

DOG POPULATION MANAGEMENT & MASS DOG VACCINATION



MOBILE APPLICATION

USER MANUAL

Version 1: September 2022



National Centre for Animal Health

Department of Livestock
Serbithang, Thimphu, Bhutan
Post Box: 155
Tel: +975-02-351083/ 351093
Fax: +975-02-351095
Email: ncah2013@gmail.com
Website: www.ncah.gov.bt



TABLE OF CONTENTS

ABBREVIATIONS	II
1. BACKGROUND	
.....	1
1.1. WHAT IS DPM&MDV APP?.....	1
1.2. DOWNLOAD	1
1.3. LOGIN	2
1.4. OFFLINE MODE.....	3
2. MASS DOG VACCINATION (MDV)	
.....	4
2.1. OWNED DOG	5
2.2. UNOWNED DOG.....	7
3. DOG POPULATION MANAGEMENT (DPM)	
.....	11
3.1. OWNED DOG	12
3.2. UNOWNED DOG.....	14
4. SEARCH (DPM)	
.....	18

ABBREVIATIONS

DPM	Dog Population Management (Sterilization)
MDV	Mass Dog Vaccination
PRN	Pet Registration Number
VIS	Veterinary Information System
NCAH	National Centre for Animal Health

1. BACKGROUND

1.1. WHAT IS DPM&MDV APP?

It is a mobile application developed for data entry during mass dog sterilization (Dog population management (DPM)) and mass dog vaccination (MDV) campaigns in Bhutan. The application is linked to the Veterinary Information System (VIS). Therefore, the VIS (<https://vis.ncah.gov.bt/>) must be used to access the reports concerning DPM and MDV data entered using this application. The application is available in both iOS and Android versions.



Figure 1: DPM&MDV Application's Logo

1.2. DOWNLOAD

For **Android** phones, the application can be downloaded from the **Play Store**, available by the name “**DPM & MDV**” and, for **iOS** (Apple) phones, it can be downloaded from the **App Store**, available by the name “**DPM-MDV**”.

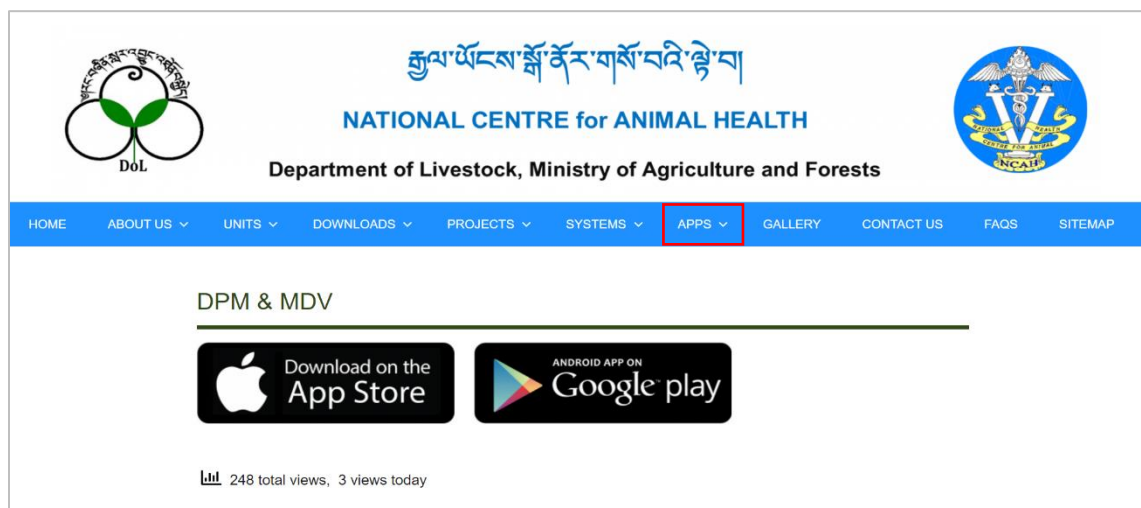


Figure 2: App download link on NCAH web page.

The link to download the application can also be found on the National Centre for Animal Health's website at <https://www.ncah.gov.bt/dpmmdv/>.

1.3. LOGIN

The user credentials (username and password) to login into the application are the same as the login credentials provided to access the VIS. Use the username and password provided by the VIS's system administrator to sign in to the mobile application.

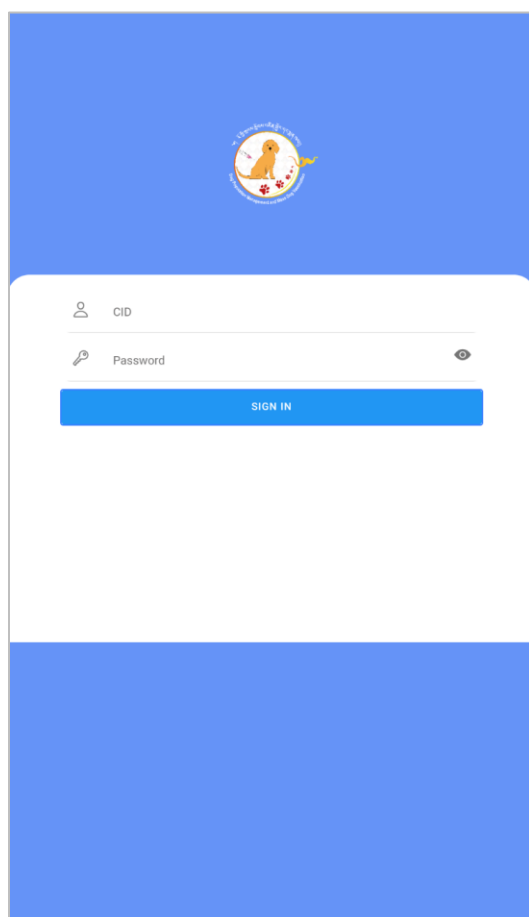


Figure 3: Login page

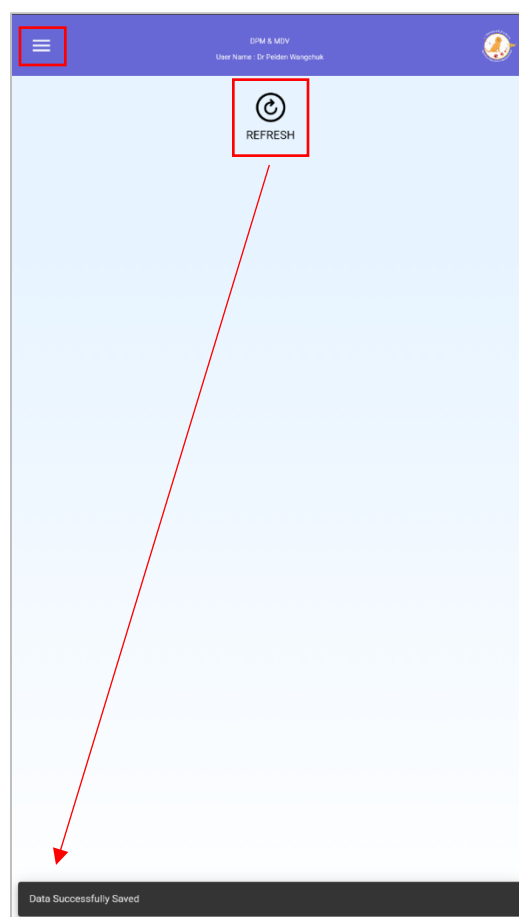


Figure 4: Refreshed page

- Open the application on your mobile phone and sign in using the provided username and password. (Figure 3).
- It's advised to always click on the "Refresh" button after signing in. It refreshes and readies the app for data entry. The indicator message for a successful refresh of the application will be shown at the bottom of the page reading "Data Successfully Saved" (Figure 4).
- To access the services for data entry, click on the menu bar (3 horizontal lines) at the top left corner (Figure 4). The two main services in the application are MDV (Mass Dog Vaccination) and DPM (Dog Population Management).
- If all the features cannot be viewed, click on "Home" or "Refresh".

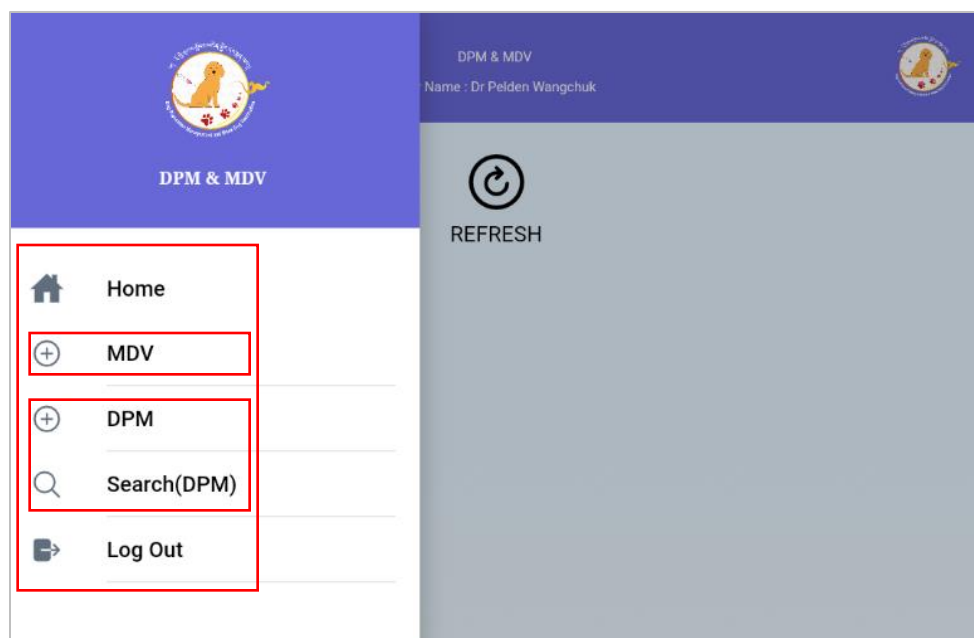


Figure 5: Services in the application

The MDV service is for data entry during the conduct of mass dog vaccination campaigns. The DPM service is for data entry during the conduct of mass dog sterilization campaigns. Search (DPM) is a part of DPM where search and update functionality is built.

1.4. OFFLINE MODE

To use the application offline, the user must first log in and refresh the app using an internet connection, following which, data collection can be done offline. However, to push the data into the server, an internet connection is required. Therefore, data submission can only be done when the user reaches a place with a stable internet connection.

The user must take precautions not to upload DPM or MDV entries in bulk from the dashboard. If possible, it's recommended to submit one entry at a time.

One of the drawbacks of using this app offline is the app's inability to validate the tag number duplication. Therefore, the data manager must be very careful when allocating the tag number of unowned dogs. If uniqueness in the tag number is not maintained, the entry submission into the server will fail.

2. MASS DOG VACCINATION (MDV)

- Click on “MDV” from the menu (Figure 5).

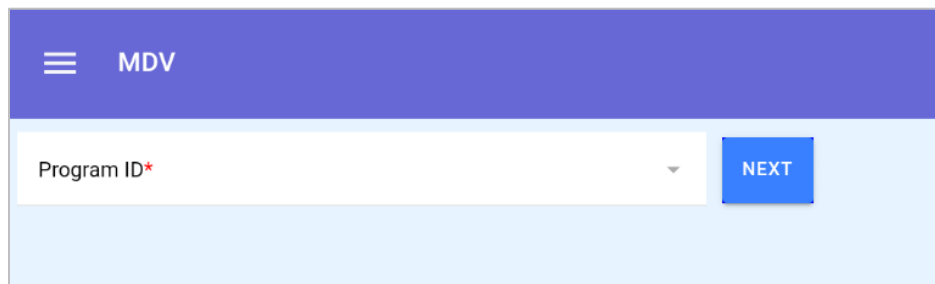
The screenshot shows a mobile app interface for MDV. At the top is a purple header bar with a white hamburger menu icon and the text 'MDV'. Below the header is a light blue section containing a white dropdown menu labeled 'Program ID*' with a downward arrow. To the right of the dropdown is a blue button with the text 'NEXT' in white.

Figure 6: Program ID for MDV

- Verify and select the program ID and click “Next” to proceed (Figure 6). The program ID will be assigned by the system admin and tagged with the user during the registration process. The empty MDV dashboard will open (Figure 7).
- To enter MDV data, click on the “+Add Data” button (Figure 7).

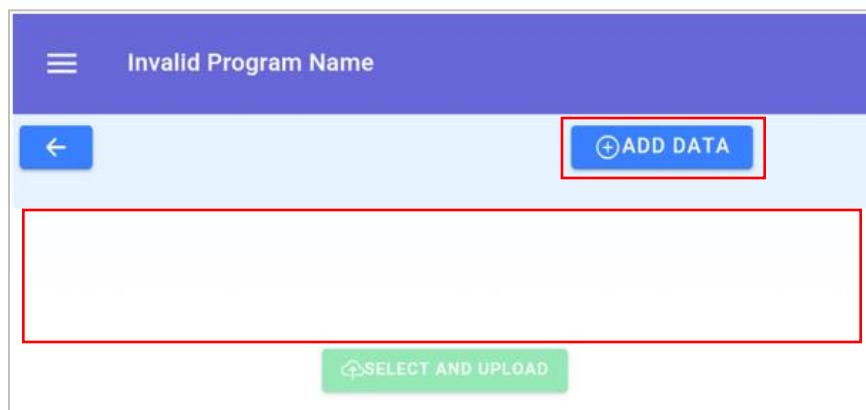
The screenshot shows the MDV dashboard. At the top is a purple header bar with a white hamburger menu icon and the text 'Invalid Program Name'. Below the header is a light blue section containing a blue button with a white left arrow and a blue button with a white plus icon and the text '+ADD DATA'. Below this is a large white rectangular area outlined in red. At the bottom is a green button with a white plus icon and the text 'SELECT AND UPLOAD'.

Figure 7: MDV dashboard

- Enter the date of vaccination and select animal and vaccine type from the dropdown (Figure 7).

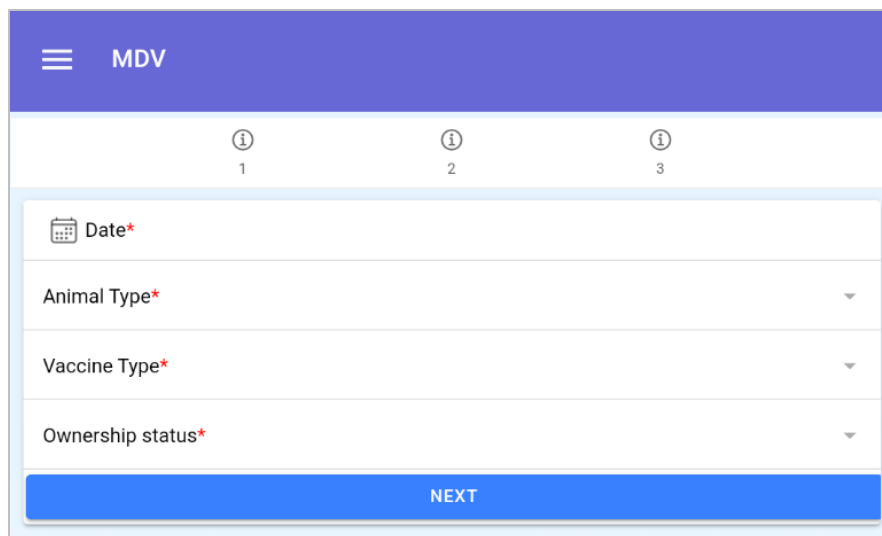


Figure 8: MDV data entry page 1

- Select the ownership status of the dog vaccinated (Figure 8). Depending on the ownership status (owned/ unowned) selected, different data entry pages will be opened.
- Click on the “Next” button to proceed (Figure 8).

2.1. OWNED DOG

- Click on the “Scan Microchip Number” (Figure 9). It will open the phone camera to scan the barcode image pasted on the pet registration booklet during the registration of the pet. The scanned microchip number of the pet dog will be displayed in the microchip number field, along with other details entered during the pet registration. Ensure that the application is given access to your phone’s camera from the phone’s setting.
- In situations where barcode image scanning cannot be done, the microchip number or the pet registration number must be carefully entered in the “Type Microchip/PRN” field (Figure 9).
- Upon successful scanning of the microchip’s barcode or manually entering the microchip or PRN, all the information will be auto-filled in the available fields (Figure 9).

MDV

1 2 3

Owner Information

SCAN MICROCHIP NUMBER

Scanned Microchip Number

Type Microchip/Registration Number
982126058539978

Name of the Owner

CID

Dzongkhag
Thimphu

Gewog
Thim Throm

Village
Motithang

Locality

Contact Number

NEXT

Figure 9: Pet registration information fetching through microchip no. or PRN

- Upon verification of the fetched information, click on the “Next” button to proceed (Figure 9).
- Verify the pet dog’s detail fetched and displayed (Figure 10).
- The “Age” and “Neuter Status” fields can be updated (Figure 10).
- After filling in all the required fields, click on the “Save as Draft” button to save the entry as a draft. It will add to the MDV dashboard (Figure 11).
- Select the entry and click on the “Select and Upload” button to submit the MDV data entered for a pet dog (Figure 11).
- To add more entries, click on the “+Add Data” button (Figure 11) and enter the fields as required.
- It is recommended to select and upload a few (2-3) entries at a time, however, if the internet connection is strong and stable, multiple entries can be selected and uploaded at once.
- Mistakenly entered data can be edited by clicking on the “Edit” icon or deleted by clicking on the “Delete” icon against the entry of interest.

MDV

1 2 3

Pet Information

Registration Number
PRN20221415925330

Name of the pet
Mushu

Sex
Male

Breed
Pug - Cross

Age
Year(0-100) Month(0-11) Day(0-29)
3 0 0

Neuter status
Yes

+ SAVE AS DRAFT

Figure 10: Fetched pet details and saving draft

Invalid Program Name

← ADD DATA

Mass Dog Vaccination Data

1. 982126058539978

SELECT AND UPLOAD

Figure 11: MDV dashboard with data entered (owned)

2.2. UNOWNED DOG

- Upon selecting “Unowned” as the ownership status, the “Catching Method” field will appear (Figure 12).
- Select the catching method and click on the “Next” button to proceed (Figure 12).

MDV

1 2 3

Date* 24/09/2022

Animal Type* Dog

Vaccine Type* ARV

Ownership status* Unowned

Catching Method*

NEXT

Figure 12: Catching method for an unowned dog (MDV)

- Click on the “Get Location” button to capture the latitude and longitude of the dog caught and vaccinated (Figure 13). Ensure to enable your phone’s location access to the application from the phone’s setting.
- Enter location details for the unowned dog caught and click “Next” to proceed (Figure 13)

MDV

1 2 3

Location of Dog

GET LOCATION*

latitude

longitude

Dzongkhag*

Gewog*

Village

Locality

NEXT

Figure 13: Location of the unowned dog during MDV

- Fill in the required fields concerning the dog's detail and save the entry as a draft by clicking on the "Save as Draft" button (Figure 14). It will add to the MDV dashboard.

MDV

1 2 3

Dog Details

Breed

Age
Year(0-100)* Month(0-11)* Day(0-29)*

Sex*

Body Color

Neuter status

+ SAVE AS DRAFT

Figure 14: Unowned dog's detail during MDV

Invalid Program Name

+ ADD DATA

Mass Dog Vaccination Data

1. Stray Dog			
2. 982126058539978			

SELECT AND UPLOAD

Figure 15: MDV dashboard with data (owned and unowned)

- Select the entry and click on the “Select and Upload” button to submit the MDV data entered for a dog (Figure 15).
- To add more entries, click on the “+Add Data” button (Figure 15) and enter the fields as required.
- It is recommended to select and upload a few (2-3) entries at a time, however, if the internet connection is strong and stable, multiple entries can be selected and uploaded at once.
- In the MDV data table (Figure 15), a red tick mark against an entry indicates that some of the fields are not filled; however, it can be submitted because the unfilled fields are not mandatory. The green tick mark indicates that all the fields are filled.
- To view the report on MDV, the VIS must be accessed.

3. DOG POPULATION MANAGEMENT (DPM)

This service is used for data entry during mass dog sterilization campaign(s), wherein individual dog details are recorded.

- Click on “DPM” from the menu (Figure 5).

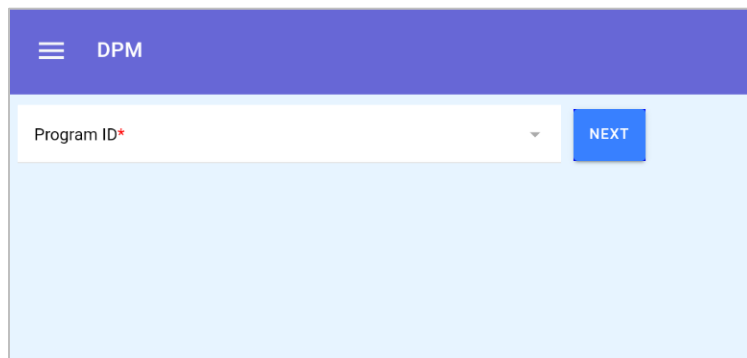
The screenshot shows a mobile app interface for the DPM (Dog Population Management) section. At the top, there is a purple header bar with a hamburger menu icon and the text 'DPM'. Below the header, there is a light blue area containing a white dropdown menu labeled 'Program ID*' and a blue button labeled 'NEXT'.

Figure 16: Program ID for DPM

- Verify and select the program ID and click “Next” to proceed (Figure 16). The program ID will be assigned by the system admin and tagged with the user during the registration process. The empty MDV dashboard will open (Figure 17).
- To enter DPM data, click on the “+Add Data” button (Figure 17).

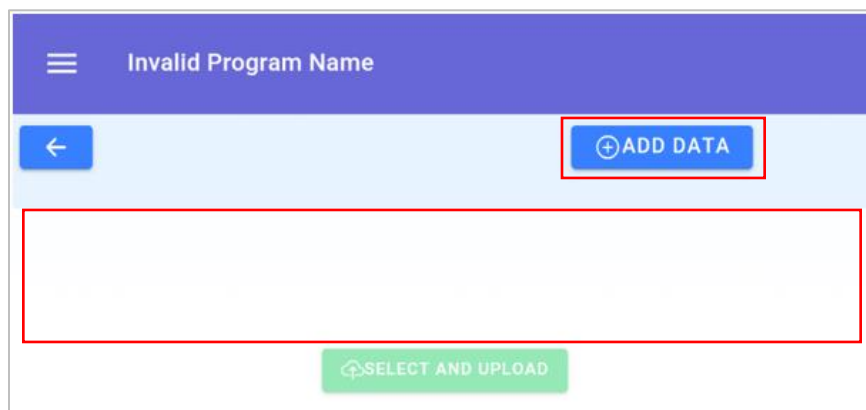
The screenshot shows the DPM Dashboard. At the top, there is a purple header bar with a hamburger menu icon and the text 'Invalid Program Name'. Below the header, there is a light blue area containing a blue button with a left arrow, a blue button with a plus icon and the text '+ADD DATA', and a large empty white text area. At the bottom, there is a green button with a plus icon and the text 'SELECT AND UPLOAD'.

Figure 17: DPM Dashboard

- Select the date of sterilization, animal type and ownership status of the dog (Figure 18). Depending on the ownership status (owned/ unowned) selected, a different data entry page will open.

The screenshot shows the DPM mobile app interface. At the top is a purple header bar with a hamburger menu icon on the left and the text 'DPM' in white. Below the header, there are three numbered steps: 1, 2, and 3, each with an information icon (i) above it. The main form area is white and contains three fields: 'Date*' with a calendar icon, 'Animal Type*' with a dropdown arrow, and 'Ownership Status*' with a dropdown arrow. At the bottom of the form is a blue button labeled 'NEXT'.

Figure 18: DPM data entry page 1

3.1. OWNED DOG

- Click on the “Scan Microchip Number” (Figure 19). It will open the phone camera to scan the barcode image pasted on the pet registration booklet during the registration of the pet. The scanned microchip number of the pet dog will be displayed in the microchip number field, along with other details entered during the pet registration. Ensure that the application is given access to your phone’s camera from the phone’s setting.
- In situations where barcode image scanning cannot be done, the microchip number or the pet registration number must be carefully entered in the “Type Microchip/PRN” field (Figure 19).
- Upon successful scanning of the microchip’s barcode or manually entering the microchip or PRN, all the information will be auto-filled in the available fields (Figure 19).
- If a dog is neutered and data is already recorded in the system, on scanning the barcode or typing the microchip number or PRN, the information won’t be fetched because it’s been already recorded in the system.
- Upon verification of the fetched information, click on the “Next” button to proceed (Figure 19).

Figure 19: Pet registration information fetching through microchip no. or PRN

- Verify the pet dog's detail fetched and displayed (Figure 20). The age of the dog can be updated.
- After filling in all the required fields, click on the "Save as Draft" button (Figure 20) to save the entry as a draft. It will add to the DPM dashboard (Figure 25).

Pet Information

Registration Number
PRN20220605325309

Name of the Pet
Tommy

Sex
Male

Breed
Pomeranian

Age

Year(0-100)	Month(0-11)	Day(0-29)
4	0	0

Body Color
White

Location of Clinic

Body Weight(kg)

Health Score: 1(very thin) to 5(Obese)

Other Conditions

Skin Condition

Transmissible Venereal Tumour

ARV Vaccination Status

Post Operative Complication

Fate of the Dog

Surgeon's Name

DOG'S PHOTO

+ SAVE AS DRAFT

Figure 20: Fetched pet details and saving draft

3.2. UNOWNED DOG

- Upon selecting “Unowned” as the ownership status, the “Catching Method” field will appear (Figure 21).
- Select the catching method and click on the “Next” button to proceed (Figure 21).

Figure 21: Catching method for an unowned dog (DPM).

- Enter the unique tag number allocated for the unowned dog (Figure 22).
- Click on the “Get Location” button to capture the latitude and longitude of the dog caught for neutering (Figure 22). Ensure to enable your phone’s location access to the application from the phone’s setting.

Figure 22: Already used tag number validation

Figure 23: Location details of an unowned dog (DPM)

- Upon clicking the “Get Location” button, if the entered tag number is already used, a validation message will pop up saying “Number already used” and the entered “Tag No.” field will be cleared (Figure 22).
- Enter location details for the unowned dog caught and click “Next” to proceed (Figure 23).

DPM

1 2 3

Dog Details

Breed
Local

Sex*
Female

Age
Year(0-100)* 2 Month(0-11)* Day(0-29)*

Body Color
Cream

Location of Clinic
DVH

Body Weight(kg)
22

Health Score: 1(very thin) to 5(Obese)
2

Other Conditions

Skin Condition
Normal

Pregnancy Status
Yes

Pregnancy Stage
Mid

Number of Foetuses Removed
2

Transmissible Venereal Tumour
No

ARV Vaccination Status
Yes

Post operative Complication
Swelling

Fate of the Dog
Recovery

Surgeon's Name
Dr Dr

DOG'S PHOTO

+ SAVE AS DRAFT

Figure 24: Unowned dog's detail during DPM

Invalid Program Name

← ADD DATA

Mass Dog Sterilization Data

✓ 1. Dummy909	🚩	✎	🗑
✓ 2. 982126058528054	🚩	✎	🗑

SELECT AND UPLOAD

Figure 25: DPM dashboard with data

- Fill in the required fields concerning the dog's detail and save the entry as a draft by clicking on the "Save as Draft" button (Figure 24). It will add to the DPM dashboard (Figure 25).
- Select the entry and click on the "Select and Upload" button to submit the DPM data entered for a pet dog (Figure 25).
- To add more entries, click on the "+Add Data" button (Figure 25) and enter the fields as required.
- It is recommended to select and upload a few (2-3) entries at a time, however, if the internet connection is strong and stable, multiple entries can be selected and uploaded at once.
- Mistakenly entered data can be edited by clicking on the "Edit" icon or deleted by clicking on the "Delete" icon against the entry of interest (Figure 25).

4. SEARCH (DPM)

This service is used when searching for an already entered DPM data to follow up and update the information of a dog. Some of the situations where this service could be used are:

- When incomplete DPM data is submitted and needs an update. For example, if a dog catching team submits DPM data with only the dog's location details and other details that need to be filled at the surgery clinic level, the data manager at the clinic level will use the tag number/microchip/PRN to fetch the details entered by the dog catching team and fill up other required fields to complete the information of the neutered dog.
- If a neutered dog is kept in the recovery shelter for observation, the "Fate of the dog" must have been selected as "Recovery". Therefore, when the dog is being released after recovery, the fate needs to be updated to "Released". Similarly, updating the fate of the dog to other available options such as abandoned, adoption, dead, etc can also be done here.
- If a neutered dog returns to the clinic with some post-surgical complications, information updating can be done through this service where the dog must be searched with the microchip number or PRN, or tag number and the "post-operative complication" field can be updated accordingly.

To search for a neutered dog and update information,

- Click on "Search (DPM)" from the menu (Figure 5).
- Enter the Tag Number if the dog to be searched is an unowned dog (Figure 27).
- Enter Microchip Number if the dog to be searched is an owned dog (Figure 27)

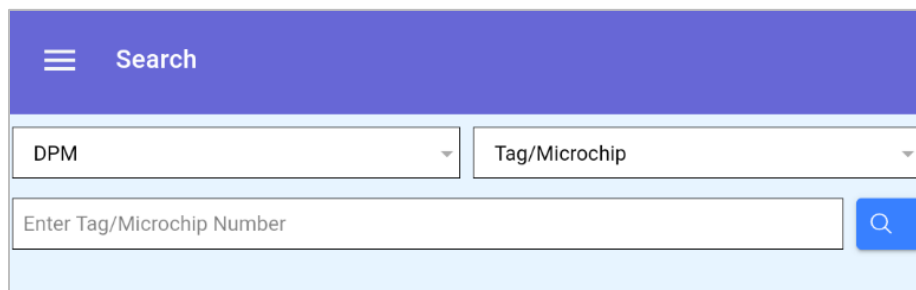


Figure 26: DPM search options

- All the editable/updatable fields after searching the owned/unowned dog are marked red in Figure 27 (Owned) and Figure 28 (Unowned).
- Fill/edit the fields as required and update the information by clicking on the "Update" button.

Search

DPM Tag/Microchip

982091068580552

Dog Population Management

Program ID*

Date* 15/09/2022

Animal Type* Dog

Ownership Status* Owned

Owner Details

Microchip Number
982091068580552

Name of the Owner
Kunzang S Jigme

District* Thimphu

Geow* Thim Throm

Village *

Locality* Babesa

Contact Number* 17125158

Pet Details

Registration Number* PRN2021141590366

Name of the Pet* Snoppy

Sex* Female

Breed* Bjobochi - Cross

Age

Year(0-100)	Month(0-11)	Day(0-29)
2	0	0

Location of Clinic
NVH

Body Weight(kg)
14

Health Score
3

Other Conditions

Skin Condition
Normal

Body Color
Brown White

Pregnancy Status
No

Transmissible Venereal Tumour
No

ARV Vaccination Status
Yes

Post Operative Complication

Fate of the Dog
Claimed

Surgeon's Name
Dr. Tshering Dhendup

DOG'S PHOTO

+ UPDATE

Figure 25: Search and update (owned DPM)

Search

DPM Tag/Microchip

Dummy909

Dog Population Management

Program ID*

Invalid Program Name

Date* 25/09/2022

Animal Type* Dog

Ownership Status* Unowned

Catching Method* Caught by net

Tag No* Dummy909

Location of Dog

Latitude* 27

Longitude* 89

District* Buthang

Geow* Tang

Village* Chakhar

Locality* Near river

Dog Details

Sex
Female

Age

Year(0-100)	Month(0-11)	Day(0-29)
2	0	0

Breed
Local

Body Color
Cream

Location of Clinic
DVH

Body Weight(kg)
22

Health Score
2

Other Conditions

Skin Condition
Normal

Transmissible Venereal Tumour
No

ARV Vaccination Status
Yes

Pregnancy Status
Yes

Pregnancy Stage
Mid

Number of Puppies
2

Post Operative Complication
Swelling

Fate of the Dog
Recovery

Surgeon's Name
Dr Dr

DOG'S PHOTO

+ UPDATE

Figure 28: Search and update (unowned DPM)

