 March, 2018 with an OPD Registration Number as 1023562. *For the purpose of the case study, please assume the address of your facility as the address of the patient. (Kindly note that it is always recommended to use the national ID of the patient for filling in the patient address.)*

After initial discussions, he has confirmed history of IV drug use. He is now complaining of fatigue, affecting his work as a driver.

He was screened using **ELISA test (HBsAg) on 15 March 2018** and found to be **positive**. He was advised to get his baseline test done at the State Lab on **16 March 2018**. He reached the state lab on 16 March 2018 and the Lab Technician drew his sample on the same day.

On 17 March 2018, he visited the TC and collected the results as follows:

Test	Result
AST	39
AST (Normal)	40
ALT	38
Albumin	4
Bilirubin	1
INR	1
Baseline Haemoglobin	12
Platelet Count	150000
Creatinine	0.8

Q1. *Is the patient complicated/non-complicated?*

Q2. *What should be next step after the first baseline test?*

The patient was advised for follow-up tests for which his sample was drawn on 30<sup>th</sup> April, 2018 and the results came on 1<sup>st</sup> May, 2018 as follows:

Test	Result
AST	36
AST (Normal)	40
ALT	35
Albumin	3
Bilirubin	1
INR	1
Baseline Haemoglobin	12
S. Creatinine	0.9
Platelet Count	160000

Q3. *What is the next step to be taken after the above results?*

He was advised to get his **HBV DNA** test done at the State Lab on **5<sup>th</sup> May 2018**. He reached the state lab and the Lab Technician drew his sample on the same day. Since, the facility had the DNA platform the sample was not stored and no transportation was required.

The DNA result came on 8<sup>th</sup> May 2018 and the result mentioned '*Detected*' with DNA count of 1,000.

*Q4. Is the treatment recommended? If yes, what is the regimen prescribed?*

Make a schedule for **2 follow-up tests and 2 HBV DNA** tests for this patient.

## Case Study 4

*(You may assume information that is not provided)*

Person named Krishna Kumari who is 40 year-old woman (who is 52 kgs in weight) visits your treatment centre (TC) on 28 February 2018 with an OPD Registration Number as 1024759. *For the purpose of the case study, please assume the address of your facility as the address of the patient. (Kindly note that it is always recommended to use the national ID of the patient for filling in the patient address.)*

After initial discussions, she has confirmed of dental treatment from unauthorised dentist 9 months ago. She is having abdomen pain and not pregnant.

She was screened using **ELISA test (HBsAg) on 15 March 2018** and found to be **positive**. She was advised to get his baseline test done at the State Lab on **16 March 2018**. She reached the state lab on 16 March 2018 and the Lab Technician drew her sample on the same day. The results came on 18 March 2018:

Test	Result
AST	42
AST (Normal)	40
ALT	45
Albumin	2
Bilirubin	1.2
INR	1
Baseline Haemoglobin	12
Platelet Count	130000
Creatinine	1

Q1. *Is the patient complicated/non-complicated?*

Q2. *What should be next step after the first baseline test?*

The patient was advised for follow-up tests for which his sample was drawn on 30<sup>th</sup> April, 2018 and the results came on 1<sup>st</sup> May, 2018 as follows:

Test	Result
AST	50
AST (Normal)	40
ALT	65
Albumin	2
Bilirubin	1
INR	1
Baseline Haemoglobin	12
S. Creatinine	0.9
Platelet Count	50000

Hint: Fibroscan test date was done on 30<sup>th</sup> April 2018 and Encephalopathy was “None”; Ascites was ‘Mild to Moderate’ and Variceal Bleed was ‘Yes’

*Q3. What is the next step to be taken after the above results?*

He was advised to get his **HBV DNA** test done at the State Lab on **5<sup>th</sup> May 2018**. He reached the state lab and the Lab Technician drew his sample on the same day. Since, the facility had the DNA platform the sample was not stored and no transportation was required.

The DNA result came on 8<sup>th</sup> May 2018 and the result mentioned 'Detected' with DNA count of 6,000.

*Q4. Is the treatment recommended? If yes, what is the regimen prescribed?*

*Q5. If treatment is recommended, what is the duration of prescription?*

Make a schedule for first **4 dispensations** (*assuming 100% adherence*), **2 follow-up tests and 2 HBV DNA** tests for this patient.

## Case Study 5

*(You may assume information that is not provided)*

Person named Hema Kumari who is 50-year-old woman (who is 62 kgs in weight) visits your treatment centre (TC) on 28 February 2018 with an OPD Registration Number as 1024849. *For the purpose of the case study, please assume the address of your facility as the address of the patient. (Kindly note that it is always recommended to use the national ID of the patient for filling in the patient address.)*

She was screened using **Rapid diagnostic test (both Anti-HCV and HBsAg)** on 28 February 2018 and found to be **positive in both**. She was advised to get his **confirmatory Viral Load (VL)** test done at the State Lab on 28 February 2018. She reached the state lab on 2 March 2018 and the Lab Technician drew her sample on the same day. Since, the facility had the VL platform the sample was not stored and no transportation was required.

Her confirmatory **VL test was done on 2 March 2018, the VL was 567200**, and the report mentioned '**Detected**'. She collected her reports on 5 March 2018 from the state lab. On 7 March 2018, she visited the TC and was then advised for the base line tests whose results came on the 9 March 2018 as follows:

Test	Result
AST	100
AST (Normal)	40
ALT	62
Albumin	3
Bilirubin	1.7
INR	1
Baseline Haemoglobin	10.2
Platelet Count	70000
Creatinine	0.9

The patient came back on 11 March 2018 and met the Treating Physician.

*Q1. Is the patient complicated/non-complicated?*

*Q2. What is the regimen prescribed for Hepatitis C?*

*Q3. What is the duration of prescription for the patient?*

*Q4. Should the patient be referred to MTC? If yes, kindly elaborate the reasons.*

Hint: Fibroscan test date was done on 12 March 2018 and Encephalopathy was "None"; Ascites was 'Mild to Moderate' and Variceal Bleed was 'Yes'

Take an assumption that the patient was 100% adherent and came on all the desired follow-up visits to complete the rest of the data entry.

Her SVR was done on the suggested date (12 weeks after the last pill was taken) and the result came as '**Non-detected**'.

*Q5. After the SVR is achieved, what is the next step to be followed?*

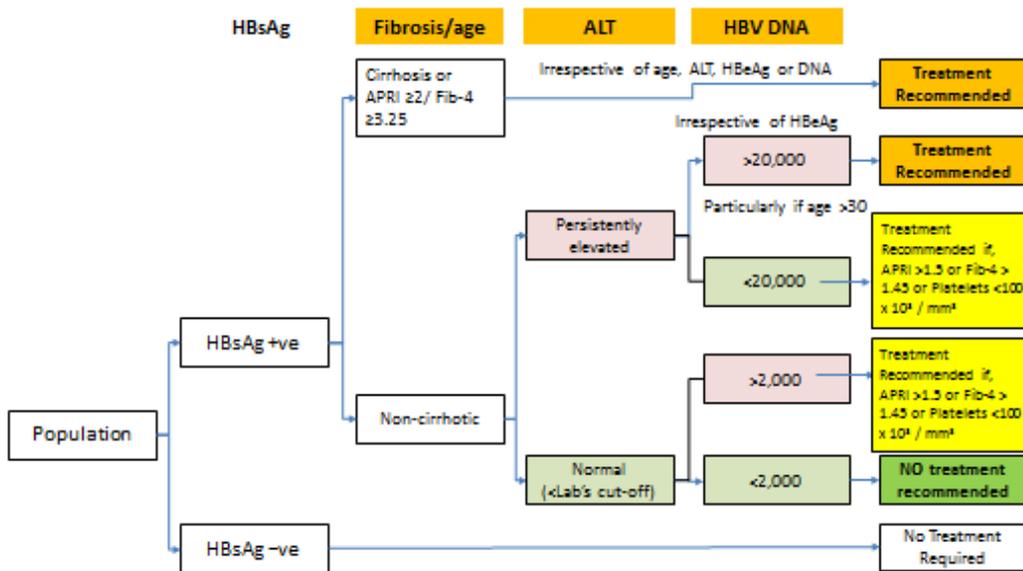
*Q6. What regimen will you prescribe for Hepatitis B treatment?*

# Medical Formulas and Logic

g) What is the logic to be followed for treating Hepatitis-B?

The following chart gives an idea on how the treatment has to flow according to the guidelines:

## Chronic Hepatitis B Infection : Whom To Treat



h) Using the APRI and FIB-4 scores, how is a patient diagnosed as being an uncomplicated case of Hepatitis-B or a complicated case of Hepatitis-B?

Diagnosis	Criteria
Uncomplicated (non-cirrhotic)	APRI=<2 AND FIB-4=<3.25
Complicated (cirrhotic)	APRI>2 OR FIB-4>3.25

$$APRI = (AST/ASTN * 100) / (Platelet Count / 1000)$$

$$FIB-4 = Age * AST / (ALT^{1/2} * (Platelet Count / 1000))$$

i) How many types of Complicated Hepatitis-B cases are there?

Broadly, a complicated Hepatitis-B case can either be a case of compensated cirrhosis or decompensated cirrhosis.

- j) How can we identify whether a patient has compensated cirrhosis or decompensated cirrhosis?
- **Decompensated Cirrhosis:** A patient presenting with ANY ONE of the following can be a case of *decompensated cirrhosis*:-
    - Ascites (mild or moderate) OR,
    - Hepatic encephalopathy (mild or moderate) OR,
    - Total bilirubin >2.5 x ULN + prolonged prothrombin time (>3 second prolongation or INR >1.5) OR,
    - Variceal bleed
  - **Compensated Cirrhosis:** A patient who is considered as a complicated case and does not present with any of the above four conditions can be considered a case of *compensated cirrhosis*
- k) How is Child Pugh score calculated?

Measure	1 point	2 points	3 points
Bilirubin	<2	2.0-3.0	>3
Albumin	>3.5	2.8-3.5	<2.8
INR	<1.7	1.71-2.3	> 2.3
Ascites	None	Mild to Moderate	Severe
Encephalopathy	None	Mild to Moderate	Severe
<b>Child Score</b>	<b>Sum of points for above five factors</b>		
Child–Pugh Class A:	5-6 points		
Child–Pugh Class B:	7-9 points		
Child–Pugh Class C:	10-15 points		