Version 9.5.x - (released 12/31/2019)

FUNCTIONAL CHANGES

- ***Improvement*:** New content was added to the "Help & FAQ" page

FUNCTIONAL CHANGES

- ***Improvement*:** In Alerts & Notifications when clicking the "Preview Message by Record" option, it now displays the Custom Record Label and/or Secondary Unique Field value in the record drop-down list in the dialog.
- ***Improvement*s and *Change*s when exporting data from REDCap into SAS**
  - Full integration of the Missing Data Code functionality in the SAS data export syntax file to prevent issues when loading data containing Missing Data Codes into SAS.
  - Note: The SAS Pathway Mapper file has been removed and is no longer utilized. Users exporting data to SAS will now need to manually modify the path of the CSV data file in their .SAS syntax file to reflect its locally saved path on the device.

Version 9.5.x - (released 12/11/2019)

FUNCTIONAL CHANGES

- ***Improvement*:** When using the Data Resolution Workflow and exporting all data queries in a CSV file, the following attributes are now all exported as their own separate columns in the CSV file: record name, event name, data access group, data quality rule, and field name. In previous versions, some of these attributes existed together in a single column and thus were harder to parse out individually. Additionally, the following columns have been added to the CSV export file: Current Query Status, Time Raised, and Time Resolved.

Version 9.5.x - (released 12/05/2019)

FUNCTIONAL CHANGES

- **New Action Tag: @HIDDEN-PDF** - Hides the field only in the downloaded PDF of one or more instruments (including blank PDFs, PDFs with data, and compact PDFs with data). Note: Other @HIDDEN action tags will not hide fields inside PDF exports, so @HIDDEN-PDF must be used specifically to hide fields in PDFs.
- ***Improvement*: More rich text editors** - The rich text editor is now available when composing survey invitations. This includes composing Automated Survey Invitations or invitations to be sent via the Participant List or via the Survey Options on data entry forms.***Improvement***: The rich text editor is now available on the Email Users page in the Control Center and also for the Survey Confirmation Email option on the Survey Settings page.
- ***Change*/*Improvement***: The HTML tags THEAD and TFOOT are now officially allowed for use in HTML-based user-provided input, such as field labels, survey instructions, etc.

- ***Change***: If the "File Upload field enhancement: Password verification & automatic external file storage" setting has been enabled in a project, then when a user attempts to delete a file for a File Upload field (including the deletion of older revisions for that field), it is now required for users to provide a reason (in the text box in the "Delete file?" popup) in order delete the file. In previous versions, providing a reason was only optional.

Version 9.4.x - (released 11/22/2019)

FUNCTIONAL CHANGES

- ***Improvement*****:** Line breaks may be preserved in data values in CSV data exports - When creating/editing a report, the section "Additional report options" contains a new setting: "Remove line breaks/carriage returns in all text data values (only applicable for CSV Raw and CSV Label data exports)". This setting will be enabled by default for all existing reports and for any new reports being created. The option will effectively enabled (i.e., will remove line breaks) when exporting Reports A and B in order to be consistent with their current behavior in previous versions. This option is only used for CSV data exports and not for reports or exports to statistical analysis packages.
- ***Improvement*****:** Added “Copy” and “Paste” options to the [right-click] context menu for all rich text editors.

Version 9.4.x - (released 11/15/2019)

FUNCTIONAL CHANGES

- ***Improvement*****:** A custom email “display name” can be set for the email sender when sending an email for Alerts & Notifications, the Survey Email Confirmation option on the Survey Settings page, and when sending survey invitations via Automated Survey Invitations, via the Participant List, or via the Compose Invitation option on a data entry form.
- ***Improvement*****:** The email “display name” for most outgoing emails is now automatically populated and thus is able to be displayed in the recipient’s email client. Previous versions did not use the display name but left it blank for outgoing emails. For user requests that are triggered by users, such as production ***Change*** requests, API token requests, etc., the user’s first and last name from their My Profile page will be used automatically as the display name in those emails. For emails originating from REDCap administrators that are automated by the system, the email display name will the “Name of REDCap Administrator” setting (from the General Configuration page) or else the “Contact name to display on Home page” (from the Home Page Configuration page), which is dependent upon the type of email being sent.
- ***Change***: The icons for Project Bookmarks and Custom Application Links that are displayed on a project's left-hand menu have been updated as Font Awesome icons to match all the other icons on the menu.
- ***Change***: The popup for displaying Project Notes on the My Projects page might not behave correctly under certain conditions. It is now displayed in a better format to avoid these issues.

Version 9.4.x - (released 11/07/2019)

***NEW FEATURE*S, & OTHER *CHANGE*S:**

- ***New Feature*: Missing Data Codes (i.e., "Data Missingness" functionality)**
  - Fields that have a blank/missing value may be marked with a custom 'Missing Data Code' to note why the value is blank. These missing codes may be used to aid in data analysis by specifying why a field lacks a value. Users may enable custom missing data codes at the project-level in the Additional Customizations popup on the Project Setup page. The missing codes should be coded just like the choices of a multiple choice field with code + comma + label, in which the codes can only have letters, numbers, dots, dashes, and underscores (e.g., '-999, Not asked' or 'UNK, Unknown'). If no codes are entered, this feature will remain disabled. After missing data codes have been set up in a project, you will see an 'M' icon next to each field when viewing a data entry form. Click the icon to open your list of missing data codes, and select one. Once selected, it will save the missing code as the literal data value for the field. Missing data codes can be used for any field type (e.g., date, slider, file upload fields).
  - If utilizing missing data codes, the functionality will be enabled on all fields by default, and the code will be saved as the literal data value for the field.
  - New action tag @NOMISSING can disable the missing data option for a given field
  - Behavior with branching logic – If a field should be hidden by branching logic, REDCap will ask the user (except on surveys) if they wish to delete the value of the field being hidden. But if the field has a missing data code saved for it, it will still hide the field but will not remove the missing data code as the field's value. This allows a field to still be "blank" and have a missing code while being hidden by branching logic.
  - New isblankormissingcode() function for branching logic, logic, and calculations - Returns a boolean (true or false) if the field value is blank/null/"" or if the value is a Missing Data Code, in which Missing Data Codes have been explicitly defined in the project on the Project Setup page under Additional Customizations. E.g. isblankormissingcode([age]), in which if "age" has a value of "UNK" (which might be a Missing Data Code in a project), then it will return TRUE. And if the field has any non-blank/non-null value that is also not a Missing Data Code, it will return FALSE.
  - Missing data codes can be imported via API, Data Import Tool
  - All the missing data codes are displayed for reference at the top of the Codebook page
  - When creating/editing a report, a new option exists under the "Addition report options" section: "Display any Missing Data Codes in place of blank values (where applicable)". This option will allow users (based on their preference) to show or not show the Missing Data Codes (if they have been saved for any field in any record) in the report or export.Note: In PDF exports of data collection instruments, any Missing Data Codes will be represented as blank values in the PDF.

- ***Change***s for Data Quality Rules
    - DQ rule A and B (for finding blank values) will continue to return only truly blank values and thus will not return fields with missing data codes saved as the value.
    - New rule - DQ “Rule I (Fields containing missing data codes)” has been added as a new rule for specifically finding fields with missing data codes saved as the value.
    - DQ rule F (Hidden fields that contain values) will ignore fields that have a missing data code saved as the value because it is allowable for such fields to be hidden by branching logic while still maintaining a missing data code as a value.

- ***Improvement/Change*****:** If a user is viewing a data entry form that has been enabled as a survey and then clicks "Compose survey invitation" in the survey options at the top right of the page, if they compose and send an invitation that is marked to be sent "Immediately", it will display a popup to inform the user that it is recommended that they leave the page very soon before the respondent has a chance to enter any data on the survey page. This is done because if the respondent begins entering data on the survey immediately after receiving the invitation, and then the user (while still viewing the data entry form) saves the form, the user could unwittingly erase the respondent's data values that were just entered.

- ***Change***: When enabling the Twilio telephony services in a project, REDCap no longer performs a check to ensure that Twilio's "Request Inspector" feature is disabled. Due to technical issues with not being able to automatically disable the Request Inspector via Twilio's API for some REDCap server configurations, REDCap no longer forces the Request Inspector to be disabled but instead provides text to inform users during the Twilio setup process that it is *highly* recommended that they disable the Request Inspector manually in their Twilio account (especially if collecting identifying information) and provides information on where/how to do such.

- ***Improvement***/***Change***: If the Universal “From” Email Address option is being utilized for the system, the sender’s email address now gets set as the Display Name in the email received. In previous versions, no Display Name is ever set for outgoing emails. So instead of the recipient only seeing that the sender is no-reply@vumc.org (assuming this to be the catch-all universal address, for example), it instead will appear to be from “joe.user@gmail.com <no-reply@vumc.org>. This is an ***Improvement*** because it provides the recipient with more context with regard to w

Version 9.3.x - (released 10/25/2019)

FUNCTIONAL CHANGES

- ***Change***: The "Data Search" feature on the "Add/Edit Records" page will no longer allow users to search over "All fields" if a project contains more than 20,000 records. This is done for performance reasons so that it does not bog down the database server.

Version 9.3.x - (released 10/11/2019)

FUNCTIONAL CHANGES

- ***Improvement/Change*:** The Codebook now denotes if an instrument is enabled as a survey, in which it is noted immediately to the right of the instrument name.
- ***Change***: Users will no longer be allowed to display all pages of a report (by selecting “ALL” from the report’s page selection drop-down list) if it has been determined that such a report would display more than 500,000 data points (i.e., table cells) on the report page. This is to help prevent users from causing performance degradation to the REDCap server and also to improve user experience (assuming the page would take a very long time to load and might even cause the user’s web browser to crash).
- ***Change***: If any projects have enabled both the Randomization module and the Double Data Entry module together in the same project, it now displays a warning at the top of the Project Home page to inform the users that these two are not compatible with each other and thus might cause various issues if used together in the same project.
- ***Improvement***/***Change***: The API method "Export Project Info" now includes a new attribute named "external_modules", which will output a comma-delimited list of all External Modules that are enabled in that project. Note: It will include only the unique module name (not the module title or module version).
- ***Change***: The drop-down record list near the top of the Data Quality module now only displays the first 10,000 record names for projects containing more than 10,000 records. This is to prevent excessive load on the server and also to prevent the user's browser from crashing for very large projects.

Version 9.3.x - (released 10/3/2019)

FUNCTIONAL CHANGES

- ***Improvement*:** If the "File Upload field enhancement: Password verification & automatic external file storage" setting has been enabled in a project, then when a user attempts to delete a file for a File Upload field (including the deletion of older revisions for that field), it will provide a text box in the "Delete file?" popup in order to allow the user to optionally provide a reason for why they are deleting the file (if they wish), after which this reason will be logged on the Logging page.

Version 9.3.x - (released 9/25/2019)

FUNCTIONAL CHANGES

- ***Improvement*:** On the Survey Settings page, the "Redirect to a URL" option now allows the Smart Variable [survey-url] to be used - e.g., [survey-url:other_survey].

Version 9.3.x - (released 9/5/2019)

FUNCTIONAL CHANGES

- ***Improvement***: The "Cancel" button on data entry forms now displays a confirmation prompt after being clicked to ask the user if they truly wish to cancel and lose all their ***Change***s.
- ***Change***: When a user copies a project that has Double Data Entry enabled, it will no longer have Double Data Entry enabled in the new project by default but instead will require that an administrator enable it for that new project.

Version 9.3.x - (released 8/15/2019)

***NEW FEATURE*S, & OTHER *CHANGE*S:**

- ***New Feature*: File Version History for File Upload fields** (project-level setting)
  - This feature allows a new file to be uploaded onto a File Upload field that already has a file uploaded for it. If a file has already been uploaded, the field will have a new link "Upload new version", and after being clicked, it will allow the user to upload another file without having to delete the existing one. The old/existing file will not be deleted but will still be accessible as an older version of that file in the Data History popup (by clicking the "H" icon next to the field). Within the Data History popup, a user may view, download, or delete any existing version of the file that exists, in which all versions of the file will be displayed in a table format and listed in chronological order with regard to being uploaded.
  - "Import File" API behavior: When the File Version History feature is enabled for a project, and the "Import File" API method is used to import a file into a File Upload field that already has a file saved for it, the new file will overwrite the existing file but keep the existing file in the File Version History, thus not deleting it. This is different for projects that have the File Version History disabled, in which importing a new file will delete the existing file.
- ***Improvement*:** The Control Center's left-hand menu now contains a text field for entering a project's PID (project ID), after which it will direct the user to that project. This provides a quick way of navigating to a project when you have the PID.
- ***Improvement*:** The Data History Popup for File Upload fields now provides more detailed information, such as the filename of the uploaded file.

Version 9.2.x - (released 7/26/2019)

FUNCTIONAL CHANGES

- ***Improvement*:** In a project with repeating instruments, the Record Home Page now displays a count of total instances of a given repeating instrument next to the instrument name in the tables of instances displayed at the bottom of that page.

Version 9.2.x - (released 7/12/2019)

***NEW FEATURE*S, & OTHER *CHANGE*S:**

- **10 new Smart Variables**
  - [project-id] - The Project ID (i.e., PID) of the current REDCap project.
  - [user-fullname] -The current user's first and last name (as listed on their My Profile page).
  - [user-email] - The current user's primary email address (as listed on their My Profile page).
  - [redcap-base-url] - The base web address for the REDCap installation.
  - [redcap-version] - The current REDCap version number of the REDCap installation.
  - [redcap-version-url] - The base web address of the current REDCap version directory for the REDCap installation.
  - [survey-base-url] - The base web address for surveys for the REDCap installation.
  - [instrument-name] - The unique instrument name of the current survey or data entry form. It will return a blank value if not in an instrument context.
  - [instrument-label] - The instrument label of the current survey or data entry form. It will return a blank value if not in an instrument context.
  - [survey-title] - The survey title of the instrument specified by the 'instrument' parameter (if provided). If the 'instrument' parameter is not provided, the current survey instrument will be used, else it will return a blank value if not in an instrument/survey context.
- **4 new Action Tags**
  - @NOW_SERVER - Loads the REDCap server's date+time into a blank Text field - similar to the @TODAY tag but additionally includes the time portion. If the field has validation, the value will adjust to match the date format. NOTE: The time used will be the REDCap server's local time, which might be different from the user's local time if in another timezone. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.
  - @TODAY_SERVER - Loads the REDCap server's date into a blank Text field - similar to the @NOW tag but without the time portion. If the field has validation, the value will adjust to match the date format. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.

- @NOW_UTC - Loads the current UTC/GMT date+time into a blank Text field - similar to the @TODAY tag but additionally includes the time portion. If the field has validation, the value will adjust to match the date format. NOTE: The time used will be the current UTC/GMT time, which might be different from the user's local time if in another timezone. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.
- @TODAY_UTC - Loads the current UTC/GMT date into a blank Text field - similar to the @NOW tag but without the time portion. If the field has validation, the value will adjust to match the date format. Also, do not use this tag on fields with branching logic because it will always prompt the user to erase the value, so look at using @HIDDEN instead if you wish to hide the field.