Minnesota Department of Health
Family Home Visiting
IHVE REDCap User Guide

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About IHVE

IHVE (pronounced "ivy") stands for "Information for Home Visiting Evaluation." IHVE is the data system used by the Minnesota Department of Health (MDH) Family Home Visiting (FHV) program for collection of evaluation data. FHV programs that receive grants from MDH are required to collect and report evaluation data to IHVE.

This document provides instructions for using REDCap to submit evaluation data to IHVE. REDCap data collection forms are provided by MDH to FHV grantees who do not have another data system that has IHVE-compatible data collection forms.

About REDCap

What is REDCap?

REDCap is an acronym for "Research Electronic Data Capture." REDCap is a secure, web-based application for managing data. REDCap was created in 2004 at Vanderbilt University and is now supported by a global consortium of non-profit organizations. It is used in a variety of settings, including research, government, and industry.

REDCap Overview and Key Terms

REDCap is an online data collection tool. REDCap can be accessed through a web browser such as Chrome, Firefox, or Safari. Google Chrome is the recommended internet browser for entering data into REDCap. You can use REDCap on any device that connects to the internet, including tablets and smartphones, but you will probably find that data entry is easiest on a desktop or laptop computer.

You will be asked to enter a username and password every time you login to REDCap. You can bookmark the website link or add it to your browser's favorites.

Data collection in REDCap is organized into "projects." A REDCap project is a secure website detailing the structure of the data that should be entered.

Field: A place to provide a piece of information (e.g. Name, Date, ID#, DOB, etc.). REDCap instruments use several different types of fields, including text boxes, drop down lists, check boxes (select all that apply), radio buttons, and calculated fields.

Data Collection Instrument or "Form": A collection of related fields. The forms are similar to the paper forms.

Event: A collection of forms that are usually filled out at the same time. An Event is like a folder for your forms. *Note:* Events are separated by vertical gray lines in REDCap.

Project: All events grouped together. A project is like a collection of folders.

Record: The set of information for a case (e.g. family). Each record has a unique Record ID that is assigned by REDCap. All the data about a family over the course of their time receiving home visiting from your organization will be entered into a single record (row).

Local Family ID: The ID created by the organization providing FHV services that is used to identify a specific family within the organization's case management system.

Data Access Group: Each REDCap user is assigned to a Data Access Group, based on their organization. Users will only be able to access and edit records created by users within the same Data Access Group.

Accessing REDCap

Each REDCap user has their own username and password. For most REDCap users, your username will be similar to your email address, but NOT the same as your email address. Your REDCap username will be your email address with a period (.) replacing the "at" (@) symbol (see Figure 1). For example, if your email address is Jane.Smith@welovebabies.org, your REDCap username will be: **Jane.Smith.welovebabies.org**

Figure 1.

The first time you log into REDCap, you will be asked to set a password and a password recovery question. The password recovery question will allow you to reset your password if you forget it.

Please remember: Never share your REDCap username and password with anyone, or use anyone else's REDCap username and password. Your username controls the data you have access to. For this reason you never want to allow someone else to use your username or use someone else's username.

After accessing REDCap for the first time, you may go back to the system at any time in one of two ways: (1) by clicking on the link in the email you received from MDH when your account was created, or (2) by typing or bookmarking the MDH REDCap website address: https://apps.health.state.mn.us/redcap/

Accessing Your Project

FHV data collection in the MDH REDCap system is secure and each user must be approved for access to the project. When the MDH REDCap administrator grants a user permission to access the FHV data collection project, the user will receive an email with a link to the project.

When you login to REDCap, you will be taken to the *Home* tab, where you will see a welcome message and a list of features. Across the top of the screen, you will see tabs labelled *My Projects, Help and FAQ, Training Videos*, and *Send-it* (see Figure 2).
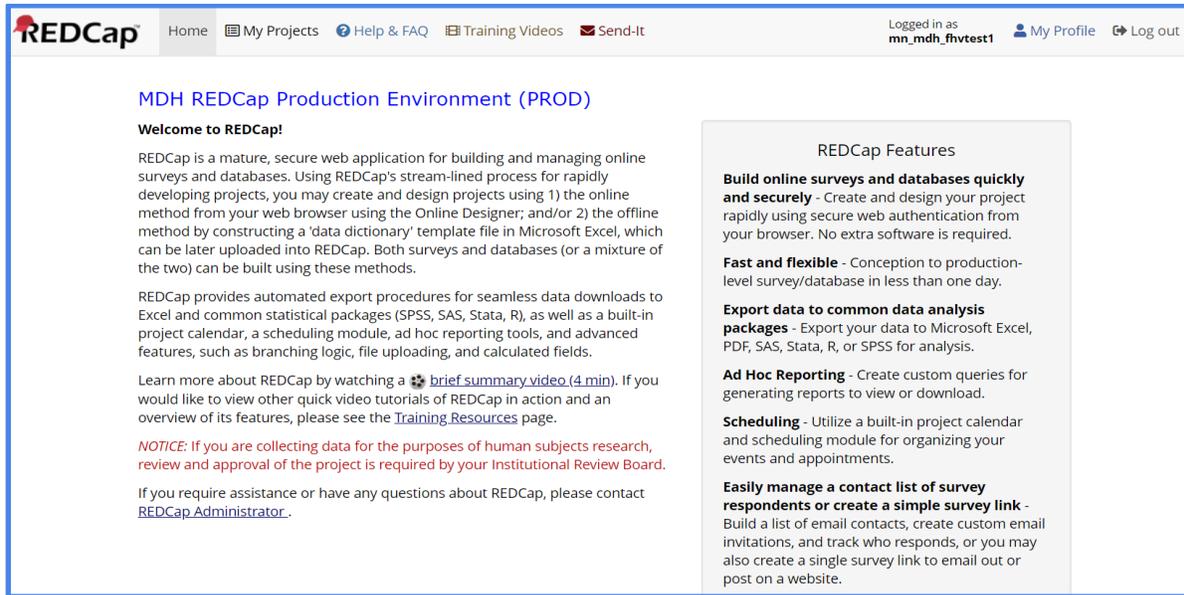
Figure 2.

When you click on the *My Projects* tab you will see a list of projects you are authorized to access (see Figure 3). Your project list will include FHV Evaluation Data Collection, FHV Home Visitor Data Collection, and FHV Data Collection Training. Click on the **"FHV Evaluation Data Collection"** link to enter the project.
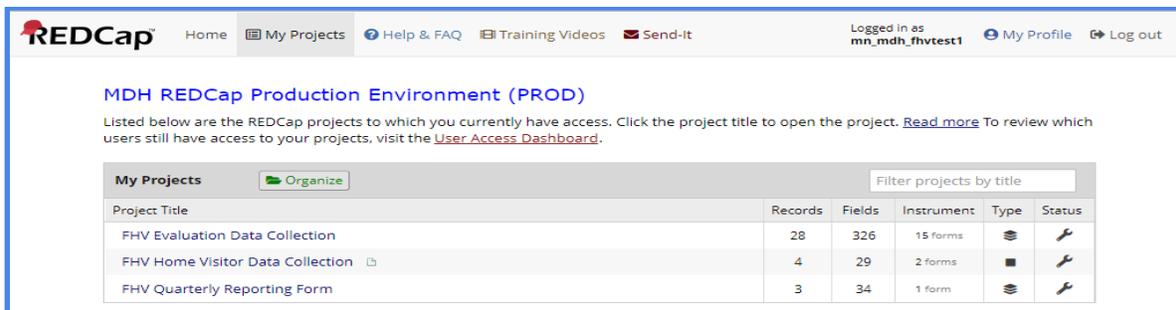
Figure 3.

The Home Screen

After clicking on the link for your project, you will be taken to the *Project Home* screen (see Figure 4). The project title appears at the top. The narrow bar on the left is the *Navigation Menu* and the larger area on the right is the *Workspace*. Data Entry is accomplished by moving back and forth between the *Navigation Menu* and the *Workspace*.

In the *Workspace*, you will see a list of users who have access to the project, and the Project Statistics, which contains the number of records and the date of the most recent edits to the project. *Note:* This is the date the project was last edited by any user, not the date you last edited the project.

Figure 4.

The Navigation Menu

At the top of the *Navigation Menu*, you will see your username, a link to log out of REDCap, and a *My Projects* button. Clicking on *My Projects* will take you back to the previous screen.

The Project Home and Design Section

Under the *Project Home and Design* section in the *Navigation Menu*, you will see links for *Project Home*, and *Codebook*. At any time, you can click the *Project Home* button to return to the home screen for your project.

Clicking on *Codebook* will take you to the Data Dictionary Codebook. The *Codebook* lists the field name, field label, and field attributes for every variable in the project. The *Codebook* can

be helpful if you are unsure what type of data should be entered in a given field (e.g. text, date, etc.). It will also tell you which fields are required and should not be left blank. Most users will not need to access the *Codebook* in order to enter data because the relevant instructions are contained within each form.

The Data Collection Section

The *Data Collection* section contains essential functions for entering data. Within the *Data Collection* section, you will see two links - *Record Status Dashboard* and *Add/Edit Records*.

The *Record Status Dashboard* shows the structure of the database in a graphical representation of the data entry forms that have been started/completed for each record (see Figure 5). The Record IDs are listed in the left column and the Data Collection Instruments are listed across the top of the grid. The individual Data Collection Instruments (forms) are organized into groups called *Events*, that are separated with a gray vertical line. Forms should always be completed in the order they appear in the *Record Status Dashboard*, working your way across the row. See **Forms and Events** section for more information on individual forms.

Each Data Collection Instrument, or form, is represented by a colored circle. The color of the circle represents the status of the form: gray for no data, red for incomplete, yellow for unverified, and green for complete. The meaning of these terms is discussed in the **Additional REDCap Features** section.

If you want to navigate to a Data Collection Instrument for a particular RecordID, click on the status icon that corresponds to a specific Data Collection Instrument.

Figure 5.

The form status is initially set by REDCap but must be updated by the user. The form status section is located at the bottom of every form (see Figure 6). Once you begin entering and saving data on a form, REDCap will automatically change the button from gray for "No Data

Saved", to red for "Incomplete." REDCap will make no further changes to the status - the user must change each form's status manually. You should change the form status to "Complete" when all fields on the form have been completed and reviewed for accuracy. However, the form status is not included in data sent to MDH, nor does it confirm that the data is error-free.

More information about the form status icons can be found in the section called **Additional REDCap Features.**

Figure 6.

Under the *Record Status Dashboard*, you will see the *Add/Edit Records* link. This function is discussed later in this document. See the section called **Starting a New Record**.

The Applications Menu

The *Data Exports, Reports, and Stats* link allows you to export and print your data (see Figure 7). You may choose to export all the data that you have entered, or select only certain forms. You will only be able to see the data that you and other people from your organization have entered.

Within the Data Exports, Reports, and Stats link, the *My Reports & Exports* tab allows you to create your own reports, which you can save and access later. The *Other Export Options* tab provides the option to download a PDF of the Data Collection Instruments containing saved data for all records in the project that you have permission to access. There are two report options provided in this menu that allow users to view and export data. Selecting "**All Data**" will provide a report that contains all data entered into all REDCap records by your organization. If specific information is needed for a report, individual instruments and events to include in the report can be selected using the "**Selected instruments and/or events**" option. Users can also create and save reports in this menu.

Figure 7.

The *Data Quality* menu contains a list of all the data quality rules that are in effect in the project. Examining violations of data quality rules is an important tool for ensuring accuracy of entered data. Executing a data quality rule will prompt REDCap to make a report of any instance of data that violates a data quality rule. This report can be used to find and correct data entry errors. You many choose to execute rules individually, or execute all rules at once.

Help & Information Menu

Clicking on the *Help & FAQ* or *Training Videos* buttons opens a new web browser to display the REDCap Help & FAQ webpage. Here you can find answers to general questions about REDCap.

Important Note: For specific questions about FHV and IHVE data entry, contact the FHV Evaluation Unit at Health.FHVData@state.mn.us. **Do not use the button "Contact REDCap administrator".**

Data Entry

Starting a New Record

In REDCap, each case is called a record. You will enter a record for each family, or case, that you need to report data for according to FHV evaluation data reporting requirements. Click on **"Add/Edit Records"** in the *Data Collection* section. You will be taken to the *Add/Edit Records* screen (see Figure 8).
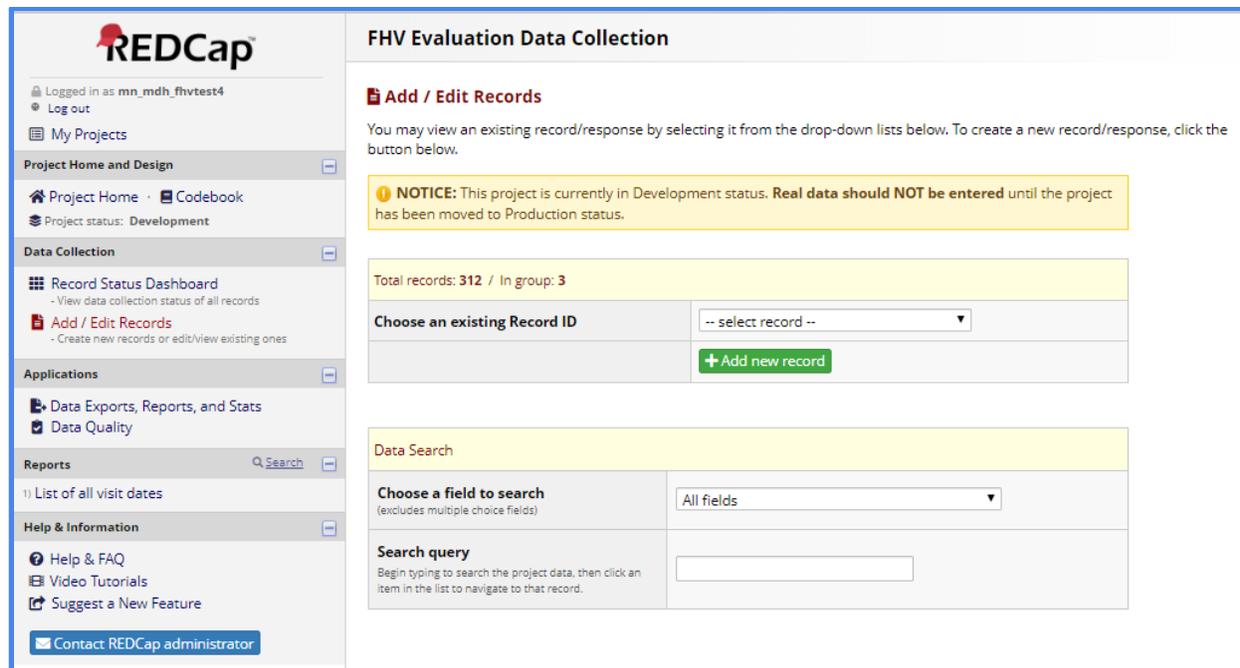
Figure 8.

This page is the only place where you can start a new record. To start a new record, click the box called **"Add new record."** You will be taken to the *Record Home Page* (see Figure 9). The green text at the top of the page that says "**Record _____ is a new Record ID. To create the record and begin entering data for it, click on any gray icon status below**."

Note: REDCap automatically assigns each new record a unique Record ID. The Record ID can only be edited by an administrator. The Record ID is a four-digit number followed by a dash and another number. More information on Record ID and Record Label formatting is available in the *Additional REDCap Features* section.

Under the Record ID creation message, you will see the name of each Data Collection Instrument and its corresponding form status icon. Because you have just created this Record ID, all the status icons are gray, indicating that no data has been entered in the Data Collection Instruments (see Figure 9). You can click on any status icon to be taken to the corresponding Data Collection Instrument. You should begin with the first form in the ***Intake & Updates*** event called ***Family Intake***.
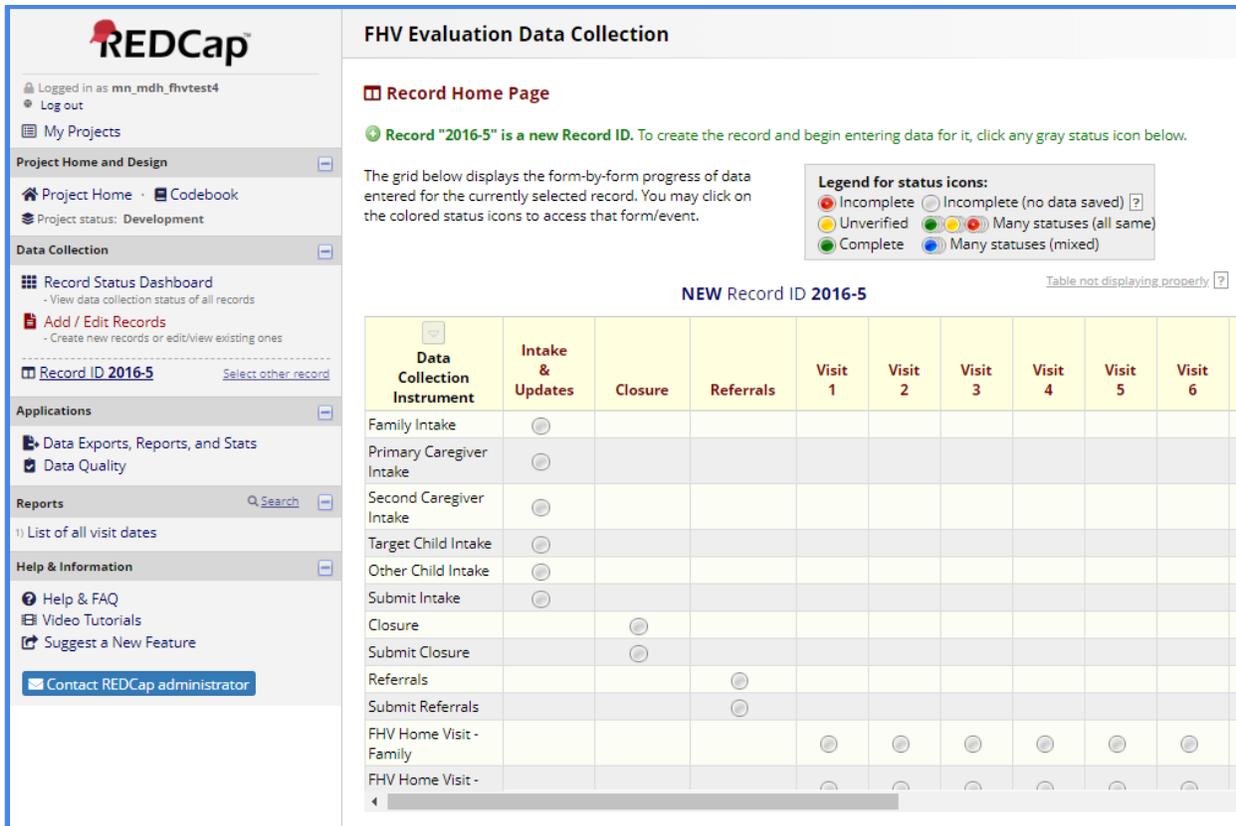
Figure 9.

Your record is not saved in REDCap until you click on a Data Collection Instrument and enter data into at least one field for the record and save the record. If you navigate away from this screen without entering and saving any data, your Record ID will not be saved. For more information see the **Saving in REDCap** section.

In addition to entering a new record, you may also want to access a record that has already been started. For more information see the section on **Accessing an Existing Record**.

Entering Data

On each form, the questions and instructions appear on the left, and data entry fields appear on the right. The Record Label for the record that is currently being edited is displayed at the top of the page. When you begin entering data for a new family, start in the *Family Intake* form by entering a *Local Family ID* that is specific to how your organization tracks families and a *Home Visitor ID* number, which is the ID number your organization uses to identify home visiting staff.

You will notice that under some fields there is blue text providing additional guidance on how to respond, such as definitions for key terms (see Figure 10).

Figure 10.

REDCap instruments use several types of questions (see Figure 11), including text boxes (enter text), drop down lists (select only one answer), check box lists (select all answers that apply), radio buttons (choose only one option), date/time stamps, and calculated fields.

Figure 11.

Some fields have associated validation rules. When entering data in these fields, you may see an alert, warning, or error message indicating that the value you entered does not match the

requirements of the field. For example, date fields may require that the value entered falls between a minimum and maximum numerical value. If you enter a value outside the acceptable range, REDCap will not prevent you from continuing, but it will alert you to the problem (see Figure 12). More information on data quality and validation rules can be found in the **Special Considerations for Entering Data** section.
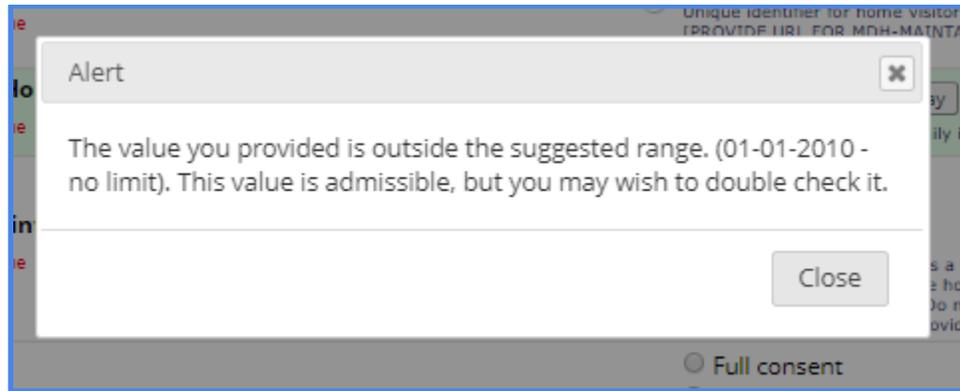
Figure 12.

You can use the tab key on your keyboard to advance from one field to the next, or use the mouse to put your cursor in the field you want to edit. You can move to a different form within the same event by clicking on the name of the form in the *Navigation Menu* to the left. To the left of the form name in the *Data Collection* section you will also see the form status icons for each form within an event. For more information on form status icons, see the section called **Saving in REDCap**.

Moving to a new form by selecting the form status indicator will close the current form without saving entries. In order to save entries, select the "Save and Continue" button located at the bottom of the form before using the form status icons to move to a new form. Alternatively, you can select the "Save and go to Next Form" button if you wish to move to the next form for the current record. For more information on saving, see the section below called Saving in REDCap. If you navigate away from the form without pressing [Enter] or clicking on one of the "Save" buttons on the screen, your work will be lost.

Saving in REDCap

When you are ready to save your data, you MUST click one of the save buttons located at the top and bottom of each screen (see Figure 13). ***There is no auto-save in REDCap. Although REDCap is highly reliable, you can experience other problems with saving, such as losing your internet connection. We recommend you save early and often in order to avoid losing your work.*** *Note:* When you navigate between fields using [Tab] or mouse clicks, if you press [Enter], you will save the form, and will either exit the form or remain on the form if data is missing.
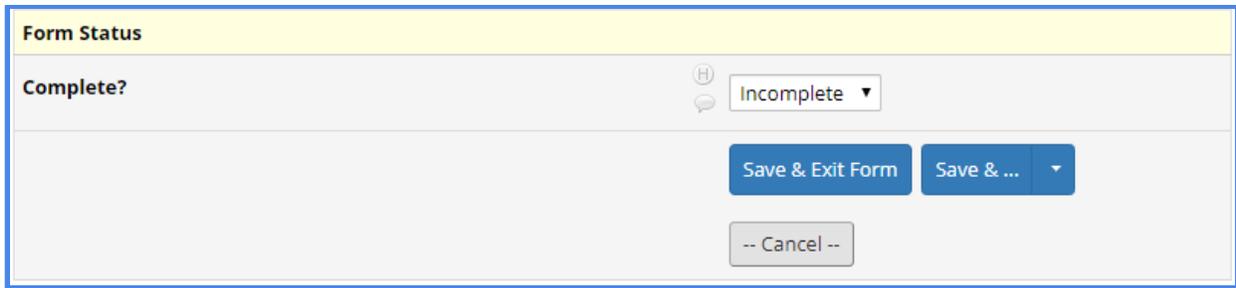
Figure 13.

REDCap does not require users to enter complete data before moving on to a new form. You can choose to leave certain fields blank and save your progress. However, you will receive a warning message about any required fields which were left blank.

At the bottom of every page, you will see two buttons with save options. If data entry is complete, clicking **"Save & Exit Form"** will return you to the *Record Home Page.* If you click on the button on the right called **"Save & …"** you can choose from three different drop down save options in addition to the option shown on the button (see Figure 14). There are several save options in REDCap, so you should select whichever one accomplishes your goal. The options are described below.

"Save & Stay" will save the data entered in the form and you will remain in the form.

"Save & Go to Next Form" will bring you to the next form in the event.

"Save & Exit Record" will save your data and return you to the *Record Home Page.*

"Save & Go To Next Record" will bring you to the *Record Home Page* of the next record only if the data entered on the current form is complete.
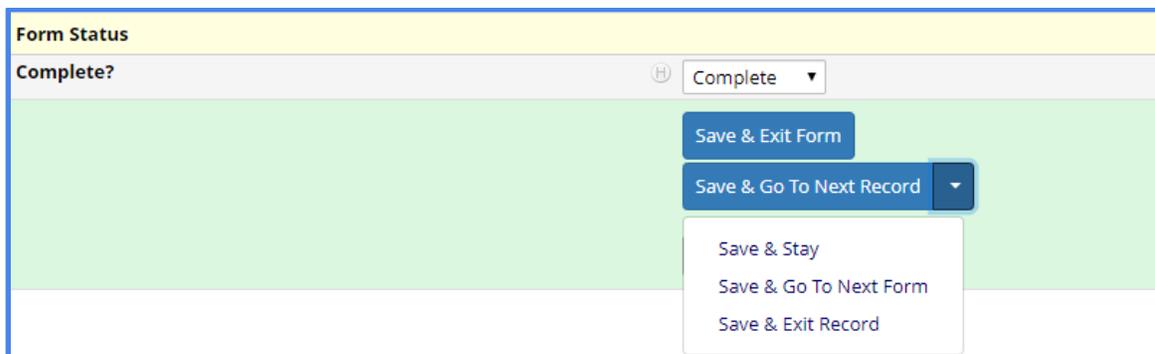
Figure 14.

If data entry is incomplete, such as missing data in a required field, when any of the save options are selected, you will be presented with three options: **"Okay", "Okay, Ignore and leave record"**, and **"Ignore and go to next form"** (see Figure 15).
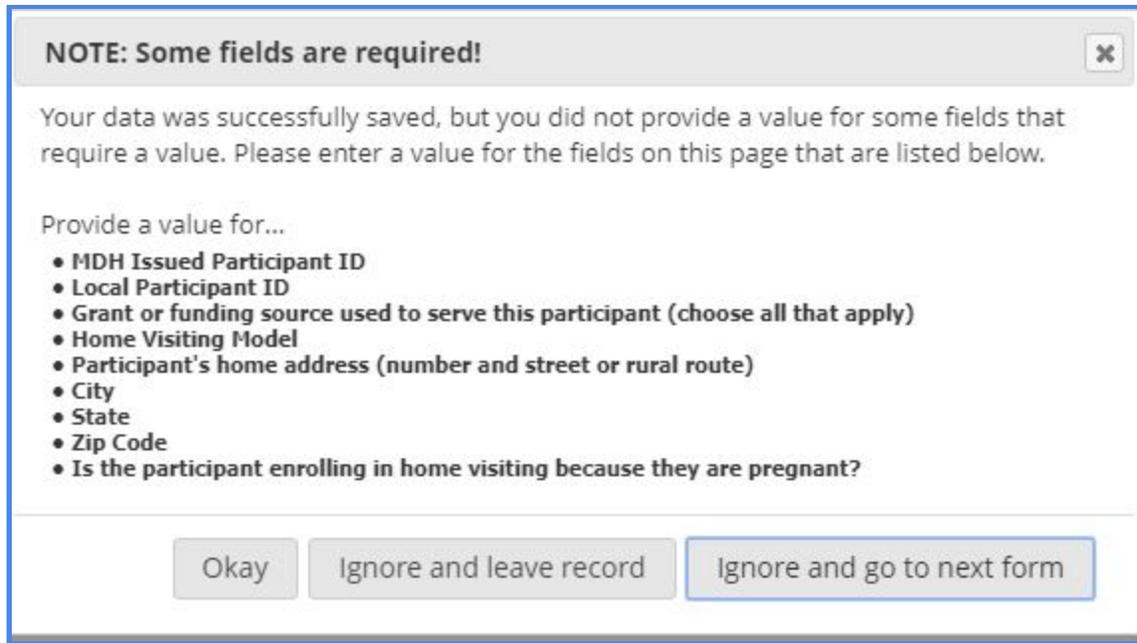
Figure 15.

When you click **"Okay"**, your data will be saved and you will stay in the form that you are currently working in. Clicking **"Ignore and leave record"** will save the data you have entered in the current form and then return you to the *Record Home Page* for that record. Clicking **"Ignore and go to next form"** will save the data you have entered in the current form and take you to the next form for the current record.

If you attempt to navigate to a different page without saving, REDCap will ask you if want to save your changes (see Figure 16). A popup box will give you three options: **"Save changes and leave"**, **"Leave without saving changes"**, and **"Stay on page"**. **"Save changes and leave"** will present you with the three options described above: **"Okay", "Ignore and leave record"**, and **"Ignore and go to next form"** (see Figure 15). Clicking **"Leave without saving changes"** will not save any of the data you have entered. Clicking **"Stay on page"** will also not save your data and you will remain in the current form.
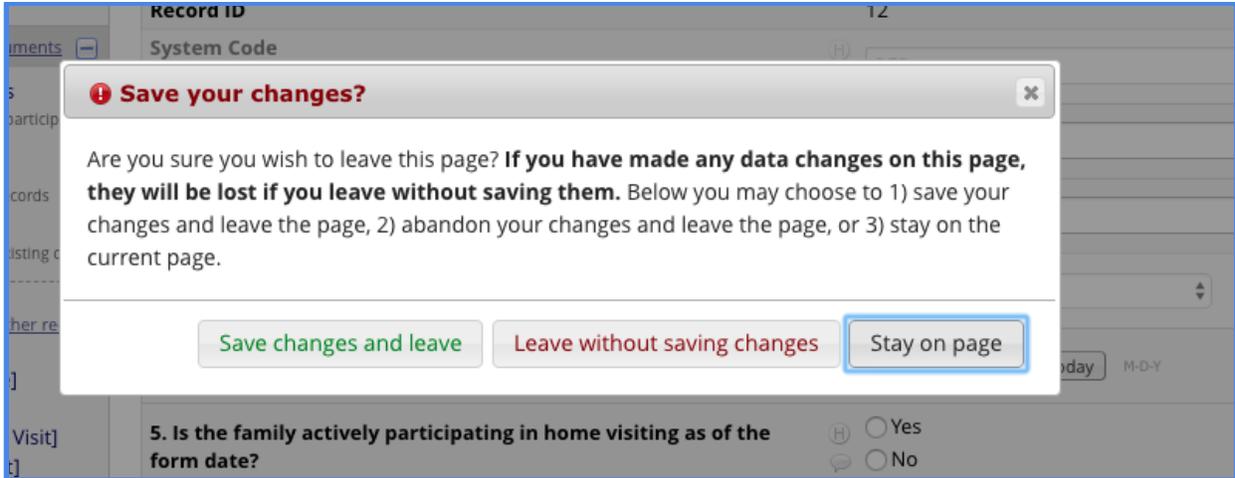
Figure 16.

After you save, you can check the *Navigation Menu* on the left to confirm you are still in the correct Record ID (see Figure 17). The Record ID will also be displayed above the events and forms on the *Record Home Page.*
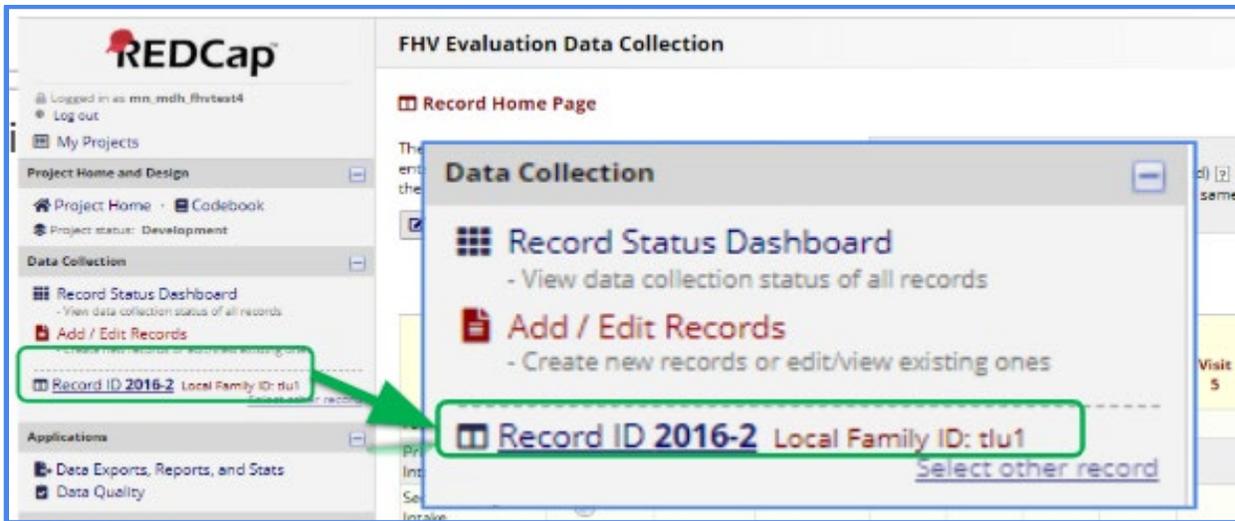
Figure 17.

Accessing an Existing Record

There are several ways to open an existing Record. On the *Add/Edit Records* page (found in the *Navigation Menu*), you can open an existing record by selecting it from the dropdown list called *Choose an existing Record ID* (see Figure 18).
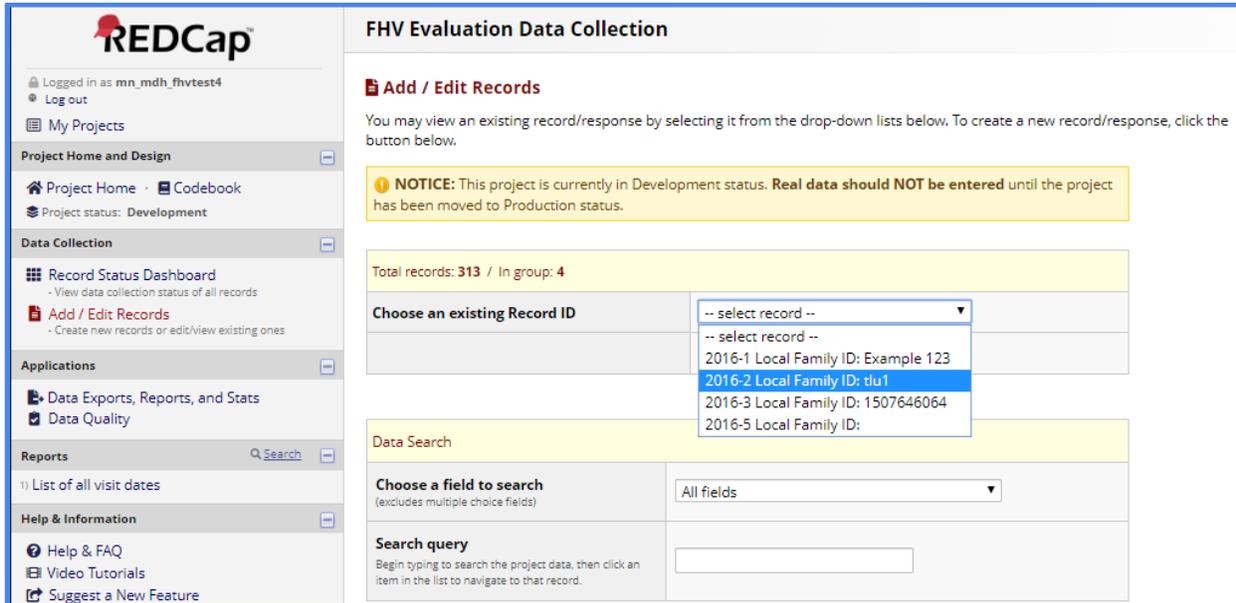
Figure 18.

When you select an existing record from the dropdown box, you will be taken to the *Record Home Page*. From there, you can choose the form you want to edit. Alternatively, you can search for specific records by any field such as staff, home visitor name, or caregiver name (see Figure 19). In the *Data Search* box, choose the field you would like to search on (or leave it set to "All Fields") and then type the text you would like to search for in the *Search Query* field.

As you type, existing Record IDs that match your search criteria will be displayed. You can click on any of the search results to be taken to the specific form that the search result is located in. Once you are in the form, confirm that you are in the record you would like to edit. At this point, you may navigate through the record in the same manner as if you had created a new record.
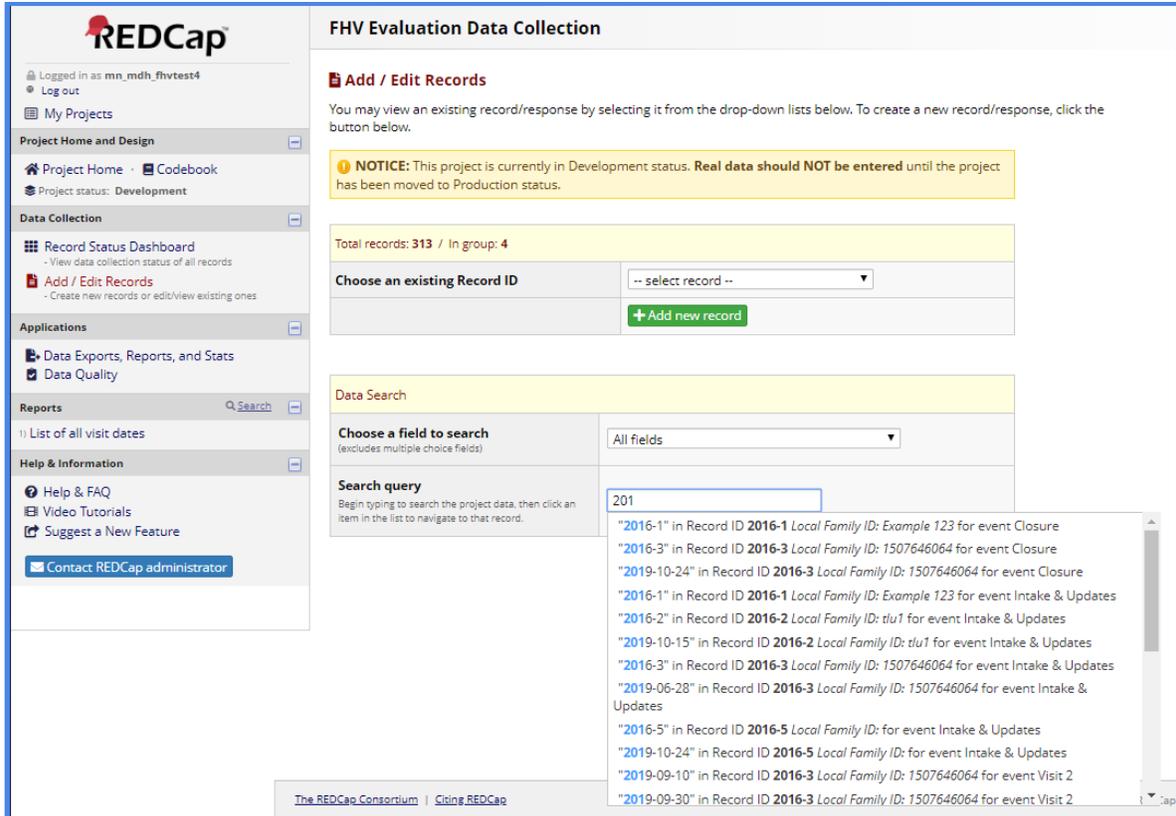
Figure 19.

A third way to access any existing record is through the *Record Status Dashboard* (found on the *Navigation Menu*). The *Record Status Dashboard* displays all the records that have already been created by anyone in your organization and the status of each form for each record. You can open any existing record by clicking on either the Record ID or the form status icon.

Note: You should never attempt to edit a record that someone else is currently editing. If you access a Record ID that someone else is currently editing, your data editing capabilities will be disabled (see Figure 20). You will be able to review the form, but cannot save changes until the original user exits the form.

Figure 20.

Forms and Events

In REDCap, forms for each record are presented in groups called events, that are separated by a gray vertical line. Forms should always be completed in the order they appear in the *Record Status Dashboard*, working your way across the row. Not all forms will apply to all records initially, but over the course of providing home visiting services, all forms should be completed for all records.

All events have **Submit** forms that serve to notify MDH that data is ready to be submitted. The **Submit** form asks users to provide the date and time of the most recent edit to the form, and to check the box to certify that your data is ready to be submitted. This form is used to ensure that MDH is only importing data that the user is ready to send and prevents MDH from importing data that is not complete, unverified, or incorrect. In most cases, you can simply click the **"Now"** button to fill in the date and time and then check the box for **"Yes, submit my data."** A new date and time must be entered any time data is added, updated, or changed.

Information on how data is submitted to MDH from REDCap can be found in the IHVE Data Import Email Messages section.

Intake & Updates Event

The forms in the *Intake & Updates* event should be completed during the initial visit. Within the *Intake & Updates* event, there are six forms: *Family Intake, Primary Caregiver Intake, Second Caregiver Intake, Target Child Intake, Other Child Intake,* and *Submit Intake.* Complete the appropriate form for each family member according to their role. When you have completed each of the intake forms, you must complete the *Submit Intake* form.

The *Family Intake* form contains a question on the level of consent that a family has given to have their data shared with MDH. More information on consent can be found in the Special Considerations for Entering Data section.

The final section of the *Primary Caregiver Intake* form is for demographic updates. Some demographic items are required to be updated every six months after the first visit. However demographic updates should always be reported as soon as possible. The fields in the primary caregiver form that need to be updated every six months are noted with blue text that reads: *Note: The following field MUST be updated at least once every six months.* REDCap does not notify users when demographic updates are due. You can keep track of these updates by checking the corresponding box each time you complete the demographic updates.

Every time you either create a new form, update an existing form, or complete a demographic update, you must also complete or update the *Submit Intake* form.

Closure Event

Closure forms are used when a family member is no longer considered to be receiving family home visiting services. Never delete data in REDCap if someone leaves the family or exits the

program. Instead you should complete a *Closure* form for the participant. To close a participant you will need to select their role (Primary Caregiver, Second Caregiver, Target Child, or Other Child), select the closure date, and select the reason for this participant closure. Once you complete the *Closure* form you must complete a *Submit Closure* form.

Referrals Event

Referrals are reported in a separate event for two reasons. First, referrals may occur outside of a visit, and therefore should not be tied to a particular visit. Second, each referral must be updated on a continuing basis as the status of the referral changes. To update the referral status, identify the referral you wish to update in the list of instances and change the referral status from the listed options. The *Referrals* form is a repeating form so that you can complete as many forms as necessary for each family. Each time you either create a new *Referrals* form or update an existing form, you must also complete or update the *Submit Referrals* form.

Visit Event

The *Visit* event is used to document the data that are collected during home visits, over the course of time that a family is enrolled in home visiting. Many of the forms within the *Visit* event are repeatable so that data can be collected on multiple different children, screenings, and interaction assessment tools. The *Visit* events are numbered consecutively (e.g. Visit 1, Visit 2, Visit 3, etc.). The *Visit* event contains five forms that need to be completed for each visit with a family: *FHV Home Visit-Family*, *FHV Home Visit-Child, Screenings*, *FHV Parent-Child Interaction Assessment*, and *Submit Visit* forms.

FHV Home Visit - Family

The first form in the *Visit* event is the *FHV Home Visit - Family* form. This form asks you to review key demographic information. If any demographic updates need to be made, go back to the appropriate form(s) in the *Intake & Updates* event. See the above *Intake & Updates* section for more information on completing demographic updates.

Next, you must answer three general questions about the visit. It is important that you start on this form and answer these questions as responses to these questions impact the ability to enter data on subsequent forms. The first question asks if any screenings were completed during this home visit, or as a follow-up to this home visit. If you select yes, you will be able to enter information in the *Screenings* form. If you select no or leave the answer blank, due to branching logic, you will not be able to enter screening information for this visit.

The second question asks if a validated Parent-Child Interaction tool was used during this home visit. Similarly to the first question, you will only be able to complete the *FHV Parent-Child Interaction Assessment* form if you indicate that an assessment was conducted.

The third question asks if there were any referrals offered during this home visit, or as a follow-up to this home visit. If the answer is yes, please go to the *Referrals* event and complete or update the appropriate *Referrals* forms.

FHV Home Visit - Child

In this form, you enter data for each specific visit for each target child. The form is repeatable so you can enter data for all target children in the family separately at each visit. Within this form, you will indicate whether the visit corresponds to one of the listed age-specific data collection points. Your response to this question will determine which questions appear on the form for you to answer.

Screenings

If you indicated in the **FHV Home Visit - Family** form that any screenings were conducted during the visit, this form will ask you to identify the screening date, the family member who was screened, what type of screening was given, what screening tool was used and the result of the screening. This form is a repeatable form, so you can complete a unique form for each screening conducted during the visit.

FHV Parent-Child Interaction Assessment

If you indicated in the **FHV Home Visit - Family** form that a parent-child interaction (PCI) assessment was conducted during the visit, please complete this form. In this form you will be asked to identify the adult and the child who were observed using the PCI tool, what PCI tool was used, and the results of the PCI tool.

Submit Visit

After completing all of the data entry for each visit, you must complete a **Submit Visit** form.

Home Visitor Data Collection Form

The IHVE Home Visitor data collection form is in its own REDCap project, separate from all of the other forms. From the *My Projects* tab, click on the **"FHV Home Visitor Collection"** link to enter the project (see Figure 21).
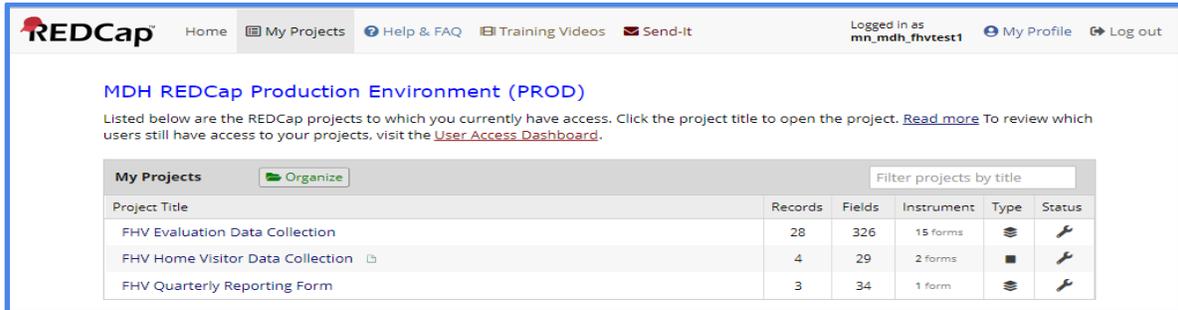
Figure 21.

The *FHV Home Visitors* form must be completed by each home visitor before data is submitted to IHVE for families that the home visitor is serving. Home visitors should also review and update the *FHV Home Visitors* form annually, or whenever information about the home visitor's training, experience, or credentials has changed.

Click on **"Add/Edit Records"** in the *Data Collection* section to begin entering data. You will be taken to the *Add/Edit Records* screen (see Figure 22).
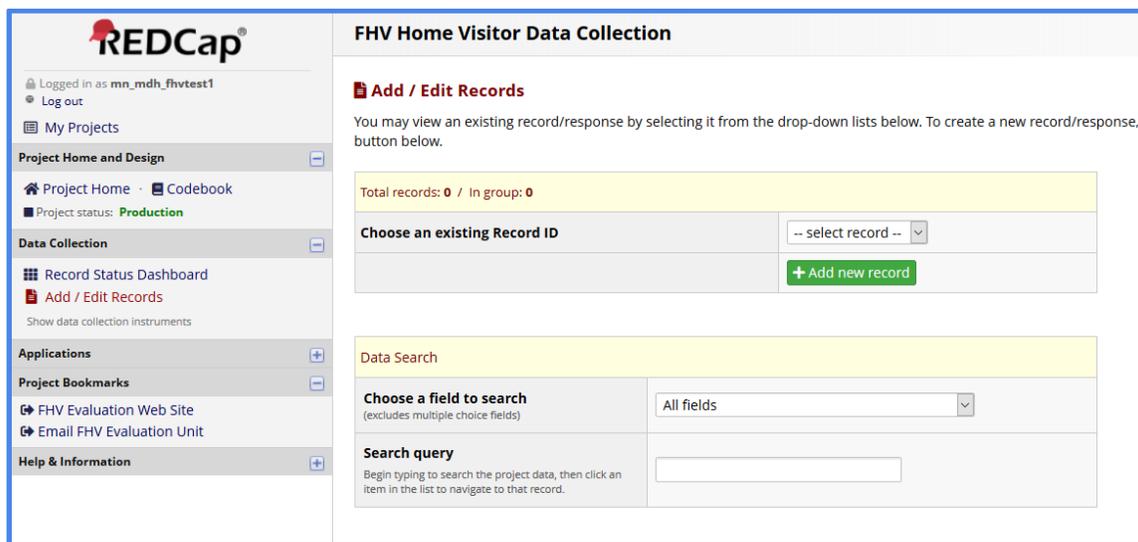
Figure 22.

If you are completing the *FHV Home Visitors* form for the first time, click the green "Add new record" button. You will be taken to the *Record Home Page*. Click on the gray status icon for the FHV Home Visitors form. You will then see the form (see Figure 23).

Figure 23.

At the top of the form is a link to the **Notice of Collection of Private Data** posted on the MDH website. This notice provides home visitors with information about how MDH will use the data collected about home visitors, who will have access to this data, and other information. Please review this notice before you complete the form.

Data entry in the FHV Home Visitors form is similar to completing forms about families in the **"FHV Evaluation Data Collection"** project.

Important Note: when entering the *Home Visitor ID*, be sure to use an employee ID number or other unique code that you can easily remember. This number or code must match the *Local Home Visitor ID number* that is entered on the **Family Intake** Form for each family that this home visitor is serving.

After you have answered all of the questions, save the form by clicking on "Save & Exit Form" or one of the options in the "Save & …" menu (see Figure 24).

Figure 24.

To submit the **FHV Home Visitors** form to IHVE, complete the **Submit** form. You can access the **Submit** form by clicking on the *Add/Edit Records* link under *Data Collection* in the Navigation Menu, and searching for your Home Visitor ID in the "Search Query" box (see Figure 25).

Figure 25.

From the Record Home Page, click on the gray status icon next for the **Submit** form. Complete the form by following these steps (see Figure 26):

1. Click the "Now" button for the Date of most recent edit
2. Check the box next to "Yes, submit my data"
3. Click the "Save & Exit Form" button.

Figure 26.

To review and update a ***FHV Home Visitors*** form, click on the *Add/Edit Records* link under *Data Collection* in the Navigation Menu, and search for your Home Visitor ID in the "Search Query" box (see Figure 25). Open your ***FHV Home Visitors*** form, make any needed updates, and save the form. Then open the ***Submit*** form and complete this form again as described above.

Additional REDCap Features

Form Status Icons

The form status icons are colored circles that indicate the status of the forms (see Figure 26), as denoted below:

- Gray – no data
- Red – incomplete
- Yellow – unverified
- Green – complete
- Blue – many statuses (only for repeatable forms)

Status icons are set by both REDCap and the user. Each icon begins as a gray circle. Once you begin entering and saving data on a form, REDCap will automatically change the icon from gray for *No Data Saved*, to red for *Incomplete*. REDCap will make no further changes to the status icon color - the user must change each form's status manually.

Status icon colors are for your own record keeping and do not serve to indicate to MDH that data is complete and ready to be imported into IHVE, nor do they confirm that data is error-free.

The form status section is located at the bottom of every form. You should change the form status icon to *Complete* when the form is complete and the entered data has been reviewed for accuracy by your organization.

You will find form status icons on the *Record Status Dashboard* and the *Record Home Page*.

Legend for status icons:
- Incomplete
- Unverified
- Complete
- Many statuses (mixed)
- Incomplete (no data saved) [?]
- Partial Survey Response
- Completed Survey Response
- Many statuses (all same)
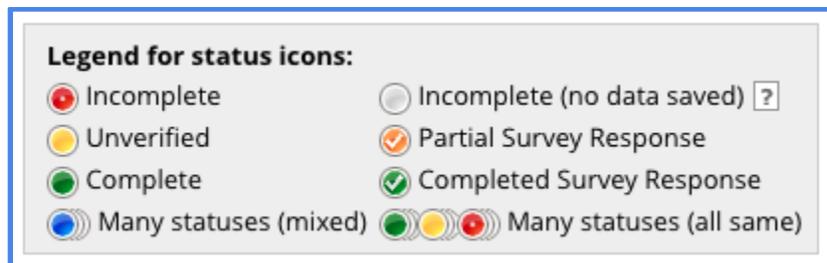
Figure 26.

History Button

On all Data Collection Instruments, a small *H* appears in a circle beside each field. REDCap tracks the history of all saved values for all fields (see Figure 27). When you click on the *H*, REDCap will display all changes in the field over time, for the current record (see Figure 28). Please note that only the currently saved value will be transmitted to IHVE.
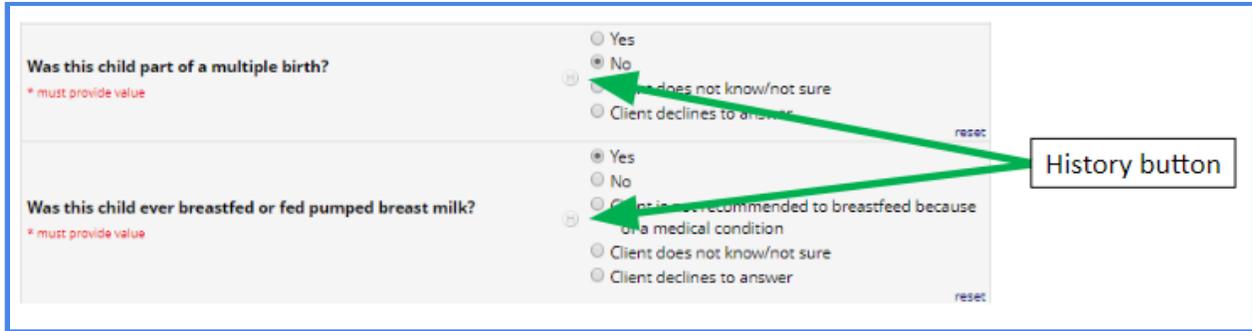
Figure 27.

Figure 28.

Downloading and Printing Forms

REDCap allows users to download PDF versions of the forms. When you are in a form, click **"Download PDF of Instrument(s)"** drop down menu at the top of the page (see Figure 29). You have the option to download a blank data entry form or a data entry form with saved data.
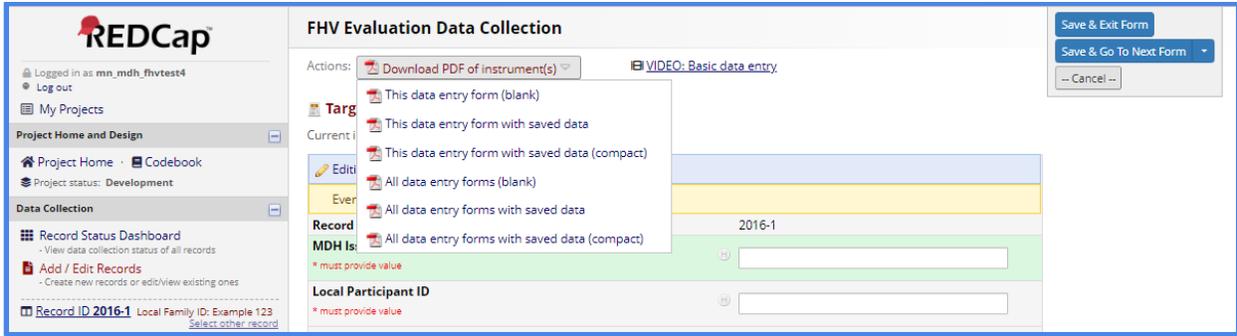
Figure 29.

Special Considerations for Entering Data

Branching Logic

Branching logic is a function that hides or displays fields under certain conditions and is used throughout REDCap to improve the data entry experience. If branching logic is in effect, a field will only be visible if certain conditions are met. For example, some questions are only relevant for certain age-specific intervals and will not appear unless the user indicates the visit correlates to an age specific interval. This function allows users to enter data more efficiently and reduces entering unnecessary data.

Calculated Fields

For certain fields, REDCap will perform a calculation based on previously entered data and return a result.

On the ***Primary Caregiver Intake*** form and the ***Second Caregiver Intake*** form, once you enter a birth date, REDCap will automatically calculate and display the approximate age of the caregiver in years (see Figure 30). You cannot edit this field - it is based on the dates you entered for the date of the first home visit (enrollment date) and the caregiver's birth date. If the field does not automatically populate an age, confirm that you have entered a date on the ***Family Intake*** form for the date of the first home visit. The purpose of this calculated field is to provide an easy way for the user to verify that the birth date was entered correctly.

Figure 30.

On the ***Target Child Intake*** form and the ***Other Child Intake*** form, you will first be asked if the child was born before or after the date of the first home visit. If the child was born after the family enrolled in family home visiting services, you will need to enter the date of the first visit after the child's birth. Once you enter the child's birth date, REDCap will calculate and display in red the child's approximate age in months (see Figure 31). You cannot edit this field - it is based on the dates you entered for either the date of the first home visit date or the date of the first visit after the child's birth and the child's birth date.

Figure 31.

Data Quality & Validation Rules

Data Quality Rules are standards which specify the type of data that are acceptable in certain fields. For example, a Data Quality Rule can help identify a required field that is blank, or a value that falls outside an acceptable range. These standards help the user identify fields that contain inappropriate data so that it can be corrected.

The MDH IHVE REDCap databases contain multiple Data Quality Rules. Some Data Quality Rules are immediate – the program will notify the user at the time of entry when unacceptable data is entered. Other Data Quality Rules must be "executed" and reviewed prior to submitting data to IHVE.

Executing Data Quality Rules

In the *Navigation Menu*, click on the *Data Quality* Application to go to the Data Quality menu. The user can choose to execute all Data Quality Rules, all custom Data Quality Rules, or all data Quality Rules except for those related to missing values. Missing values in required fields will cause errors in IHVE, so all Data Quality Rules should be executed and then the results examined. [Note: Violations of rules A, E, H, and I do **NOT** need to be examined and can be ignored.] When the user clicks on the "All" button at the top of the page, REDCap will calculate and display the number of discrepancies for each Data Quality Rule. For any rule that contains a discrepancy, the user can click on "View" to see the data that contains the discrepancy. The user can then click on the discrepant value and REDCap will open that form and Record in a new browser window. The user should correct the invalid value, save the form, and return to the list of discrepancies in the Data Quality Rules menu.

For certain data entry fields, data quality rules limit the response that can be entered. Data quality rules help reduce instances of implausible data (e.g. an estimated delivery date more than 280 days in the future) and reduce data entry errors. If a data quality rule is violated, a warning message will be displayed (see Figure 32). REDCap will not prevent you from saving this data, but you should review it carefully.

Figure 32.

REDCap also has validation rules that attempt to limit the data that can be entered. When a validation rule is violated, an alert will appear and the the data that prompted the validation rule alert will be highlighted in red (see Figure 33). An example of a validation rule is the limits to the minimum and maximum values that can be entered for a child's birth weight. REDCap will allow you to save the data you entered that prompted the validation rule alert, but you should review this data carefully.
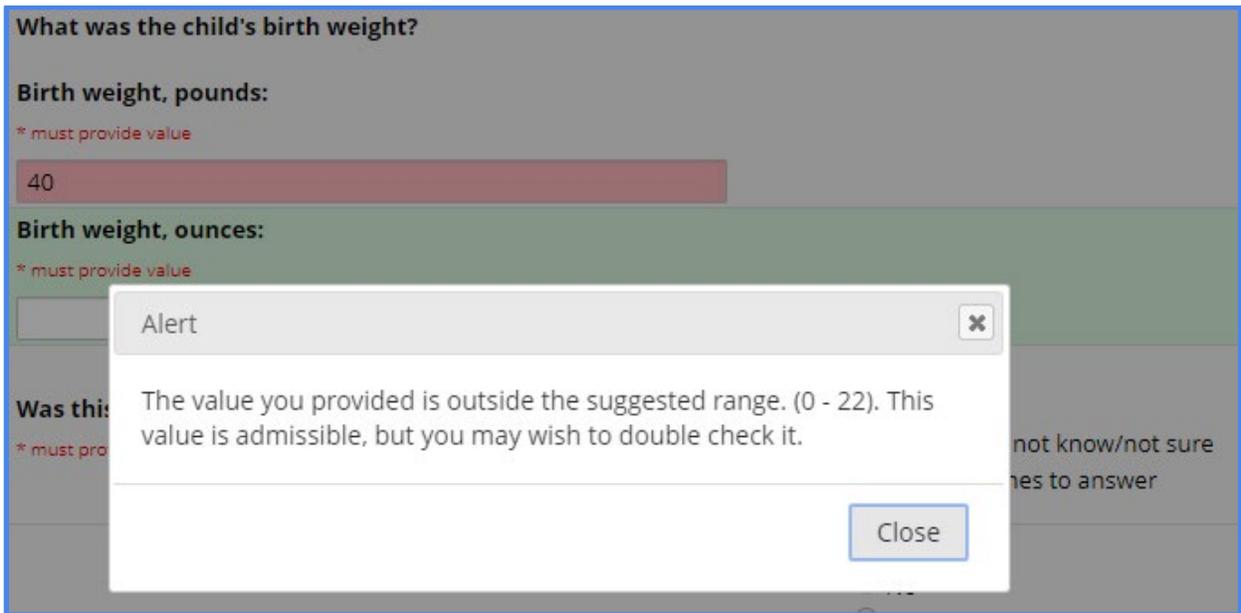
Figure 33.

Dynamic Formatting of Record ID and Record Label

REDCap automatically assigns each new record a unique Record ID. The Record ID can only be edited by an administrator. Record IDs are listed in the first column of the Record Status Dashboard, and at the top of every data entry form. You will notice that each Record ID consists of two parts - blue numerals and alphanumeric text in red. The four digit number at the beginning of the Record ID represents your organization. Record IDs of families receiving services from the same organization will all begin with the same four numbers. Users will be able to view and edit all records entered by anyone in the same organization. After the four digit number for your organization, there is a dash, and then the records are ordered sequentially, (1, 2, 3, 4 etc.)

After the blue number, you will see the words Local Family ID in red, and then some combination of letters or numbers. This is the Record Label, which is pulled directly from the Local Family ID that is entered on the *Family Intake* form. This Local Family ID is represented in the Record ID in order to make it easier to locate records. If there is not a Local Family ID entered on the Family Intake form, there will be a blank space in the Record Label. As you can see in the example below (see Figure 34) the full Record Label is:

2016-1 Local Family ID: Family 123

The REDCap Record ID is 2016-1, and the Record Label is Family 123.

Below the full Record Label on the Record ID, the Data Access Group the record belongs to is listed in green text. Please refer to **REDCap Overview & Key Terms** section for a definition of Data Access Group.

Figure 34.

Informed Consent

MDH requires that all families receiving family home visiting services are given an opportunity to provide informed consent for their data to be shared with MDH. There are three options for consent (see Figure 35):

1. Full Consent – all data will be shared with MDH, including personal identifiers.
2. Exclude personal identifiers – personal identifiers will be suppressed.
3. No Consent – no client data will be shared with MDH.

Figure 35.

In REDCap, clicking the **"Full Consent"** option means that all fields will be displayed on the subsequent forms for all participants.

When **"Exclude personal identifiers"** is selected, data that are considered personal identifiers (see Figure 36) are removed from subsequent forms, so this data cannot be entered into REDCap.

Figure 36.

When **"No Consent"** is selected, the user will be presented with a warning message stating (see Figure 37): *STOP. Since you selected "No Consent" do not enter any more data on these forms.* At this point you should not enter any additional information for this family. You should exit the form without saving the data that was already entered.

Figure 37.

If a family changes their level of consent during the course of receiving family home visiting services, this field must be updated in the *Family Intake* form. If the consent level is changed from **"Full Consent"** to **"Exclude personal identifiers,"** REDCap will delete data from personal identifier fields. When the form is saved, a message will alert the user that data will be deleted. You must click **"OK"** for each message (see Figure 38).

Please note that any data that has already been submitted to the IHVE database will be retained there.

Figure 38.

IHVE Data Submission Email Messages

Every day after business hours, the IHVE data system looks for *Submit* forms that were completed during the past day, indicating that there is new data to send to MDH. The IHVE data system pulls the data out of REDCap and checks the data for errors. IHVE sends an email back to the FHV provider agency for each data submission. There are two types of emails:

- **Successful Data Submission Message**
- **Error Message**

Important Note: These emails **do not** go back directly to the REDCap user that entered the data. IHVE will send these emails to an email address designated by the FHV provider agency. To find out which email address receives these messages for your agency, talk with your team lead or program supervisor, or contact the MDH FHV Evaluation Unit at Health.FHVData@state.mn.us.

Please review these email messages regularly. These emails confirm that your agency's data is being sent to IHVE. If you receive error messages, you will want to address them promptly.

Successful Data Submission Message

If there are no errors in the data submission, the data will be saved in the MDH IHVE database. Your agency will receive an email that contains the MDH Assigned ID for each person in the family (see Figure 39). This ID should match the *MDH Issued Participant ID* field on the *Intake* form for each participant.

From:
Sent: Monday, November 4, 2019 10:06 AM
To: <REDCap User Email Here>
Subject: FHV REDCap Import Status

MDH FHV REDCap Successful Visit Import

NON-PRODUCTION OR TEST DATA

This is an update on your REDCap submission. The submission was successful. You should update the REDCap record to include the MDH Assigned Participant Ids shown below. This is necessary to track future changes for the family and participants.

REDCap Visit/Record Id 1999-151::1

MDH Assigned Visit Id   487b860a-2433-4df6-bef0-7be44b08d119

Participant	Local ID	MDH Assigned ID
PCG	p123456	61f453af-5ced-4a38-b9dc-5326c56c92cd
SCG	s123456	1be0f08d-e558-474e-8e9c-cfc741595453
TC	t123456	145711a2-ad79-4bd2-8403-5df7248d1653

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Figure 39.

If this data submission contains new FHV participants that did not previously have an *MDH Issued Participant ID,* copy the MDH Assigned ID from this email and paste it into the *MDH Issued Participant ID* field on the participant's *Intake* form. Use the Participant type and Local ID information in the email to match the ID to the correct participant:

- PCG = Primary Caregiver
- SCG = Second Caregiver
- TC = Target Child
- OC = Other Child

After pasting the *MDH Issued Participant ID* into the *Intake* form, make sure to save the form (see the section **Saving in REDCap**), and update the ***Submit Intake*** form. These steps will ensure that data submitted to IHVE in the future will be associated with the correct participants.

Error Message

If there were errors in the data submission, the data will **not** be saved in the MDH IHVE database. Your agency will receive an email with the REDCap Record ID, visit number, and a list of the errors (see Figure 40).

You must review these errors and make corrections in REDCap. After you have made your edits to each form, save the form and update the ***Submit*** form associated with the corrected form.

Contact the MDH FHV Evaluation Unit if you need help correcting errors by emailing Health.FHVData@state.mn.us.

You can avoid errors by following validation rules and by making sure that required fields are completed.
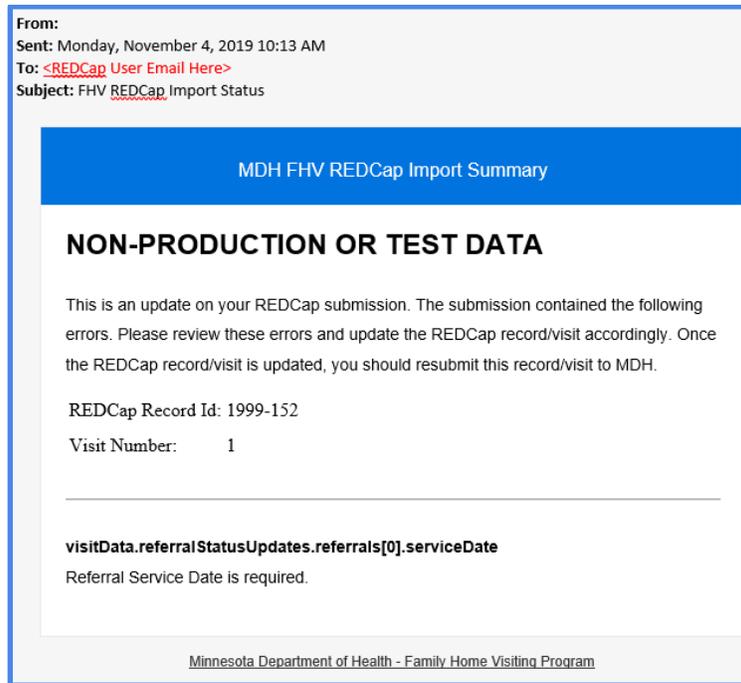
Figure 40.

IHVE Person Search Instructions

Person Search is a feature that allows IHVE REDCap users to search for Family Home Visiting (FHV) participants within the IHVE database. Access to the IHVE Person Search is limited to local FHV staff who collect and report FHV evaluation data to MDH.

Login Instructions

MDH will set up a Person Search account for each IHVE REDCap user. When the account is created, you will receive an email from Health.FHVData@state.mn.us with your username and temporary password (Figure 41). The email will have the subject line "MDH FHV REDCap Person Search."

Important Note: Your Person Search username will be the same as your MDH REDCap username.
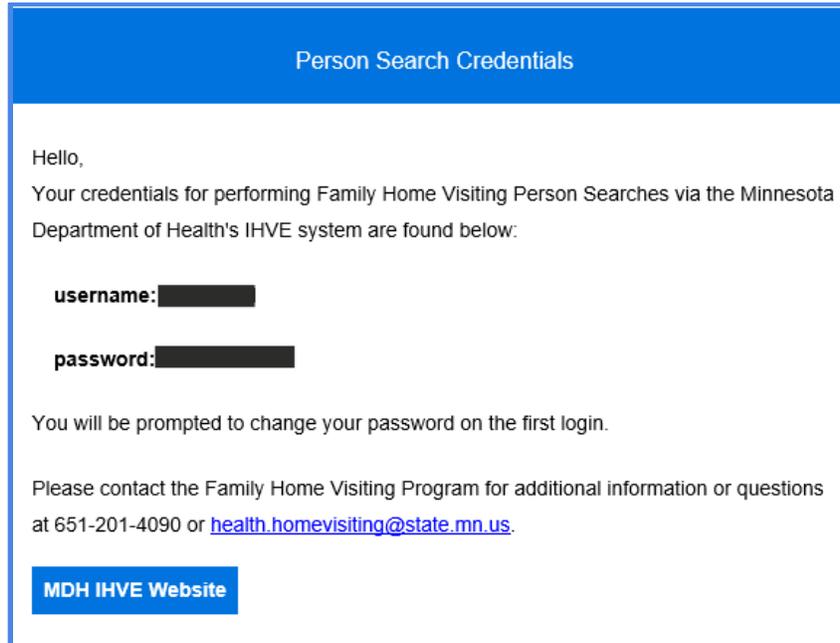
Figure 41.

To log into your Person Search account for the first time, go to the IHVE Portal (https://ihve.web.health.state.mn.us/) using your web browser. Click "Log in" in the top menu bar (Figure 42).
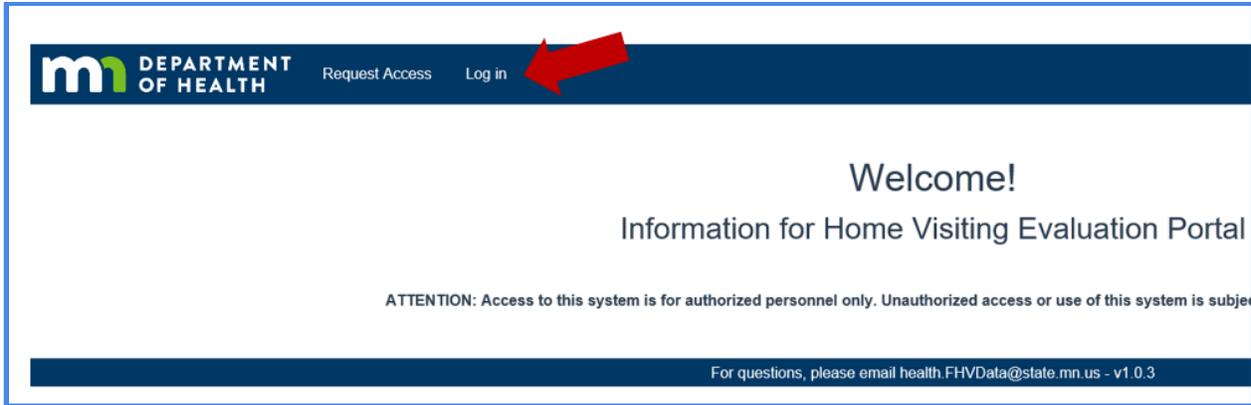
Figure 42.

The login screen will pop up (Figure 43). Enter the username and temporary password that was sent to you by email.

Figure 43.

When you log into the MDH IHVE Portal for the first time, you will be prompted to change the password to activate your account (Figure 44).

Figure 44.

The new password must have the following: at least 1 upper case character**,** at least 1 special character (such as !#$%&'()*+,-./:;<=>?@[\]^_`{|}~") and minimum length of 10 characters.

If you do not update the password within 10 minutes, the Person Search will time out, and you will need to log back in with the temporary password.

A confirmation message will appear when the new password is created successfully (Figure 45).
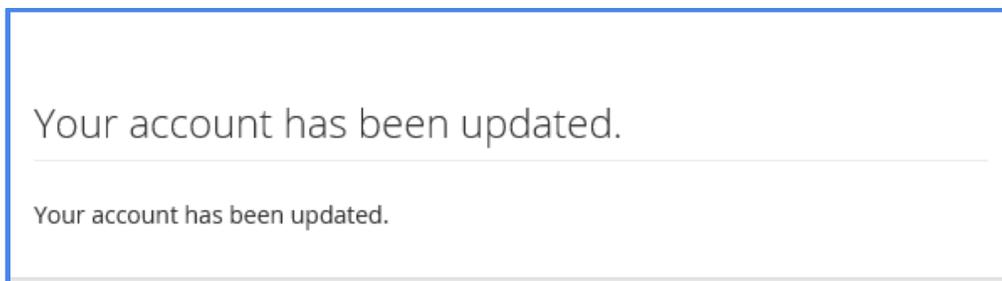
Figure 45.

Person Search by Local ID or Search by Name or Demographics

To use the Person Search, log into the MDH IHVE Portal and click on "Person Search" in the top menu bar (Figure 46).
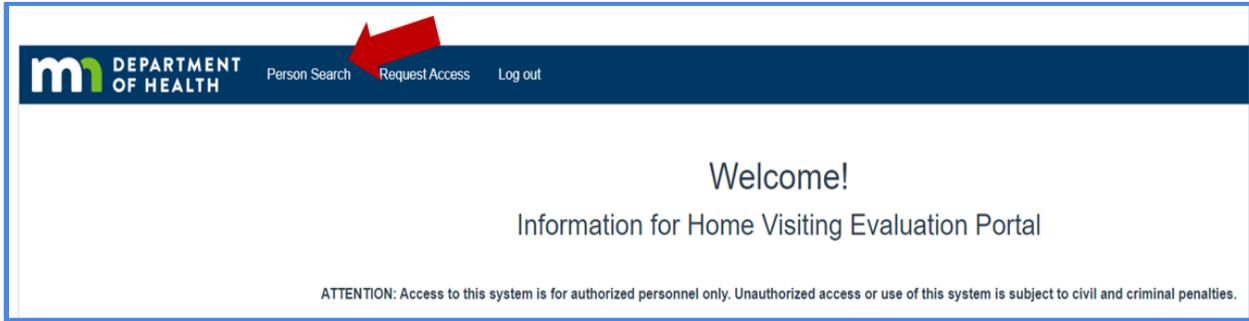
Figure 46.

There are two types of Person Search:

1) Search by Local ID, and
2) Search by Name or Demographics.

Search by Local ID

Select the FHV Provider from the Provider menu, and enter the Local Participant ID that was assigned to your client by that FHV Provider (Figure 47). Both fields are required for this type of search.

Figure 47.

Search by Name or Demographics

Enter the first and last name of the person. Both fields are required for this search. You can enter other demographic information in the fields to get a better match (Figure 48).

Figure 48.

Reviewing Person Search Results

If there are no matches to the search terms, a message stating "No Results Found" will appear (Figure 49).

Figure 49.

If there are possible matches to the search terms, the Person Search will display the result(s) (Figure 50). For each result, the MDH ID will be shown – this is the IHVE Participant ID, also called the MDH Issued Participant ID in the REDCap forms. Review the information shown for each result and determine whether it is the correct match for your client.

Important Note: If you are not sure that the result matches your client, do not use the MDH ID provided. Instead, please proceed as if your client does not already exist in the IHVE database and submit the intake forms without an *MDH Issued Participant ID*.

Figure 50.

Entering the IHVE Participant ID into REDCap

If there is a match for your client in the Person Search, copy the MDH ID using your computer's copy-paste function (Figure 51).

Figure 51.

Paste the MDH ID in the *MDH Issued Participant ID* field on the client's *Intake* form in REDCap (Figure 52). Make sure to save the form (see the section **Saving in REDCap**), and update the ***Submit Intake*** form.

Figure 52.

Resetting Password

If you forget your password for the MDH IHVE Portal, click on the 'Forgot Password?' link on the login screen (Figure 53).

Figure 53.

You will be prompted to enter your username or email address (Figure 54).
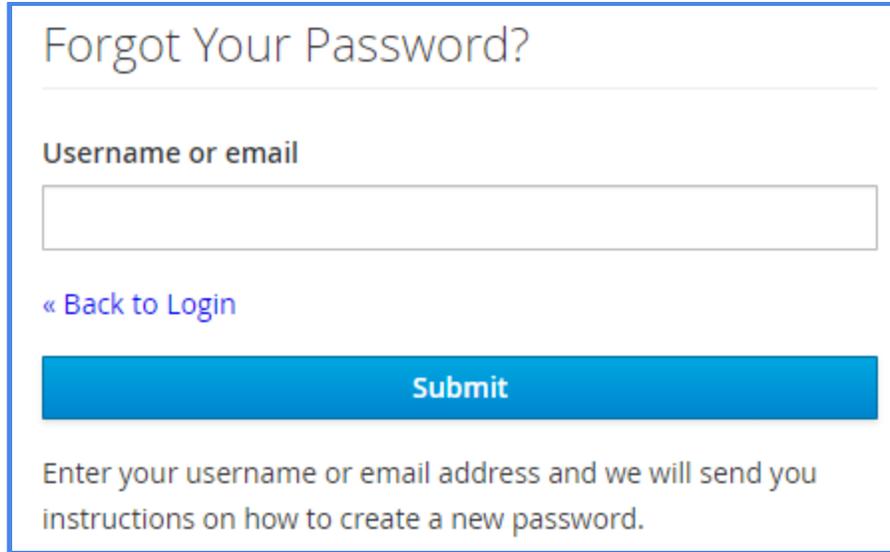
Figure 54.

You should receive an email with a link that will allow you to reset your password (Figure 55). Click on the link. Note that the link will expire within 5 minutes; if you do not use it within that time, you will need to click on the 'Forgot Password?' link again to generate another email.
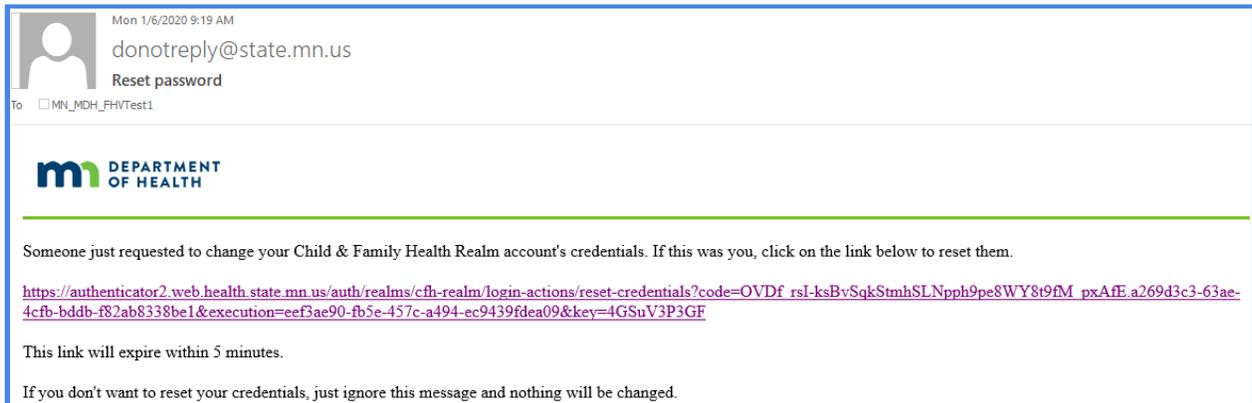
Figure 55.

After you click on the link, you will be prompted to enter a new password.

Appendix

How to Get Help

Contact the FHV Evaluation Unit by email at Health.FHVData@state.mn.us with any questions about IHVE or related to entering family home visiting data in REDCap.

Family Home Visiting Section

Child and Family Health Division

P.O. Box 64882, St. Paul, MN 55164

Health.FHVData@state.mn.us

Additional Resources

The REDCap Consortium website is a helpful resource for information about REDCap around the world and also has video resources. The main learning/training resources are on the *Training Resources* and *Help & FAQ* tabs of the REDCap page.

Video Tutorials

For video tutorials, go to the *Training Resources* tab in REDCap to view videos that cover specific topic areas.

- A Brief Overview of REDCap (5 min) - A quick summary of what REDCap features..
- Data Entry Overview - A focused exploration of basic data entry workflow.

Glossary of Terms

Add/Edit Records – the only place where you can start a new record located in the Navigation Menu.

Branching Logic – a function that hides or displays fields under certain conditions. If branching logic is defined, a field will only be visible if the conditions were met.

Calculated Fields – real-time calculations on data entry forms. Examples include caregiver's and child's age.

Codebook – a read-only version of the project's Data Dictionary and serves as a quick reference for viewing field attributes without having to download and interpret the Data Dictionary.

Data Access Group (DAGs) – restricts user access to a subset of data within the project. For example, each data entry user only has access to see and enter data for their program site.

Data Collection Instrument – a data entry form created to capture data. It is used interchangeably with "data entry form" or simply "form".

Data Entry Fields – REDCap instruments use several different types of questions, including text boxes (enter text), drop down lists (select only one answer), check box lists (select all answers that apply), and calculated fields.

Data Dictionary – a specifically formatted CSV (comma delimited) file that you can use in place of the Online Designer to create and edit your Data Collection Instruments and fields.

Data Quality Rules – predefined data rules that limits what data can be entered for certain fields. Data quality rules help the project check for data discrepancies. Examples include minimum and maximum limits for fields such as birth weight.

Field – see Data Entry Fields

Form Status Icon – status of the record's data form completeness, denoted with a color; gray – no data; red – incomplete; yellow – unverified; green – complete; blue-many statuses (mixed).

History – tracks the history of all recorded data values for a particular variable.

User Rights – the customized privileges that research team members have in terms of data form modification, data entry, and data access.

Projects – a group of one or more forms in which you and other users enter data.

Record ID – a unique identifier for each record in the database. REDCap automatically assigns each new record a unique Record ID. The Record ID can only be edited by an administrator. The Record ID is a four-digit number followed by a dash and another number.

Record Label – information added to the unique ID of the program (e.g. Record ID 1847-1 Local Family ID: Family 123) to help select the right record during data entry. For example, 4-digit site location and Local Family ID will be added as Record Labels when entered.

Record – the set of information for a unique participant. Each record is composed of a number of fields (pieces of data), which can be spread across multiple forms (instruments) per record.

Record Status Dashboard – a table that lists all existing records and their status for every Data Collection Instrument as denoted by form status indicator colors. Users can use the Record Status Dashboard to navigate to a record's home page or to a record's Data Collection Instrument.

Repeating Form (Instrument) – a Data Collection Instrument that can be repeated as many times as needed during data entry. The Visit Level Data form is a repeatable form and can be completed multiple times for the same Record ID.

Variable Name – the name of the variable that is stored in the REDCap database (not visible during data entry).

Record Home Page – displays a grid of the form-by-form progress of data entered for a specific Record ID as denoted by form status indicator colors.

REDCap Mobile App – is not compatible with the MDH FHV REDCap database.