REDCap Release Notes

Version 9.0.1 - (released 5/10/2019)

BUG FIXES & OTHER CHANGES:

• Change: Replaced many of the older icons in the user interface with Font Awesome icons, especially on the left-hand project menu and left-hand Control Center menu.
• Change: Consolidated the two project pages “Record Locking Customization” and “E-signature and Locking Mgmt” into a single two-tabbed page named “Customize & Manage Locking/E-signatures”. Note: If user only has access to one of these pages, they will simply not see the other page/tab.
• Bug fix: When enabling the Clinical Data Pull (CDP) module in a project, it would mistakenly say ”Enable DDP on FHIR” in the Logging. It should instead say ”Enable the Clinical Data Pull (CDP) module” in the Logging since that module was renamed and is no longer called ”DDP on FHIR”.
• Bug fix: The FHIR web service requests made by the Clinical Data Pull module would mistakenly make calls to the FHIR ’Observation’ endpoint using a format that was not compatible with some Epic installations. This was modified to a slightly more compatible format. (Ticket #63080)
• Bug fix: In the Alerts & Notifications module, it was mistakenly not allowing users to use Signature fields in the Message Attachment section of an alert.
• Bug fix: In the Alerts & Notifications module, for alerts set to trigger when saving a specific form or survey with conditional logic set, in which the alert is set to repeat after initially being sent, then if the ”ensure logic is still true” option has been checked and a recurring notification has already been scheduled for a record, it would mistakenly not remove the recurring notification when the logic becomes false. And this only occurs if an initial notification has already been sent for that record for that alert.
• Bug fix: In the Alerts & Notifications module, whenever an alert is created or modified, the Logging page might get too wide when displaying the details of this event.
• Bug fix: In the Alerts & Notifications module, the Logging page might mistakenly display logged events when Alerts are created or modified when selecting a record from the ”filter by record” drop-down.
• Bug fix: After being triggered, if an Alert is set to be scheduled after a delay (rather than sending immediately) and is set to only send one time, the Notification Log page would mistakenly display the record multiple times, all with the same time. Also, the Notification Log’s ”end time” might mistakenly get forcibly set to the current time and prevent users from viewing notifications that are scheduled to be sent in the future. (Ticket #63087)
• Bug fix: When clicking the form status stack icon on the Record Home Page or Record Status Dashboard for a repeating instrument/event, the popup displaying all the repeating instances would sometimes not be positioned correctly on the page and might be too narrow.
• Bug fix: When using the @DEFAULT action tag in a repeating survey, it might mistakenly think that the current survey has data and thus would prevent the action tag from operating, even when no data exists for that survey on that repeating instance.
• Bug fix: When importing data (via the Data Import Tool or API import) for a repeating event, if the field "redcap_repeat_instance" is not included as a field in the imported data set, instead of returning an error message, it would mistakenly allow the data to get imported. While this causes no problems for the first imported batch of data, any subsequent imports would mistakenly get piled on top of the existing data in the database (rather than updating the existing values), thus causing duplicate/multiple rows of data to pile up in the database for a given record/event/field, which could have various negative consequences, such as making some project pages very slow. Now it will instead return an error message if data for a repeating event is being imported in which the field "redcap_repeat_instance" is not included as a field in the imported data set. (Ticket #63128)

Version 9.0.0 - (released 5/3/2019)

NEW FEATURES, BUG FIXES, & OTHER CHANGES:

• New feature: Alerts & Notifications
  o The Alerts & Notifications feature allows you to construct alerts and send customized email notifications. These notifications may be sent to one or more recipients and can be triggered or scheduled when a form/survey is saved and/or based on conditional logic whenever data is saved or imported. When adding/editing an alert, you will need to 1) set how the alert gets triggered, 2) define when the notification should be sent (including how many times), and 3) specify the recipient, sender, message text, and other settings for the notification. For the message, you may utilize customized options such as rich text, the piping of field variables (including Smart Variables), and uploading multiple file attachments. While similar in many respects to Automated Survey Invitations, Alerts & Notifications allow for greater complexity and have more capabilities. For example, alerts apply to both data entry forms and surveys, and they also allow for more options regarding who can be the recipient of a notification (project users, survey participants, etc.).
  o System-level permission settings – On the "Modules/Services Configuration" page in the Control Center (at bottom of page), administrators may adjust the settings that determine if normal users are able to use email field variables in an alert’s To/CC/BCC field and/or use email addresses entered manually as freeform text into an alert’s To/CC/BCC field. These settings will be determined based on the comfort level and/or policy of the local REDCap institution. By default, REDCap will allow normal users to use email fields and freeform text emails (i.e., both are enabled by default), but this can be easily changed immediately after installation or upgrading. Additionally, if Yes is chosen for allowing freeform emails to be entered, the admin may limit those emails to a specific whitelist of email domain names (e.g., vumc.org, mmc.edu) to provide some additional restriction there.
  o Converting existing Email Alerts into Alerts & Notifications – If your REDCap installation currently has the Email Alerts external module installed and is being used in projects, there will be an option (a green button) at the top left of the Email Alerts configuration page to convert all the Email Alerts in a given project into Alerts & Notifications. This is an opt-in setting, and must be done for each project one at a time. It will present a dialog popup with information so that the user understands that there are some differences between EA and A&N, but overall, everything will be able to be converted, although the alerts might look slightly different afterward as A&N’s. Once the Email Alerts are converted, the Email Alerts module will be automatically disabled for the project, and the user will be redirected to the A&N page. Note: The conversion instructions notes that if (for whatever reason) the A&N’s are not behaving like the user anticipated, they can easily revert back to using Email Alerts again by 1) deactivating all the A&N’s that were created from the conversion, and 2) have an administrator re-enable the Email Alerts module.
• **Improvement:** The rich text editors on the Survey Settings page have now been updated to a newer version of the TinyMCE package. (Note: IE9 and IE10 will still use the older version of the rich text editor because they are not compatible with the newer one.)

• **Improvement:** New records can now be created directly from the Record Status Dashboard. If record auto-numbering is enabled, it will display an “Add new record” button, otherwise it will display a text field for users to enter a new record name to create.

• **Improvement:** Links to the Online Designer, Data Dictionary Upload page, and Codebook were added to the left-hand project menu for easier navigation. Also, a new section “Project Home and Design” was added on the left-hand menu to contain all these links, as well as the Project Home and Project Setup page links.

• **Change:** The Quick Tasks box on the Project Home page was removed since all the pages listed inside it are now located on the left-hand project menu, thus making the Quick Tasks box redundant.

• **Bug fix:** Certain types of HTML tags in a field label might cause parsing issues when exporting to stats packages, especially SAS. To prevent this, all HTML tags will now be removed from field labels as they are included in the stats package syntax files. (Ticket #57751)

• **Bug fix:** When calling the "Export Records" API method, if any invalid values were passed in the API request parameters 'events', 'fields', or 'forms', it would often ignore the incorrect value and would mistakenly not return an error. Additionally, in this scenario it might mistakenly return all events, all fields, or all forms, respectively, rather than limiting the data returned to only the valid values in those filter parameters. (Ticket #54273)

• **Bug fix:** If a production project is in Draft Mode, and a matrix field’s label has been modified *and* the field has data saved for one or more records, this is now considered a critical issue during the production change approval process because of specific cases where changing a matrix field’s label can change its meaning and thus negate the existing data - much more so than with regular non-matrix fields. (Ticket #60834)

• **Bug fix:** If a repeating instrument is enabled as a repeating survey, and then later the instrument is set to no longer be repeating via the "repeatable instruments" dialog on the Project Setup page, it would mistakenly still display the repeating survey icon (i.e., green circle arrow) next to the instrument in the Online Designer. (Ticket #60869)

• **Bug fix:** If running a REDCap server with PHP 7.3, then the PDF Auto-Archiver would fail, as well as attempts to add PDF attachments to confirmation emails when surveys are completed. In all cases, it would crash with an HTTP 500 sever error. (Ticket #55868)

• **Bug fix:** Some Smart Variables, especially those related to repeating instance, would mistakenly not pipe correctly inside survey instruction text and survey completion text.

### Version 8.11.11 - (released 4/26/2019)

**BUG FIXES & OTHER CHANGES:**

• Bug fixes and updates for External Module framework

• Bug fix: If hyperlinks exist inside multiple choice labels on a survey that has Enhanced Choices enabled, the hyperlinks might mistakenly not be displayed in the correct color (depending on the survey design settings) and thus might not be readable.

• Bug fix: For multi-page surveys having fields with branching logic, in very specific situations some pages of the survey might mistakenly get skipped over. (Ticket #62299)
• Bug fix: When a hook or External Module is using REDCap::saveData() on a project page and importing data into another project, it may mistakenly change the global variable $Proj to point to the other project, thus causing possible issues on the page after the REDCap::saveData() method has been called.

• Bug fix: When importing data for a repeating instrument or event (via API or Data Import Tool), it would mistakenly be possible to import a non-integer number value (e.g., 2.1, 5.44) for the redcap_repeat_instance field.

• Bug fix: The Action Tag @NONEOFTHEABOVE fails to work if it references a choice not wrapped in quotes and is also followed by other text in the Field Annotation - e.g., "@NONEOFTHEABOVE=0 @INSTANCETABLE_HIDE". (Ticket #61939)

• Bug fix: When using the Twilio telephony services for surveys, in which a telephone/number field has been designated as the "phone number field for survey invitations", it would mistakenly not display the record name on the Survey Invitation Log to prevent users from viewing it. Since a field's value is being used, the response is already de-anonymized (i.e., a user can connect the participant in the Participant List to a specific record), thus it should not hide the record name in the Survey Invitation Log. (Ticket #49955)

Version 8.11.10 - (released 4/19/2019)

BUG FIXES & OTHER CHANGES:

• **Minor security fix:** A Cross-Site Scripting (XSS) vulnerability was discovered on the Data Import Tool page, in which a malicious user could potentially exploit it by manipulating data values for a specific field being imported in the CSV data file.

• Change: The Data History Widget on data entry pages now displays the "seconds" component of the "Date/Time of Change" timestamp for when the data value was added/modified. This allows users to view the logging items with greater granularity for when data changes are made in narrow windows of time.

• Bug fixes and updates for the External Module framework

• Bug fix: The Clinical Data Pull (CDP) would not function successfully on Cerner systems because part of REDCap's OAuth2 authorization process for FHIR only worked for Epic.

• Bug fix: When using Google reCAPTCHA for surveys, if the REDCap server was not able to communicate with the Google server (even temporarily), it would effectively prevent participants from ever reaching the survey. It now goes ahead and allows the participant to take the survey without successfully passing the reCAPTCHA if the Google server does not respond back within 5 seconds. (Ticket #61969)
• Bug fix: When using Google reCAPTCHA for surveys, the REDCap footer text was mistakenly not being displayed on the reCAPTCHA page, and the style/locations of the survey title and logo were slightly incorrect on the reCAPTCHA page. (Ticket #61969)

**Version 8.11.9 - (released 4/12/2019)**

**BUG FIXES & OTHER CHANGES:**

• **Major bug fix:** The DateDiff+Today/Now cron job would sometimes crash due to a fatal PHP error caused when processing the [survey-link] Smart Variable in the message of an Automated Survey Invitation. This would occur only under very specific conditions, and it would result in many projects/records not having their ASI datediff logic being processed, thus the ASI’s survey invitations would not get successfully scheduled in these cases and might cause invitations from other unrelated projects not to get scheduled either. (Ticket #61346, #61213)

• **Major bug fix:** When a project is using a public survey that has "Save & Return Later" enabled with "Allow respondents to return without needing a return code" enabled, then if a participant clicks the "Save & Return Later" button on the public survey and leaves the survey open on the "Your survey responses were saved!" page while another participant partially or fully completes the survey, and then if the original participant clicks the "Continue Survey Now" button on the "Your survey responses were saved!" page, then the original participant will mistakenly create a brand new record/response whenever they submit survey page again after returning. (Ticket #61764)

• Improvement: Added links to "select all" or "deselect all" for the checkbox options on the "Copy Project" page.

• Bug fix: When viewing the Field Comment Log popup on a data entry form, if the username in the User column is very long, it would mistakenly not wrap in the table but instead would overflow into the next column. Note: This was only partially fixed in a previous version. (Ticket #60923)

• Bug fix: The page footer on project pages would sometimes not be displayed at the very bottom of the page if the left-hand menu was taller than the right side of the page.

• Bug fix: In a project that has sent many survey invitations (e.g., >50,000), it could cause both the Public Survey Link page and the Participant List page to load very slowly and in some cases never fully load at all.

• Bug fix: When using the Clinical Data Pull, it would mistakenly make a POST request (instead of a GET request) to the Conformance Statement (metadata) endpoint. This would only cause issues with certain EHRs/configurations. (Ticket #61549)

• Bug fix: For some pages in REDCap, the PHP constant "PAGE" might mistakenly get set as '/index.php" rather than "index.php", which could cause problems for existing External Modules or hooks that must utilize the value of PAGE to determine the current location. This has now been changed so that any slashes at the beginning of PAGE will be trimmed off before it gets defined. (Ticket #61776)

• Bug fix: When exporting data in CSV Labels format for projects whose language is set to a language other than the default English, it would mistakenly always display "all" the choice labels for checkbox fields in the export file, rather than outputting the choice labels for only the checkbox options that had been selected for that field. (Ticket #60620)

• Change: Added note about e-Consent feature on the REDCap Home Page.

• Bug fix: When the Double Data Entry module is enabled in a project, and the current user is DDE person #1 or #2, it would not display the form status icons with the correct color on the left-hand menu when viewing a record but would instead mistakenly always display them as gray status icons. (Ticket #57484)

• Change: More explanatory info was added on the Survey Settings page for Question Numbering, Question Display Format, and Response Limit.
• Bug fix: The DateDiff+Today/Now cron job would mistakenly get run for projects that had been deleted in the past 30 days. It now ignores any projects that have been deleted by a user.

• Bug fix: When using the e-Consent Framework for a survey, the resulting PDF of the consent survey would mistakenly not obey the project-level PDF Customization setting to show or hide the REDCap logo/URL under specific conditions. This would vary depending on if certain settings were set for the e-Consent Framework, such as having first/last name fields defined or consent version. (Ticket #58221)

• Bug fix: When using the e-Consent Framework for a survey, if custom PDF header text is set under the project-level PDF Customization settings, it would mistakenly not get displayed on the resulting PDF of the consent survey.

Version 8.11.8 - (released 4/4/2019)

BUG FIXES & OTHER CHANGES:

• Minor security fix: If a malicious user is able to find the URL endpoint at which REDCap Messenger's message history can be downloaded as a CSV file for a given conversation, they could potentially exploit it by manipulating the query string of the HTTP request, which might allow them to download other users' conversations to which they do not have access.

• Minor security fix: If the hook functions file (as defined on the General Configuration page in the Control Center) begins with "http" or "ftp", then REDCap will not attempt to call/include that path.

• Major bug fix: When using Smart Variables in the conditional logic of an Automated Survey Invitation, in which the logic also contains a datediff function using "today" or "now" as a parameter in the function, it would often cause the ASI cron job to not correctly parse the logic and thus not schedule the invitations at the correct time, or it might mistakenly cause the cron job to crash unexpectedly without finishing scheduling all other ASIs for other surveys.

• Bug fix: When using branching logic or a calculation that contains a X-event-name or X-instance Smart Variable connected, in which it references an event or instance that does not exist (e.g., [previous-event-name] while on the first event), it would not fail gracefully but would mistakenly display an error message saying that the logic/calculation is incorrect.

• Bug fix: When completing an Adaptive survey or Auto Scoring survey from the REDCap Shared Library, the "redcap_survey_complete" hook would mistakenly not pass a value for the "record" and "response_id" parameters in the hook. (Ticket #60668)

• Bug fix: If the Clinical Data Pull feature is enabled for a project, it would still mistakenly display "DDP" (instead of "CDP") in a couple places in the project (Record Status Dashboard, Logging page).

• Bug fixes and updates for External Modules framework

• Bug fix: If a multi-page survey contains a matrix of fields, in which those fields are used in branching logic or in a calculation on another page on that survey, it would mistakenly display the matrix fields on the survey page containing the fields that reference them in their logic/calc. (Ticket #61134)

• Bug fix: A single LOINC lab was mistakenly missing from the field mapping page for Clinical Data Pull.

• Bug fix: If a multi-page survey contains a page in which every field on the page is a Descriptive field and also has branching logic, it would mistakenly always skip the page regardless of whether all the fields were hidden by branching logic.

• Bug fix: When the redcap_survey_identifier field is displayed in a report or data export, it would mistakenly only display the participant identifier value on the first event of a given record and would not display it if the first
instrument was a repeating instrument. It now always displays the participant identifier value in the redcap_survey_identifier column of a report/export for every row/item for a given record. (Ticket #59811)

- Bug fix: The FHIR web service requests made by the Clinical Data Pull module would mistakenly make calls to the FHIR "Observation" endpoint using a slightly incorrect format according to HL7's FHIR standards. This does not appear to affect CDP when interfacing with Epic but when interfacing with other EHR vendors (notably Cerner). (Ticket #61150)

- Bug fix: The code for generating the Survey Queue setup table was mistakenly referencing variables that had not been defined. However, this did not affect anything. (Ticket #61030)

- Bug fix: If the setting "Auto-suspend users after period of inactivity" is enabled, and some users who are suspended have not had any activity within the designated period of inactivity, then if the user has a sponsor and the user’s sponsor puts in a request to have them unsuspended, the user would mistakenly get re-suspended within a day. (Ticket #58909)

- Bug fix: If a normal user is copying a project and is also in a User Role, it would mistakenly not give them their current role’s privileges in the new project but instead would give them the privileges that they had before being put into a role in the copied project. (Note: The user will always be removed from the user role in the new project and will always be given User Rights and Project Setup/Design Privileges.) (Ticket #55767)

- Bug fix: If an administrator is viewing the table of users on the Browse Users page, if they check the checkbox next to a user and then click the "Fetch for selected" link (under "Time of latest password reset"), it would display an erroneous error message about no users being selected if all the selected users are suspended. It should instead work for all table-based users regardless of whether the users are suspended or not. (Ticket #60625)

- Change: The form status field on a data entry form has a blank drop-down option which serves no purpose. The blank option has been removed. (Ticket #60849)

- Bug fix: When exporting an Project XML file containing data from a project, if any multiple choice option labels contain ASCII control codes, it would mistakenly prevent the data from being restored completely in the new REDCap project being created. (Ticket #34968)

- Change: The Configuration Check page in the Control Center now ensures that the REDCap server can communicate with the Google reCAPTCHA API service, if enabled. (Ticket #60764)

- Bug fix: The plugin/module method named "REDCap::evaluateLogic" might mistakenly not interpret logic correctly if it contains checkbox fields and if the project is classic/non-longitudinal. (Ticket #60998)

- Bug fix: The upgrade page would attempt to display a non-existent icon in a button on the page. (Ticket #60560)

- Bug fix: Fixed a page layout issue that occurred at specific page widths. (Ticket #60317)

Version 8.11.7 - (released 3/24/2019)

BUG FIXES & OTHER CHANGES:

- **Medium security fix:** A Cross-Site Scripting (XSS) vulnerability was discovered on many pages, in which a malicious user could potentially exploit it by manipulating the query string of an HTTP request.

- **Major bug fix:** When the Clinical Data Pull (CDP) is enabled on a project, if extra data is imported from the EHR for several patients at one time via the cron job (after a user has already pulled some patient data from the EHR for those patients), in certain cases it might mistakenly not clear out data from another patient whose data is being fetched and thus inadvertently add one patient’s data to another patient.
• Bug fix: Some data exports were not getting correctly logged as "Data Export" on the project logging page, specifically when downloading PDFs with data and downloading an "exported data file" or an "exported syntax file". It now lists "Data Export" as the proper Action for these events and also displays them when filtering the logging page by event="Data Export". (Ticket #59278)

• Bug fix: When updating the value of the Secondary Unique Field or the designated survey email field for a project that is either longitudinal or has repeating events/forms, it would mistakenly not log the value change across all events/instances as it should since a new value for those fields gets propagated to every event/instance in the project to keep them all in sync. They now all get logged as separate logged events, which allows the value to always appear in the Data History widget on the data entry page. (Ticket #59586)

• Bug fix: When performing piping of a field with the Smart Variable \[X-instance\] appended to the field variable, it would sometimes mistakenly not perform the piping at all. (Ticket #59671)

• Bug fix: When performing piping of the Smart Variable survey-time-completed or survey-date-completed with the parameter ".value" appended to the end of it, it would mistakenly throw an error on a survey or data entry form if it was being used in branching logic or in a calculated field. (Ticket #59885)

Version 8.11.6 - (released 3/15/2019)

BUG FIXES & OTHER CHANGES:

• **Minor security fix:** A Cross-Site Scripting (XSS) vulnerability was discovered on certain pages, in which a malicious user could potentially exploit it by manipulating the query string of an HTTP request.

• Bug fix: Incorrect text was displayed in the Edit User popup on the User Rights page that mistakenly referenced "Clinical Data Pull" instead of "DDP" in projects with DDP Custom enabled.

• Change: Support was added to External Module framework to support return values for hooks. Specifically, the hook redcap_custom_verify_username was modified so that if it returns result "status" of "1" or TRUE, it will display a green message box containing the return "message", whereas if return "status" is "0" or FALSE, it will display a red message box containing the return "message".

• Bug fix: If a survey that has Survey Auto-Continue enabled is a repeating instrument and is then followed by another survey that is a repeating instrument, then if respondent completes the first survey, it will mistakenly take them to repeating instance #2 of the following survey, thus skipping over instance #1.

• Bug fix: Fixed typo in Clinical Data Pull error message. (Ticket #59005)

• Bug fix: When launching patients in the EHR embedded window for the Clinical Data Pull, in certain situations, especially if the user does not have access to all the FHIR end-points (often due to a limitation in their EHR privileges), it might mistakenly cause the FHIR access token in the database to get removed for that user for that patient, thus resulting in an error message to the user stating that there are no available access tokens that can be used.

• Bug fix: When using the Data Resolution Workflow, the Resolve Issues page might mistakenly display negative counts for certain data query statuses.

• Bug fix: When importing data where the field "redcap_repeat_instance" has a numerical value but the current event/form in the data (i.e., CSV row) does not exist on a repeating instrument or repeating event, it would mistakenly allow the data to be imported, but the imported data would immediately be orphaned since that data would not be accessible in the user interface. It now gives an error for this situation. This issue was supposedly fixed in the previous version (and the version before that), but mistakenly it would sometimes display a false positive for this issue and
return the error under legitimate circumstances, specifically when only checkbox fields were being imported (not including the record ID field, event name, or repeat fields). (Ticket #57699)

- Fixes and updates for the External Module Framework
- Bug fix: When viewing the REDCap login page on a mobile device (device width < 575 pixels), it would mistakenly display a "Go to My Projects" button on the page. (Ticket #59494)
- Bug fix: When using the Data Resolution Workflow in a project and opening a data query on a field on a data entry form, the floating Save button that appears next to the field when the field is selected was mistakenly not being displayed in the correct location on the page if the field, specifically when navigating from a link on the Resolve Issues page for a radio button field. (Ticket #59373)
- Bug fix: When using the "Test logic with a record" feature when setting up an Automated Survey Invitation, on certain occasions it might return an incorrect response. (Ticket #59030).
- Bug fix: The HTML character code " " might mistakenly get displayed in the text of PDFs downloaded for an instrument but only if downloading the blank PDF (without data). (Ticket #58790)
- Bug fix: When using the Randomization module with strata fields, in which one or more strata fields exist as part of a matrix of fields, it would mistakenly cause a JavaScript error to occur on the data entry form where the strata fields are located, thus preventing the form from being saved successfully. (Ticket #59639)
- Bug fix: The field count for projects on the My Projects page was mistakenly not including Descriptive fields. This could be confusing for users. It now includes all fields in the field count now. (Ticket #60004)
- Bug fix: When performing piping of a field with the Smart Variable [next-event-name], [previous-event-name], or [event-name] prepended to the field variable, it would sometimes mistakenly not perform the piping at all. (Ticket #44559)

Version 8.11.5 - (released 2/21/2019)

BUG FIXES & OTHER CHANGES:

- Bug fix: When there exist a lot of branching logic and several matrices of fields together on a survey page or data entry form, the page will scroll very slowly for the user. Bug emerged in REDCap 8.11.0. This issue was improved upon in the previous version but still existed for instruments with many hundred fields or more. (Ticket #58443)
- Bug fix: When downloading the CSV file of Automated Survey Invitations on the Online Designer, the file's filename might mistakenly begin and end with an apostrophe, thus preventing it from being opened correctly on the user's computer. (Ticket #58445)
- Bug fix: If a matrix of fields exists on a data entry form, then the matrix's floating headers might mistakenly get partially obscured by the floating box of Save buttons that appear at the top right of the page. (Ticket #58484)
- Bug fix: When importing data where the field "redcap_repeat_instance" has a numerical value but the current event/form in the data (i.e., CSV row) does not exist on a repeating instrument or repeating event, it would mistakenly allow the data to be imported, but the imported data would immediately be orphaned since that data would not be accessible in the user interface. It now gives an error for this situation. This issue was supposedly fixed in the previous version, but mistakenly in the previous version it would sometimes display a false positive for this issue and return the error under legitimate circumstances. (Ticket #57699)
- Bug fix: The example Java code generated by the API Playground for the "Export Records" API method contained an error. (Ticket #58488)
• Bug fix: Some specific PROMIS assessments that are downloading from the REDCap Shared Library as part of a battery might be mistakenly labeled as "Auto-scoring" or "Adaptive" in the Online Designer after being downloaded when such instruments are actually neither "Auto-scoring" nor "Adaptive". (Ticket #58488)

• Bug fix: If using the Survey Auto-Continue feature to continue to a survey that is a repeating survey instrument, if any repeating instances have already been created for that repeating survey, then after completing the first survey, it would mistakenly say that the repeating survey has already been completed. It should instead advance the respondent to the next available repeating instance of the repeating survey so that a new repeating instance can be added via survey. (Ticket #58624)

• Bug fix: When exporting an Project XML file containing data from a project, if any text field values contain ASCII control codes, it would mistakenly prevent the data from being restored completely in the new REDCap project being created. (Ticket #34968)

• Bug fix: Fixed a typo in the Twilio configuration instructions. (Ticket #58731)

• Bug fix: When downloading the Project XML file (metadata only) for a project, it might mistakenly begin and end the XML filename with an apostrophe.

Version 8.11.4 - (released 2/15/2019)

BUG FIXES & OTHER CHANGES:

• Text changes: The "DDP on FHIR" feature was renamed "Clinical Data Interoperability Services". The main (and currently only) feature under the “Clinical Data Interoperability Services” umbrella of services is the “Clinical Data Pull" (CDP). Other services will be added in future versions of REDCap, such as “Clinical Data Mart”.

• Bug fix: After the initial schedule is generated for a record on the Scheduling page, if the user modifies one of the dates in the schedule so that it is the same as the maximum date or minimum date (if a min/max is set for an event), then on certain occasions it would mistakenly display a popup saying that the new date is out of range when in fact it is not.

• Bug fix: When there exist a lot of branching logic and several matrices of fields together on a survey page or data entry form, the page will inevitably get slower and slower as more and more branching logic gets triggered on the page during data entry. This could eventually cause the page to ultimately become unresponsive in certain situations. Bug emerged in REDCap 8.11.0. (Ticket #58019)

• Bug fix: Several project pages might appear too narrow for specific screen sizes. Bug emerged in REDCap 8.11.2.

• Bug fix: Updated an outdated item on the Help & FAQ page regarding how often the ASI cron job runs (Ticket #58205).

• Bug fix: When using the @DEFAULT action tag to have a date/datetime field reference itself from a previous repeating instance on a repeating instrument, it would mistakenly not pipe in the value correctly on the first instance of that instrument, thus mangling it with a value of "["" or "00-00-0000" or other non-sensical value. (Ticket #17157)

• Bug fix: When using the Data Resolution Workflow in a project and opening a data query on a field on a data entry form, the floating Save button that appears next to the field when the field is selected was mistakenly not being displayed in the correct location on the page. (Ticket #57905)

• Bug fix: For specific server configurations and project sizes, the project Logging page might take an exorbitant amount of time to load when initially loading the page. (Ticket #58251)

• Bug fix: When importing data where the field "redcap_repeat_instance" has a numerical value but the current event/form in the data (i.e., CSV row) does not exist on a repeating instrument or repeating event, it would mistakenly
allow the data to be imported, but the imported data would immediately be orphaned since that data would not be accessible in the user interface. It now gives an error for this situation. (Ticket #57699)

- Bug fix: When calling the API method "Export Survey Participants" while utilizing the designated survey email field in the project, it would mistakenly omit the values for the participant's email address or record name in the API response. (Ticket #58349)
- Bug fix: When calling the API Method "Export Records" with the 'format' parameter set to 'odm', it would mistakenly not include all files from File Upload and Signature fields, which are expected to be base64-encoded inside the ItemDataBase64Binary tags in the resulting XML. (Ticket #54301)
- Bug fix: On the To-Do List page in the Control Center, if an administrator clicks the icon to add a comment to a To-Do List item, the "Submit" button in the resulting popup displayed would not be sized or positioned correctly. (Ticket #54301)

Version 8.11.3 - (released 1/31/2019)

BUG FIXES & OTHER CHANGES:

- **Improvement:** When copying a project, there are now separate options for copying users and/or user roles. In previous versions, these were combined as a single choice 'Copy users and roles', but now users may decide to copy one or the other. (Ticket #36687)
- Bug fix: If an individual project was set to "Offline" status by an administrator, any survey invitations in that project that had been scheduled to send would mistakenly still send. Invitations should not be sent out unless the project is in "Online" status. (Ticket #57045)
- Change: If the current date or current timestamp is used in the REDCap upgrade script with regard to storing the date of the upgrade and when setting the send-time of system notifications via Messenger, it will now use the database's date and time at the time of the SQL script execution instead of the hard-coded values generated by the web server on the Upgrade page. (Ticket #57079)
- Bug fix: If upgrading from 8.11.0 or 8.11.1 to 8.11.2, it would mistakenly provide some SQL to fix database errors after completing the upgrade. (Ticket #57103)
- Bug fix: Many API requests would mistakenly return a "503" HTTP status code error on certain errors when it should instead return a "400" error.
- Bug fix: When downloading a PROMIS Battery from the REDCap Shared Library, it would mistakenly not display the battery survey pages according to the PROMIS guidelines, in which the battery title should be displayed on every page (not the title of each individual assessment) and that the survey instructions are only seen on the first assessment of the battery. This will only affect batteries that will be downloaded in the future from the Shared Library. Also, although these particular title and instructions settings will be set when a battery is downloaded, it will always be possible for a user to modify the title and/or instructions afterward, if they wish (though it is not preferred).
- Bug fix: When a participant completes a PROMIS adaptive survey or PROMIS auto-scoring survey that finishes after only one question, it might mistakenly not save the survey completion time of the survey response.
- Change: Added a link to the Codebook page on the Data Import Tool instructions to allow users to more easily find the raw coded values for multiple choices fields that they wish to import.
- Change: The output of the REDCap Cron Job now displays the current server time on which each job completed. The timestamp is listed in parentheses after the word "done!" for each job.
- Bug fix: The last column in the Participant List table might not be displayed fully. (Ticket #57184)
• Bug fix: Under certain conditions, REDCap Messenger’s "System Notifications" section would mistakenly not display the messages for that section in the Messenger panel. (Ticket #57247)

• Bug fix: When selecting to view Report B on the "Data Exports, Reports, and Stats" page for a longitudinal project, if the report is displayed as a multi-page report and specific events have been selected as a filter by the user, then if the user selects another report page to view using the page drop-down selector, it would mistakenly lose the event filter for the report (because the "events" parameter would not get included in the URL) and thus would display rows from every event on the page. (Ticket #57254)

• Bug fix: For certain server configurations, when REDCap is creating a cache of a project’s record list in a database table (as an invisible, back-end process to the user), it might mistakenly doubly UTF8-encode some record names, resulting in a database query error, thus causing the record list caching process to constantly fail and possibly display an outdated list of records in the user interface (e.g., Record Status Dashboard). (Ticket #56523)

• Change: The "Survey Settings" page in the Online Designer now gives slightly more emphasis to the "e-Consent Framework" feature to make it easier for users to find it on the page.

• Bug fix: If a Custom Record Status Dashboard has filter logic that references fields from a repeating instrument, it might mistakenly return an empty set, thus resulting in a dashboard with no records displayed, when it is known that some records should be displayed. Bug emerged in REDCap 8.11.2 (Standard). (Ticket #57234)

• Bug fix: The lab field "Ketones Ur-mCnc" (LOINC 49779-2) was mistakenly missing from the DDP on FHIR list of mappable fields.

• Bug fix: The cron job "AutomatedSurveyInvitationsDatediffChecker2" might mistakenly crash if SQL fields are piped into the email subject or email message of Automated Survey Invitations that contain datediff + today or now in the ASI conditional logic. (Ticket #57356)

• Change: When a user clicks the "Help & FAQ" link on a project’s left-hand menu, it will now load the "Help & FAQ" page in a new window to prevent the user from losing their current page context in the project as they view the "Help & FAQ" page.

• Bug fix: When editing the project title, purpose, etc. in the Modify Project Settings popup on a project’s Project Setup page, if Research is selected for Purpose, then the fields for entering the Name of the P.I. would mistakenly not wrap together, thus leaving the last name field on a row by itself. (Ticket #57417)

• Bug fix: When exporting Report B (i.e., without creating a new report from the selections of Report B) on the "Data Exports, Reports, and Stats" page, if a specific instrument is not selected but "All instruments" are left selected, it might mistakenly not list any fields in the resulting stats package syntax file (for R, SAS, Stata, SPSS), thus preventing the exported data from loading properly in the stats package.

• Bug fix: On the Cron Jobs page in the Control Center, the suggested command to set up the REDCap cron job on a Windows server was mistakenly not escaping paths that contained a space in them. This has been fixed to present the correct command. (Ticket #57426)

Version 8.11.2 - (released 1/24/2019)

BUG FIXES & OTHER CHANGES:

• Major bug fix: When a project is using a public survey that has "Save & Return Later" enabled with "Allow respondents to return without needing a return code" enabled, then if a participant clicks the "Save & Return Later" button on the public survey and leaves the survey open on the "Your survey responses were saved!" page while another participant partially or fully completes the survey, and then if the original participant clicks the "Continue Survey Now" button on
the "Your survey responses were saved!" page, then the original participant will mistakenly have the other participant’s response loaded for them on the survey page.

- **Change/improvement:** When using the e-Consent Framework, a new option was added to the Survey Settings page: "Allow e-Consent responses to be edited by users?". If left unchecked (default), then users will not be able to edit a completed e-Consent response (although it can be locked or e-signed by a user with locking/e-signature privileges). If the setting is checked, then users will be able to modify the survey response so long as they have "Edit survey responses" privileges for that survey instrument. Note: If the e-Consent survey response is modified after being completed, this will not affect the e-Consent PDF file that was stored in the File Repository.

- **Change/improvement:** In the popup dialog for moving a project to production, it now displays the number of records in the project to help the user decide if they wish to keep all data or have all records deleted when moving to production.

- **Bug fix:** When using REDCap::getData() in a module, plugin, or hook, in which some filter logic is passed as a parameter and is expected to return an empty result set (because there are no matches for the filter logic), it might instead mistakenly return results with blank values for all fields being returned (with the exception of the record ID field and pseudo-fields, such as redcap_event_name), even though those fields might actually have non-blank values. (Ticket #56806)

- **Bug fix:** When a user selects to display "ALL" records on the Record Status Dashboard in a project containing a large amount of records, if the page ends up crashing due to too many records being displayed, then the user would mistakenly never be able to view the Record Status Dashboard again without it crashing (because it remembers to show all records the next time the page is visited). (Ticket #56662)

- **Bug fix:** If a calc field utilizes Smart Variables in its calculation, and a user performs a data import or executes Data Quality rule H, then other calculated fields in the project might have their value mistakenly set as the calculated result of the other calc field, thus overwriting the correct value of that other calc field. This is rare but can occur in specific situations depending on the structure of the project and the order of the calc fields involved. (Ticket #56731)

- **Bug fix:** The Google reCAPTCHA box on the Public Survey Link page might cause the "Link Actions" and "Link Customizations" sections to be misaligned on the page for some non-English languages. (Ticket #56868)

- **Bug fix:** If the Data Resolution Workflow is enabled in a project, then incorrect language is displayed inside the "Data Quality rules were violated!" popup on a data entry form whenever a Data Quality rule has "real time execution" enabled.

- **Bug fix:** When viewing the Field Comment Log popup on a data entry form, if the username in the User column is very long, it would mistakenly not wrap in the table but instead would overflow into the next column.

- **Bug fix:** When a user attempts to access a REDCap project that has been set to "Offline" on the "Edit a Project’s Settings" page by an administrator, it would mistakenly display the default system-offline message rather than the project-offline message. (Ticket #56938)

- **Bug fix:** Certain project pages might not display correctly on tablets (causing the main right-hand window to display below the left-hand menu), especially if the project’s language is set to a non-English language. (Ticket #56872)

### Version 8.11.1 - (released 1/23/2019)

**BUG FIXES, & OTHER CHANGES:**

- **Bug fix:** If running REDCap on PHP 5.5, the Online Designer page would mistakenly not load. Bug emerged in REDCap 8.11.0. (Ticket #56859)
Version 8.11.0 - (released 1/22/2019)

NEW FEATURES, BUG FIXES, & OTHER CHANGES:

• **New feature: Microsoft Azure Quick Start** – Method for quickly deploying a full, production-ready REDCap server environment on Microsoft Azure Cloud Platform. This includes a completely automated way for deploying the server infrastructure as well as a fully automated installation of REDCap. For details, see the top of the page [https://projectredcap.org/software/requirements/](https://projectredcap.org/software/requirements/) (Note: The REDCap "Easy Upgrade" feature does not yet work with Azure but is expected to in a later REDCap version).

• **New feature: The "Survey Link Lookup" external module was integrated into REDCap**
  o This feature allows administrators to take a survey URL and find and navigate to the corresponding project, survey, record and data entry form. The Survey Link Lookup page is located under the "Projects" section on the left-hand menu in the Control Center.
  o If this external module was already enabled on the REDCap installation, it will automatically be disabled during the upgrade process to prevent any possible conflicts.

• **New feature: The "REDCaptcha" external module was integrated into REDCap**
  o This feature allows users to utilize the Google reCAPTCHA functionality to help protect public surveys from abuse from "bots", which are automated software programs that might enter trash data into surveys. The feature must first be enabled at the system level on the Modules/Services Configuration page in the Control Center since it requires an administrator generate a new Google API pair of keys that will be used for this functionality. Once the site key and secret key are set, users will then be able to choose to enable the Google reCAPTCHA functionality on the Public Survey page in their project, after which the public survey will display the reCAPTCHA checkbox and "I'm not a robot" text on a survey page prior to allowing the participant to view the public survey. This feature is not employed on any private survey links because those are unique to a record and thus would never be made publicly available like a public survey link would.
  o Note: A survey participant will never have to pass the reCAPTCHA test more than once per day on a given device/computer.
  o Additional note: If this external module was already enabled on the REDCap installation, it will **NOT** automatically be disabled during the upgrade process. Thus you may consider disabling the module after the upgrade if you wish the utilize this new integrated feature.

• **New feature: The "Sticky Matrix Header" external module was integrated into REDCap.** This feature will cause matrix headers to float and stick to the top of a page on either a survey or data entry form so that the matrix headers are always visible, which is helpful for matrices with many rows. If this external module was already enabled on the REDCap installation, it will automatically be disabled during the upgrade process to prevent any possible conflicts.

• **New feature: The "Codebook Concertina" external module was integrated into REDCap.** This feature will display Expand and Collapse buttons for each instrument listed on the Codebook page in a project. If this external module was already enabled on the REDCap installation, it will automatically be disabled during the upgrade process to prevent any possible conflicts.

• **Minor security fix:** A Cross-Site Scripting (XSS) vulnerability was discovered on certain pages, in which a malicious user could potentially exploit it by manipulating the query string of an HTTP request.

• **Improvement:** When enabling an instrument as a survey or editing an existing survey's survey settings, it now displays a "Save Changes" button at the top of the page (next to the Cancel button) so that the user does not necessarily have to scroll all the way to the bottom to submit the page.
• **Change:** **PHP 5.5 is now the minimum required PHP version.** In previous versions, the minimum required PHP version was PHP 5.3.

• **Change/improvement:** When viewing a survey response on a data entry form that had been completed using the E-consent Framework, users with Record Locking privileges will now be able to Lock and E-sign the instrument. Previously in all versions of REDCap version 8.10.X, the entire instrument was read-only, including the Locking and E-signature options. (Ticket #54874)

• **Improvement:** If a URL is included in a message posted on REDCap Messenger (including those sent via General Notifications from an administrator), the URL will be displayed as a clickable link to the user in the Messenger panel.

• **Change/improvement:** The Custom Record Label and Secondary Unique Field values are now displayed with the record name in the table on the "PDF Survey Archive" tab in the File Repository if the "PDF Auto-Archiver" is enabled for one or more surveys in a project. In previous versions, it did not display them next to the record name.

• **Change:** For projects in production, the settings on the Record Locking Customization page can now be edited by any user that has "Record Locking Customization" privileges in the project. In previous versions, only REDCap administrators could modify this page's settings while in production. This change will alleviate the burden of administrators for many production projects needing to make changes on this page.

• **Bug fix:** In server environments with PHP error reporting enabled, it would display a deprecation notice regarding the constructor of several PHP classes. (Ticket #55557)

• **Bug fix:** When viewing an individual user on the Browse Users page in the Control Center, if the user is a Table-based authentication user and their secondary or tertiary email address has not yet been verified, then it would mistakenly not display the buttons to auto-verify the address or re-send the verification email to the user. This only occurs if the user is a Table-based user.

• **Bug fix:** When a form or survey is submitted, in which there do not exist any fields on the instrument that are used in a calculated field anywhere in the project, then it would mistakenly trigger the calculation of all calcf fields in the project. It should instead only trigger calculations if a field being submitted is used in a calculation. (Ticket #55192)

• **Bug fix:** The "Export Survey Participants" API method would mistakenly not include some participants in the resulting API response if those participants had not first been viewed by a user either on the Participant List page or on the data entry form for the survey instrument that was passed as a parameter in the API request. Once a user had viewed the data entry form or Participant List for that instrument, the participants would then appear in the API export. (Ticket #55517)

• **Bug fix:** When creating a project and selecting the option to upload a REDCap Project XML file, if the user fails to upload an XML file and then clicks the "Create Project" button, it would mistakenly create an empty project. It should instead give a warning to the user to upload an XML file and prevent the user from submitting the page. (Ticket #55731)

• **Bug fix:** When a user makes a request to an administrator that a project be copied, it would mistakenly not check off some of the checkboxes on the Copy Project page when the administrator loads the page via the link in the email or via the To-Do List. This includes the following options: All report folders, All data quality rules, All project bookmarks, and All custom record status dashboards. (Ticket #55751)

• **Bug fix:** When attempting to rename a record to "0" on the Record Home Page, it would fail and return an error message to a user. (Ticket #55723)

• **Bug fix:** When using the Smart Variables form-link, form-url, survey-link, or survey-url to create links/URLs either to or from a repeating instrument or repeating event, it might mistakenly add the instance number of the current context to the URL when instead it should evaluate whether or not the instance number makes sense to be added to the target URL. (Ticket #54776)

• **Bug fix:** When using Twilio telephony services for surveys, U.S. phone numbers having the area code "463" would mistakenly not work for SMS or voice calls unless the number has a "1" prepended to it. (Ticket #55668)

• **Change:** The System Statistics page in the Control Center would load very slowly for large installations, especially if they had DDP Custom or DDP on FHIR enabled. The page has been reconfigured to fetch all DDP-related stats asynchronously.
• Bug fix: When adding/editing/deleting a Report Folder or assigning/unassigning a report to a Report Folder and then closing and re-opening the Report Folder popup, the user would mistakenly no longer be able to perform any actions inside that popup (as if its elements were locked). (Ticket #55878)

• Bug fix: When a user enters an incorrect password on the login page, it might mistakenly cause some of the custom login text (if any) to become disproportionally enlarged. (Ticket #55945)

• Bug fix: When creating/editing a record on a data entry form, in which the record name contains a forward slash or back slash, it may cause a Data Quality rule with Real Time Execution not to get triggered correctly or cause the Required Field popup alert not to display correctly. (Ticket #56093)

• Bug fix: If a participant partially completes a survey using the "Save & Return Later" feature, in which there is no email address associated with that participant (either via the participant list or via the designated survey email invitation field), then the page that gets displayed immediately after clicking the "Save & Return Later" button might mistakenly display the text "You have just been sent an email containing a link for continuing the survey" for a moment and then suddenly disappear, which could be confusing.

• Bug fix: When inline images are used for Descriptive fields on a survey or form, then if the user is viewing the page on a mobile device and the image's native width is smaller than the width of the page, it would mistakenly not resize it correctly and would make it too small on the page. It now makes the image wider on the page for better viewing of it.

• Bug fix: When printing a page in the Control Center, the left-hand menu would mistakenly not be removed from the print-out when using Firefox. (Ticket #56340)

• Bug fix: The "Announcement text to display at top of Home page and My Projects page" would mistakenly not get displayed at the top on the REDCap Home Page if the "Additionally display text on login page?" option is set to "No". (Ticket #56618)

• Bug fix: If the biomedical ontology auto-suggest functionality is disabled as the system level, it would mistakenly prevent users on the Online Designer from setting a min or max limit for a Text field in the "Add Field"/"Edit Field" popup. (Ticket #56499)

• Bug fix: When entering a number- or integer-validated text field on a form or survey on an Android device, it would mistakenly open the full keyboard when typing in the field rather than displaying a more appropriate number-centric keyboard. (Ticket #56447)

• Bug fix: When entering a number-validated text field on a form or survey on an iOS device, it would mistakenly open the full keyboard when typing in the field rather than displaying a more appropriate number-centric keyboard.

• Bug fix: "event_id" was mistakenly not listed as a reserved field name to prevent users from using it as a field's variable name. (Ticket #56627)

• Bug fix: When an administrator is approving a "Move project to production" request on the To-Do List page, the To-Do List popup would mistakenly not automatically close after the request was approved or if the admin clicked Cancel to close the request. (Ticket #56457)

• Bug fix: When using the @MAXCHECKED action tag for a checkbox field, if a user clicked on the checkbox’s label (rather than on the checkbox itself), it would appear to keep the checkbox unchecked if the @MAXCHECKED limit has been reached, but it would mistakenly save the checkbox as checked. (Ticket #56658)

• Bug fix: For specific screen widths, the nav items at the top of the page on the Home page, My Projects page, etc. would mistakenly not be visible.

• Bug fix: When performing a data import in projects with repeating instruments or repeating events, the "redcap_repeat_instance" field could mistakenly be imported with a value of "0", which should never be allowed because it must always be an integer larger than "0". (Ticket #28842)

• Bug fix: If a required field is changed to be a Descriptive field, it would still mistakenly display the "must provide value" text below the Descriptive field's label on a survey page or data entry form. (Ticket #56719)

• Bug fix: After selecting the "Export Reports" API method in the API Playground, the "Report ID" drop-down list would mistakenly not get rendered correctly, thus preventing users from utilizing it on that page. (Ticket #56707)

• Bug fix: When using the survey-link or survey-url Smart Variable in the email message for an Automated Survey Invitation, in which the instrument name is appended to the Smart Variable (e.g. [survey-
link:survey_2)), then if the appended instrument name is different from the survey instrument for the current ASI, it would mistakenly replace the Smart Variable with the link to the current ASI survey rather than with the explicitly specified one. (Ticket #55400)

- **Bug fix:** When using the first-event-name or last-event-name Smart Variable in branching logic or in a calculated field, in certain cases it might not get interpreted correctly, thus mistakenly resulting in a branching logic error message on a survey page or data entry form. (Ticket #56583)

- **Bug fix:** When setting the conditional logic for an Automated Survey Invitation in a longitudinal project, if any fields are prepended with the Smart Variable [event-name], it would cause the ASI not to send the invitation if step 2 had the "Ensure logic is still true before sending invitation?" option selected while Step 3 was set to "Send immediately". (Ticket #55919)

- **Bug fix:** When setting the conditional logic for an Automated Survey Invitation in a longitudinal project, if any fields are prepended with the Smart Variable [event-name] and the user selected a record from the "Test logic with a record" drop-down, it would mistakenly return "False" even when the condition is actually True.

- **Bug fix:** When setting the branching logic for a field in the "Add/Edit Branching Logic" popup on the Online Designer, if a user selected a record from the "Test logic with a record" drop-down, it would mistakenly return "False" even when the condition is actually True. (Ticket #56623)

- **Bug fix:** When a repeating instrument is being used as a survey and is being displayed in the Survey Queue, then it may mistakenly display the text "All surveys in your queue have been completed" on the Survey Queue if only 6 surveys have been completed in the queue (including all instances of the repeating survey), which could be confusing to respondents who might want to keep taking the repeating survey. Since a repeating survey is by definition open-ended and can be taken over and over again without end, the Survey Queue should never state "All surveys in your queue have been completed" if the queue contains at least one repeating survey. (Ticket #56540)