NEWSLETTER: REDCap LTS v14.5.44

Hello! This is REDCap's production environment upgrade information. The below information contains details of the BCM REDCap server updates.

As of **Friday, April 18, 2025**, the REDCap application has undergone the following upgrades:

- BCM REDCap Version **14.5.43** LTS to Version **14.5.44** LTS

How does this affect you, as a user?

- Critical security fixes for known vulnerabilities.
- External Modules have been added and updated.

For more information, please see below.

For questions or REDCap help, please contact our BCM REDCap team at:

redcap-support@bcm.edu

For Enhanced E-consent Information:

- E-consent Framework 2.0:
    - Significant changes have been made to the user interface.
    - For a brief overview of the changes, please view the video here: https://redcap.link/econsent2vid
    - The BCM REDCap team has also recorded a Q&A video that discusses the changes further. It can be found here: REDCap 2.0 Q&A Session

REDCap LTS v14.5.44 External Modules List

This is the list of approved implemented External Modules that can now be used for your existing project. If you would like a listed module to be added to your project or would like to inquire about an existing module not yet on this list, please contact redcap-support@bcm.edu

Official External Modules can be found within the External Module Repository:
https://redcap.vumc.org/consortium/modules/index.php

Disclaimer from REDCap: Disclaimer: The modules listed in the REDCap Repo have gone through a process of testing, validation, and curation by the Vanderbilt REDCap Team with help from trusted individuals in the REDCap Consortium. It should not be assumed that all modules are bug-free or perfect, so please be aware that the entire risk as to the quality and performance of the module as it is used in your REDCap installation is borne by the REDCap administrators who download and install the modules.

External Module Name - with version	Description
Complete Row - v1.0.0	Colors each row of an instrument - if a value has been provided. This will highlight rows with missing values to improve their visibility.
Configuration Example - v0.1	Example module to show off all the options available.
Inline Descriptive Pop-ups - v1.4.8	Allows users to specify words or phrases on a form/survey to appear as a highlighted link that will display a popup of instructive text when the cursor moves over the word/phrase. The configuration allows multiple words/phrases to be utilized.
Language Editor - v1.0.2	Allows per project customization of the language.ini settings.
Multilingual - v1.9.8 EOL: As of June 25, 2024, this module is no longer supported or will be implemented for BCM projects due to database incompatibilities.	Allow survey's and data entry forms to be translated into multiple languages. Add translations via the Online Designer. **NOTE: Multi-Language Management (MLM) has been implemented as an in-build feature in REDCap as of v12.0.0.** This EM is kept for to preserve projects who already have implemented this module.
Yale Second Language extension - v1.1.2	Basic multilanguage support for REDCap forms. **NOTE: Multi-Language Management (MLM) has been implemented as an in-build feature in REDCap as of v12.0.0. This EM is kept for to**

	preserve projects who already have implemented this module.
REDCap Survey UI Tweaks - v1.2.2	A collection of UI and quality of life enhancements to make surveys more aesthetically pleasing and user friendly. This module provides end users with the ability to apply certain survey tweaks either globally to all surveys in the project or on a survey-by-survey basis. **NOTE: Survey UI Tweaks has features that is also in-built within REDCap. This EM is released for very specific functions that the in-build feature may not be able to implement. Released only for those very specific instances.**
~~Auto Complete Form Status Based on Required Fields - v1.6~~ Notice: There is a current bug issue with the use of this module. We will temporarily remove this EM until a fix has been implemented.	This external module will set the Form Status 'Complete?' dropdown automatically to 'Complete' when all required fields are entered, and set to 'Incomplete' when not all required fields are entered.
Custom Record Auto-numbering - v1.0.6	Allows users to create a custom record auto-numbering schema for their REDCap project. This works during data entry but not in public surveys or API/CSV data import.
Public Survey DAG - v1.1.0	Assign a public url for each DAG in a project.
Cross-Project Check for Duplicate Records/Check for Duplicates Across Multiple Projects - v1.5	Checks for duplicate records (as defined by a certain number of matching fields) across one or more projects. If the field matches across multiple records, a duplicate is reported. (Does not currently work for repeating instruments/events.)
Search and Populate Data From Another Project - v0.6.0	Search another project for data to populate data into the current form. This module embeds REDCap's Search Query functionality into a data entry page to allow searches of _another_ project to populate fields in the current data entry page
Report Tweaks - v1.2.10	Configurable Display Enhancements for REDCap Reports
Orca Call List Module - v1.3.3	A configurable, searchable, call list dashboard
CheatBlocker – v2.0.1	This module is used to identify "cheaters" or "gamers" and prevents individuals from completing a study screener multiple times to gain study entrance. It can be used in two ways: 1) at the point of screening to automatically inform

	potential participants that they are ineligible for the study, or 2) to flag a record as a potential duplicate and then allow study staff to make the final decision to include or exclude the record.
Random Number ActionTag - v1.0.2	External module that adds an action-tag to this project for generating random numbers on text fields.
MGB LabArchives - v1.5.11	REDCap users can upload REDCap reports to their own LabArchives notebook by establishing a connection to their LabArchives account.
Barcodes - v1.0.0	A REDCap external module that transforms text fields to barcodes on data entry forms and surveys.
Note Taker - v1.0.0	A data entry enhancement for easy note taking inside of a redcap field.
Instance Table - v1.10.0	Use the action tag @INSTANCETABLE=form_name in a descriptive text field to include a table showing data from repeat instances of that form. If project is longitudinal, use @INSTANCETABLE=event_name:form_name to specify the event and form (can be a repeating form or a form in a repeating event). Other action tags are available for controlling certain properties of the tables and their contents.
Pre-populate instruments - v2.1.2	This module pre-populates one or more instruments with data from a previous event/instance. In a longitudinal project instruments will be pre-populated with data from the most current event data. In a classic project instruments will be pre-populated with data from the last instance (if repeating instances for the instruments are enabled).
REDCap CSS Injector - v2.0.1	Allows administrators to inject CSS into survey pages, data entry pages, and every other project page.

REDCap LTS v14.5.44 Change Log

This is a detailed list from REDCap's official Change Log site for STS and LTS for this version release. The LTS Change Log contains bug fixes while STS contains both **New Features** and bug fixes.

For an easy-to-read listing, this is The University of Arizona Health Sciences' website. (Please note that they are on the STS version): https://cb2.uahs.arizona.edu/services/redcap/redcap-version-changes

NEW FEATURES NOTE: New features for LTS are derived from STS **v14.5.4**

LTS Change Log:

Version 14.5.44(released on 2025-04-17)

Major security fix: An SQL Injection vulnerability was found in a specific feature in the Online Designer, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. This can only be exploited by authenticated users. Bug exists in all versions of REDCap.

Version 14.5.43(released on 2025-02-06)

Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report), specifically targeting the "href" attribute of a hyperlink. This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

Major security fix: An SQL Injection vulnerability was found on the User Rights page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by

manipulating an HTTP request in a specially-crafted way when adding new User Roles. This can only be exploited by authenticated users. Bug exists in REDCap 10.3.3 and higher.

Version 14.5.42(released on 2025-01-30)

Bug fix: A missing LOINC code was added to the CDIS mapping features.

Bug fix: If survey invitations are scheduled via the Participant List, in which one or more invitation reminders are scheduled to be sent, the reminders might mistakenly not get automatically removed from the Survey Invitation Log after the survey had been completed. This would cause the reminders to be sent to the participant even after they had completed the survey. (Ticket #203090b)

Bug fix: The column for the "Lock/Unlock Entire Records (record level)" user privilege was mistakenly missing from the user rights/roles table on the User Rights page in a project.

Bug fix: The drag and drop implementation to move fields in the Online Designer prevented other drag and drop operations on the same page from working.

Bug fix: The special function isnumber() would mistakenly return an incorrect response for numbers that begin with zero and a decimal (e.g., 0.2) and also returned an incorrect response for integers with leading zeros that being with plus or minus (e.g., +02), which are expected to return false from the function. Bug emerged in REDCap 14.5.37 LTS and 15.0.3 Standard. (Ticket #248368)

Bug fix: Two-factor verification would mistakenly be successful for users who enter a 6-digit 2FA code with unnecessary leading zeros. (Ticket #248167)

Bug fix: When using the EHR launch process in the Clinical Data Pull feature of CDIS, if a user authenticates for the first time, any initial action they attempt (e.g., adding or removing a project) would fail silently.

Various CDIS-related bug fixes:

The Mapping Helper was mistakenly not logging the MRN alongside the FHIR ID of the patient.

SMART on FHIR authorization fix: Resolved an issue where the dropdown menu for selecting a FHIR system was not functioning when multiple FHIR systems were available.

EHR Launch bug fix: Fixed a bug where, in certain circumstances, the EHR user was not correctly extracted and displayed in the navbar next to the REDCap user.

Version 14.5.41(released on 2025-01-26)

Critical bug fix: When a project is in draft mode and an administrator approves their drafted changes, or if the user clicks Submit Changes for Review in the Online Designer where the changes are approved automatically, the process would mistakenly fail with a fatal PHP error. Bug emerged in the previous release. (Ticket #248136)

Version 14.5.40(released on 2025-01-26)

Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who is logged in could potentially exploit it by manipulating the attributes of fields (e.g., field label) when viewing and saving fields on the Online Designer's field-view page. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. Note: Only

authenticated users are able to exploit this. This issue was supposedly fixed in REDCap 14.5.38 LTS

and 15.0.4 Standard Release, but it was only partially fixed. This vulnerability exists in all versions of

REDCap.

Bug fix: Some text on the Calendar page in a project, specifically the Agenda tab, might mistakenly

not be displaying as translated but would be in English if the project is set to use a different

language. (Ticket #247305b)

Bug fix: When using Multi-Language Management together with MyCap in a project that is in

production status, the MyCap project config JSON that is consumed by the MyCap mobile app was

mistakenly not getting updated when MLM changes were made on the MLM setup page.

Version 14.5.39(released on 2025-01-24)

Critical bug fix: Any survey pages or data entry forms that contain calculated fields would mistakenly

crash and never load due to a fatal PHP error.

Version 14.5.38(released on 2025-01-24)

Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who

is logged in could potentially exploit it by manipulating any REDCap logic that is stored in a project

(e.g., calculations, branching logic, data quality rule logic, report filter logic). Note: Only authenticated

users are able to exploit this. This vulnerability exists in all versions of REDCap.

Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who

is logged in could potentially exploit it by manipulating the attributes of fields (e.g., field label) when

viewing and saving fields on the Online Designer's field-view page. If successfully exploited, this

could allow the attacker to remotely execute arbitrary code on the REDCap server. Note: Only authenticated users are able to exploit this. This vulnerability exists in all versions of REDCap.

Version 14.5.37(released on 2025-01-23)

Bug fix: In a MyCap-enabled project, a user clicking the "Messages" link for a participant on the MyCap Participant List page might mistakenly receive a "Missing/Invalid Participant" message. (Ticket #246982)

Bug fix: In the Online Designer when editing a field that has field validation, in which the field has both min and max validation values, if the user changes the validation type and then puts their cursor into the min validation text box, they may get stuck in a never-ending validation error loop. (Ticket #247376)

Bug fix: REDCap mistakenly did not allow dropping of text (e.g., from Word) into input elements in the Online Designer.

Bug fix: The "deceased date/time" value of a patient whose data is pulled via CDIS might mistakenly contain a leading space, thus leading to field validation issues in CDIS projects when the data is being imported from the EHR. (Ticket #247705)

Bug fix: The special function isnumber() would mistakenly return True when provided with a number with a leading zero (e.g., "02"). It now returns False for any text strings that are numbers with leading zeros.

Bug fix: When a custom Record Status Dashboard is ordered by a project's record ID field in "Descending order", the dashboard will mistakenly not display the records in the correct order if the

first instrument in the project is a repeating instrument or if it exists on a repeating event. (Ticket #247891)

Bug fix: When using "Copy" option for the instrument-level "Choose action" button in the Online Designer, the instrument would fail to be copied and return a vague error message if a Text field on the instrument contains field validation that does not exist as a valid field validation type on the REDCap server.

Bug fix: When using any "X & Table-based" authentication method together with Two-Factor Authentication enabled in REDCap, in which the "Enforce two-factor authentication ONLY for Table-based users" setting is set to "Yes" and the "Enable the Google/Microsoft Authenticator app option for 2FA" setting is enabled, the QR code and setup procedure information for setting up the Authenticator app would mistakenly be displayed to non-Table-based users, such as on the user's Profile page and immediately after verifying their primary email address. (Ticket #247942)

Bug fix: When using the "Custom Surveys for Project Status Transitions" feature together with the Survey Base URL feature, the custom survey that is loaded in an iframe on the page for a Project Status Transition would load but might mistakenly fail to be submitted due to a cross-origin JavaScript security permission error. (Ticket #240644b)

Bug fix: When viewing a survey that contains hyperlinks in the survey instructions, survey completion text, or in field labels that utilize the rich text editor, the hyperlink's text might mistakenly be locked at a specific font size and thus would look strange adjacent to other text. (Ticket #246917b)

Version 14.5.36(released on 2025-01-17)

Major bug fix: The upgrade process might fail to complete when executing the upgrade SQL script to upgrade to the previous version. (Ticket #247576)

Version 14.5.35(released on 2025-01-16)

Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report). This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

Major security fix: An Insecure Direct Object References (IDOR) vulnerability was found, in which a malicious user could potentially exploit it by manipulating an HTTP request in a specially crafted manner when uploading files for File Upload fields on survey pages and data entry forms. This could allow the attacker to download any file that has been uploaded into the project, potentially containing sensitive/private information. The files that could be downloaded include those uploaded to File Upload fields, to the File Repository, or any other files that have been generally uploaded into the project in the past. Note: This vulnerability does not allow someone to download files from another project, but only files within the current project, such as files associated with a different record or a different field, event, or instance within the same record.

Bug fix: A missing LOINC code was added to the CDIS mapping features.

Bug fix: If a multiple choice field has one or more non-integer numeric codings (e.g., 0.5), in which the field is used in a calc or CALCTEXT field that utilizes mathematical addition (e.g., [field1]+[field2]),

the resulting calculation might not always be mathematically correct in certain situations, such as if some fields used in the calculation have a blank/null value. (Ticket #246718)

Bug fix: In certain MLM setup situations, the Survey Queue might fail to translate completely.

Bug fix: In certain situations, the Submit buttons at the bottom of survey pages might mistakenly not be wide enough. Bug emerged in the previous release.

Bug fix: Some text on the Scheduling and Calendar pages in a project might mistakenly not be displayed as translated but would be in English if the project is set to use a different language. (Ticket #247305)

Bug fix: When performing a Data Search on the "Add/Edit Records" page, in which the search results include a match on a record's record ID/name while the first instrument in the project is not designated for certain events in a longitudinal project, the search results might mistakenly return a result pointing to an event where the first instrument is not designated, and thus the user clicking the search result would lead to an "Access Denied" error. It will now not output such search results in this specific case. (Ticket #247507, #247508)

Bug fix: When performing a Data Search on the "Add/Edit Records" page, in which the search results include a match on a record's record ID/name while the user does not have view access to the first instrument in the project (where the record ID field is located), clicking the search result would mistakenly take the user to a form to which they do not have access, which would display an error message and could be confusing. It will now take the user to the Record Home Page for that record in this specific situation. (Ticket #247510)

Bug fix: When renaming an instrument that is enabled as a survey via the "Choose action" button in the Online Designer, if the user enters a new instrument name that contains an apostrophe, then when REDCap asks if the user wants to also change the survey title to that value, the "Yes" button in the dialog would mistakenly do nothing due to a JavaScript error. (Ticket #247526)

Bug fix: When using "Large" or "Very large" as the survey text size for a survey that has horizontally-aligned checkboxes, the first checkbox of a field would appear to be slightly cut off on the left side. (Ticket #247466)

Bug fix: When using OpenID Connect for authentication, the pre-filling of a user's first/last name and email address in their Profile might mistakenly not occur for certain OIDC setups. (Ticket #246812)

Version 14.5.34(released on 2025-01-09)

Bug fix: The submit buttons on survey pages might mistakenly have their text spill out if the button text is long. (Ticket #247033)

Bug fix: When using Double Data Entry together with Missing Data Codes, in which an MDY- or DMY-formatted date/datetime field has a Missing Data Code value for a record that is about to be merged via the Data Comparison Tool page, the Missing Data Code value would mistakenly be converted into the value "00-00-0000" in the newly created record.

Version 14.5.33(released on 2025-01-08)

Major security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered when uploading files for a File Upload field on a data entry form or survey page, in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a URL.

This can be exploited by anyone who has a link to a survey with a File Upload field (i.e., does not require authentication). Bug exists in all REDCap versions for the past 10 years.

Bug fix: A fatal PHP error might mistakenly occur in a Dynamic Data Pull (DDP) project when saving adjudicated data. (Ticket #246497)

Bug fix: Fixed a small inconsistency in the text referring to the "Add/Edit Reports" privilege on the User Rights page. (Ticket #246840)

Bug fix: When using "Large" or "Very large" as the survey text size for a survey that contains hyperlinks in the survey instructions, survey completion text, or in field labels that utilize the rich text editor, the hyperlink's text might mistakenly be locked at a specific font size and thus would look strange adjacent to other text. (Ticket #246917)

Bug fix: While generating a new schedule on the Scheduling page in a project, some parts of the table and date/time widgets on the page were mistakenly always displayed in English, even when the user interface had been set to another language. Additionally, the text boxes in the Time column of a projected schedule were too narrow. (Ticket #246833)

Version 14.5.32(released on 2025-01-02)

Major security fix: An SQL Injection vulnerability was found on the User Rights page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way when adding new User Roles. This can only be exploited by authenticated users. Bug exists in REDCap 10.3.3 and higher.

Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered on the Data Import Tool page in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a CSV data file being uploaded for the Background Data Import process. This can only be exploited by an authenticated user. Bugs exists in REDCap 13.8.0 and higher.

Minor security fix: Removed outdated dependencies on the external libraries (jQuery, Bootstrap, Popper) in the "Launch from EHR" process for CDIS projects, specifically due to a vulnerability in Bootstrap 4. These libraries were previously locked to older versions to maintain compatibility with older browsers like IE11, required in specific Epic integration settings. This update eliminates potential security risks associated with the outdated libraries and improves overall maintainability. Note: The vulnerability is only exploitable if the Clinical Data Pull service is enabled in CDIS.

Bug fix: If MyCap is disabled at the system level and then a user creates a project via a Project XML file, in which the Project XML is set to have MyCap enabled, the MyCap settings for the project would mistakenly get loaded into the new project.

Bug fix: In extremely rare situations, the survey page might return the error message "An unknown error has caused the REDCap page to halt", thus possibly preventing the survey response from being saved properly and ending the survey prematurely.

Bug fix: Several missing LOINC codes were added to the CDIS mapping features.

Bug fix: When using inline comments inside the "Action Tag/Field Annotation" text, specifically for the IF action tag, the logic might mistakenly not get parsed correctly, thus causing it not to behave as expected. (Ticket #246704)

Version 14.5.31(released on 2024-12-27)

Bug fix: Fields might mistakenly fail to be embedded inside a Descriptive field if the Descriptive field already has some input elements contained inside it (in its pre-embedded state). (Ticket #246424)

Bug fix: For logic-based PDF snapshots stored in the PDF Snapshot Archive in the File Repository, the record link for the snapshot in the snapshot table on the page would mistakenly not navigate the user to the record correctly.

Bug fix: The "Read introduction to Data Resolution Workflow" link does not work from the "Resolution Metrics" tab of the Data Quality page due to a JavaScript error. (Ticket #246592)

Bug fix: The Configuration Check page and main Control Center page might mistakenly note that something is wrong with the database structure, specifically the table "redcap_ehr_resource_imports". This was merely a false positive, and it only occurs when running MySQL 8. (Ticket #246426)

Bug fix: When a user is performing the "Re-evaluate ASI" action in the Online Designer, in which they select the "Test Run" option, the process might mistakenly run many more SQL queries than is intended, which might result in database server performance degradation while the process is running. (Ticket #246170)

Bug fix: When importing clinical notes for Clinical Data Mart projects via CDIS, the system would fail to identify existing clinical notes, resulting in duplicate entries being stored in CDM projects. REDCap now properly detects and prevents duplicates.

Bug fix: When using CDIS, the Patient resource would return a blank gender value if a blank gender is provided (i.e., exists in the EHR), instead of defaulting to 'UNK'. This change ensures consistent handling of blank gender values, particularly in "Break the Glass" scenarios.

Bug fix: When using Custom Event Labels in a longitudinal project, in very specific cases when field variables are prepended with a unique event name in the label, that field's value might mistakenly not get displayed in the Custom Event Label in the table header on the Record Home Page. (Ticket #246409)

Bug fix: When using REDCap's Two-Factor Authentication feature with the Microsoft/Google Authenticator 2FA option enabled while also using an "X & Table-based" authentication method, the table of user attributes on the Browse Users page in the Control Center would mistakenly display the "Send instructions via email" option for Microsoft/Google Authenticator when an administrator is viewing a non-Table-based user when the "Enforce two-factor authentication ONLY for Table-based users?" 2FA setting is enabled. If 2FA is enabled only for Table-based users, then that option on the Browse Users page should not be displayed when viewing a non-Table-based user's account. Additionally, the "Expiration time for 2-step login code" row should also be hidden in this case. (Ticket #246329)

Bug fix: When using the "Break the Glass" feature for CDIS, the selection would mistakenly not be cleared after a successful "Break the Glass" action, leaving the "Submit" button enabled. The selection now clears as expected, and the button is properly disabled.

Version 14.5.30(released on 2024-12-19)

Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered at the survey end-point in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a survey URL. This can be exploited by anyone and does not require authentication; however, this exploit is only successful when the outgoing email service being used allows invalid email addresses (e.g., those containing HTML tags or JavaScript) to be used in the recipient email address and returns a status of True that the email sent successfully. Thus, this bug does not occur if using SendGrid, MailGun, or Mandrill third-party email services. Bugs exists in all versions of REDCap.

Major bug fix: When a record in a longitudinal project belongs to a Data Access Group, in which the record has data in only one event, if a user clicks the red X on the Record Home Page to "Delete all data on event" for the one event that contains data, it would mistakenly cause the record to no longer be assigned to the DAG. Additionally, the Logging page would not note the record being unassigned from the DAG. (Ticket #246056)

Bug fix: If a multi-page survey has the "Save & Return Later" option enabled and has the "Allow respondents to return without needing a return code" option enabled, if data is entered on that instrument via data entry form (but not via survey) and then the survey is opened, the survey page might mistakenly open on a later page rather than on the first page, as expected. (Ticket #245967)

Bug fix: If a survey has invitations that have been scheduled or sent, and that survey instrument is later deleted (i.e., the instrument, not the survey settings), those invitations would still appear in the Survey Invitation Log. (Ticket #246034)

Bug fix: In a MyCap-enabled project that also uses MLM, the base language in MLM would be included in the list of languages in MyCap even if MyCap is not utilized in MLM.

Bug fix: The "Break the Glass" feature for CDIS when pulling data from Epic into REDCap was no longer working due to changes on the Epic side. The issue has been fixed to allow CDIS users to be able to perform "Break the Glass" operations on multiple records again in the REDCap interface.

Bug fix: The FHIR statistics collection process for CDIS (i.e., counting the number of values and types of data imported from the EHR via Clinical Data Mart and Clinical Data Pull) was mistakenly storing inaccurate counts for a long time. Much of the stats of data being imported from the EHR was not stored due to a bug. In response to this issue, the old stats data will have to be abandoned but will remain in the REDCap backend database in the table "redcap_ehr_import_counts" for legacy purposes, and that table will no longer be used by the application. As of this version, REDCap has two new database tables "redcap_ehr_resource_imports" and "redcap_ehr_resource_import_details" to collect accurate CDIS stats going forward. The new tables and stats page enhance monitoring, enable improved reporting, and ensure accurate categorization of imported resources in REDCap. Note: There is not a user interface yet in LTS to view these stats being collected, but a FHIR Stats page has been added in REDCap 14.9.3 Standard.

Bug fix: When a PDF Snapshot is being triggered using a data import or if a PDF is being generated via the REDCap::getPDF() method in an External Module, it would mistakenly output the error message "PDF cannot be output because some content has already been output to buffer" onto the page if some of the webpage had already been rendered. (Ticket #246037)

Bug fix: When a user is assigning another user to a data query via email for the Data Resolution Workflow, the recipient's first and last name would mistakenly be used as the email sender's Display Name in the email. (Ticket #245946)

Bug fix: When saving API secrets/keys on various configuration-related Control Center pages, the values of the secrets/keys would mistakenly get logged in the "redcap_log_event" database table. These values are already being encrypted when added to the "redcap_config" table, and as such, they should not be stored in plain text in the internal REDCap logging either. Thus, going forward, any such values will be stored with the value "[REDACTED]" in the logging table rather than as their literal value. (Ticket #245886)

Bug fix: When using the Survey Login feature in a project, if a survey participant leaves all survey login fields empty and they try to log in by submitting blank values, the survey login would mistakenly be successful, regardless of the number of login fields and the minimum number of fields above that are required for login. (Ticket #246295)

Version 14.5.29(released on 2024-12-12)

Bug fix: On the CDP Mapping page for CDIS, any HTML existing inside the field label of fields being mapped would mistakenly not get stripped out, thus possibly causing readability issues and other issues on that page.

Bug fix: The C# code generated by the API Playground had some errors. (Ticket #241561)

Bug fix: When an admin clicks the "Auto-fill form/survey" link on a form or survey, and specific number-validated fields (e.g., number_2dp_comma_decimal) have a min or max range validation, this would result in an out-of-range validation error on the page. (Ticket #226377b)

Bug fix: When importing data using the Data Import Tool or API, it would mistakenly not be possible to import Missing Data Codes for a Slider field. Note: This was supposedly fixed in REDCap 14.5.22 LTS, but it was not. (Ticket #243896)

Bug fix: When modifying the label of a field in a matrix while in Draft Mode in production status, in which the field contains data for one or more records, a red warning saying "*Possible data loss if a matrix field's label changes" should be displayed on the Project Modifications page; however, that warning was mistakenly not being displayed in that situation. Bug emerged in REDCap 14.5.0. (Ticket #245793)

Bug fix: When using SendGrid as the outgoing email provider, if the system-level setting "Utilize the Display Name in all outgoing emails?" is turned off, the Reply-To Display Name might mistakenly still get added to outgoing emails. (Ticket #245904)

Bug fix: When using the DAG Switcher in a project, and the current user clicks the Switch button to open the DAG Switcher dialog, the drop-down list of DAGs in the dialog would mistakenly not look completely like a drop-down element, thus potentially causing confusion. (Ticket #245627)

Bug fix: When using the URL of a website (e.g., public survey link) as the Embed Media URL for a Descriptive field, the embedded website would mistakenly not display properly when viewing the survey page or data entry form on an iOS device. (Ticket #245700)

Version 14.5.28(released on 2024-12-06)

Critical bug fix: Under specific circumstances when using PHP 8, data entry forms and survey pages might mistakenly always crash with a fatal PHP error, thus making data collection impossible. Bug emerged in the previous version. (Ticket #245574)

Version 14.5.27(released on 2024-12-05)

Medium security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into the record name of a record being imported via the Data Import Tool or API, after which the exploit could be activated in a specific place in the Online Designer. This can only be exploited by authenticated users. Bugs exists in all versions of REDCap in the past 8 years.

Minor security fix: If REDCap Messenger is enabled, a malicious user could impersonate another user in the system specifically when uploading a file into a Messenger conversation by manipulating an HTTP request in a specially-crafted way. Note: This would not give the user being impersonated access to a Messenger conversation to which they do not have access to, but it would make it appear as if the other user uploaded the file to the conversation. This can only be exploited by authenticated users. Bugs exists in all versions of REDCap in the past 8 years.

Bug fix: A missing LOINC code was added to the CDIS mapping features.

Bug fix: An outdated version of jQuery was mistakenly included in REDCap as part of a third-party library. That outdated version has been removed since it did not serve a functional role in the library. (Ticket #245523)

Bug fix: If a Text field or Dropdown field is embedded on an instrument but is not using the ":icons" notation (e.g., {myfield:icons}), then if Missing Data Codes are being used in the project and the field's current saved value is a MDC, there would be no way for a user to clear out the MDC and thus change the field's value. In this situation, the M icon will now be displayed next to the field to allow users to unset the MDC value. (Ticket #245398)

Bug fix: When a user attempts to resize the Choices textbox (for a multiple choice field) inside the Edit Field dialog in the Online Designer, the elements below the textbox would not move in response to the resizing, thus allowing the textbox to be stretched and mistakenly appear underneath the other elements. (Ticket #245180)

Bug fix: When an admin clicks the "Auto-fill form/survey" link on a form or survey, and a DMY or MDY formatted date field has the literal value "today" as the min or max range validation, this would result in an out-of-range validation error on the page. (Ticket #226377)

Bug fix: When downloading the Notification Log on the Alerts & Notifications page, the resulting CSV file's filename would mistakenly end with ".csv.csv". (Ticket #245440)

Bug fix: When exporting data to SPSS, the SPSS Pathway Mapper batch file would mistakenly remove the BOM (byte order mark) from the SPSS file, leading to UTF-8 characters in the SPSS file getting mangled.

Bug fix: When modifying a matrix of fields in the Online Designer, in which the variable names of some fields are changed, the fields would mistakenly not be saved correctly, and attributes of some fields in the matrix might get merged into other fields in the matrix. (Ticket #244773)

Bug fix: When performing a data import that contains values for the Secondary Unique Field in the project, in which the SUF's value happens to be a Missing Data Code and another record already has the same Missing Data Code saved for the SUF in the other record, the import process would stop with an error message saying the value of the field duplicates the value from another record. The SUF uniqueness check should not be performed when importing a Missing Data Code. (Ticket #245182)

Bug fix: When the "Require a reason when making changes to existing records" feature is enabled in a project and a user goes to import data using the Data Import Tool, the user is given a warning message if a "reason" is not provided for all existing records being modified by the import, but it would mistakenly allow the import to take place without a reason provided, which should not be allowed. (Ticket #245514)

Bug fix: When uploading a consent form file for a survey on the e-Consent Framework page, in which the file uploaded is not a PDF file, it would mistakenly add a placeholder in the consent file version table (but with a blank value for the PDF file), which would prevent users thereafter from uploading the correct file with the same consent form version number (because the version number is already used by the previous mistaken upload). (Ticket #245561)

Bug fix: When using Twilio/Mosio telephony services in a project that is utilizing the setting to use a mappable multiple choice field for the Delivery Preference, if a new record is created via a data import or via the API, in which the mappable field value is set during the import process, the new record's delivery preference would mistakenly be set to the project default delivery preference (or instead as "Email") rather than to the correct delivery preference value for the record. (Ticket #245186)

Bug fix: When viewing the field-view in the Online Designer, in which a date/datetime field is embedded and also has the CALCDATE action tag, the green "Field is embedded elsewhere on page" button would mistakenly be hidden for that field. (Ticket #245243)

Bug fixes for Clinical Data Interoperability Services (CDIS): 1) Resolved incorrect display of mapped status for "Device - Implants" resources in the CDIS Mapping Helper, and 2) Fixed saving functionality for "Device - Implants" resources in the matching form for CDM projects.

Version 14.5.26(released on 2024-11-26)

Minor security fix: A vulnerability was discovered in REDCap Messenger in which a malicious user could potentially exploit it by manipulating an HTTP request in a specially-crafted way that would potentially allow them to enumerate a list of all usernames in the whole system, including users' first and last name. This can only be exploited by authenticated users. Bugs exists in all versions of REDCap 7.4.0 and later.

Bug fix: If a survey ends via a Stop Action and the Alternate Survey Completion Text has been left blank, it would display no text at all at the end of the survey when it should instead default to displaying the regular Survey Completion Text. (Ticket #245008)

Bug fix: In very specific situations where a date/datetime field has the READONLY action tag, the calendar datepicker icon next to the field would mistakenly still be displayed, thus allowing users to inadvertently modify the field value using the datepicker widget. (Ticket #244986)

Bug fix: The Data Search feature on the "Add/Edit Records" page might mistakenly keep saying "Searching..." even when nothing has been returned if certain keys on the keyboard are clicked, such as Enter, when typing the search term. (Ticket #54818b)

Bug fix: The piping documentation mistakenly did not specify that piping essentially bypasses a user's Data Viewing Rights, so even if a user has 'No Access' Data Viewing Rights for the instrument of a piped field, any user will be able to view the data of the piped field regardless of where the field is being piped. More information has now been added to the piping documentation to clarify this missing piece of information. (Ticket #244827)

Bug fix: Various fixes in CDIS with specific regard to ensuring that authentication in REDCap works correctly and successfully when in an EHR/CDIS context.

Bug fix: When MLM is active, the redirection of completed surveys via the survey termination option "Redirect to a URL" would not work as expected. (Ticket #244741)

Bug fix: When uploading a file into a REDCap Messenger conversation while inside a REDCap project, the Upload File dialog would mistakenly be covered by the left-hand project menu.

Version 14.5.25(released on 2024-11-20)

Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in REDCap Messenger and in the Data Quality module in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way. These can only be exploited by authenticated users. Bugs exists in all versions of REDCap 7.4.0 and later.

Major security fix: An SQL Injection vulnerability was found on a MyCap-related page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. This can only be exploited by authenticated users. Bugs exists in all versions of REDCap 13.0.0 and later.

Minor security fix: A security vulnerability was discovered in the Moment.js library that is utilized by REDCap. That library has been removed from the REDCap code to remediate this issue.

Minor security fix: Due to a ReDoS (Regular expression Denial of Service) vulnerability discovered in the Vue third-party library that is bundled in REDCap, the Vue library utilized specifically on the CDP Mapping page has been upgraded to a newer version that does not contain the vulnerability.

Bug fix: If one or more fields are piped into the survey instructions of a survey, in which the fields being piped are located on the first page of the survey, the real-time piping action might not occur when entering data into those fields on the first survey page unless those same fields happen to be piped elsewhere on the page.

Bug fix: In a multi-arm project that utilizes the Survey Queue or certain [survey-X] Smart Variables, in which individual records will exist on multiple arms at the same time, if a record exists in one arm and then a participant uses the Survey Queue to navigate to a survey in another arm where the record does not yet exist, the participant would mistakenly be redirected to the survey page that asks them to enter a survey access code. And if using a [survey-X] Smart Variable that refers to a survey on another arm, it would mistakenly return a blank value.

Bug fix: Several missing LOINC codes were added to the CDIS mapping features.

Bug fix: The API Playground page might load unusually slowly for older projects or busy projects (i.e., with lots of logged events).

Bug fix: When a matrix of fields contains no choices, the Online Designer field-view page, data entry form, and survey page containing that matrix might mistakenly crash due to a fatal PHP error when using PHP 8. (Ticket #244669)

Bug fix: When exporting a report in "labels" format for a report that is sorted by a multiple choice field that has integers for every choice value, the resulting exported data would mistakenly not be sorted according to the choice labels but would often revert to being sorted by the record ID field instead. (Ticket #244525)

Bug fix: When using Multi-Language Management and translating field labels, in certain cases some text in the field label might not align horizontally with other text that should be displayed on the same line.

Bug fix: When using a CDIS service, the Date of Death value of a patient was mistakenly displayed in Zulu (UTC) time instead of the expected local formatted time. The date is now converted to local time and formatted to YYYY-MM-DD HH:MM format for consistency.

Version 14.5.24(released on 2024-11-14)

Bug fix: A duplicate language key for MyCap existed in the English.ini file. (Ticket #243930)

Bug fix: If the Survey Base URL is being used together with Clickjacking Prevention in the REDCap installation, "Custom Surveys for Project Status Transitions" survey pages would initially load in a user's browser, but after clicking a submit button on the survey, the page would be blocked and would not load any more pages. Note: This was supposedly fixed in REDCap 14.5.16 (LTS) and 14.6.10 (Standard), but it was only partially fixed. (Ticket #240644b)

Bug fix: If using the AWS CloudFormation deployment of REDCap, the REDCap upgrade process might mistakenly fail or have issues due to the "upgrade-aws-eb.sh" file inside the REDCap source code not being up-to-date with the same file stored in the GitHub repo for REDCap's AWS CloudFormation (https://github.com/vanderbilt-redcap/redcap-aws-cloudformation/). The file inside REDCap has now been updated to match the GitHub file.

Bug fix: In a MyCap-enabled project, REDCap was mistakenly listing DAG-specific announcements in a participant's message thread even if they are not in the DAG.

Bug fix: In a MyCap-enabled project, fields with the action tag MC-PARTICIPANT-CODE would mistakenly not get updated with the participant code value for records created via the API.

Bug fix: When downloading a PDF containing saved data, in which the PDF contains data for repeating instruments and/or repeating events, the repeating instances might be mistakenly displayed out of order in the PDF (with the instances of different repeating instruments being ordered by instance number instead of being ordered by instrument then instance number). Additionally, some of the repeating instruments might be duplicated as empty forms (as if they have no data) on certain pages in the PDF. (Ticket #244080)

Bug fix: When using field embedding on a Descriptive field that has an "Embed media" URL that is set to be displayed "Inline", the resulting "View media" button and/or field label would mistakenly not appear where the field is supposed to be embedded on a survey page or data entry form. (Ticket #243847)

Bug fix: When using the "Erase all data" option on the Other Functionality page or when moving a project to production while erasing all records, any PDF Snapshots that are stored in the "PDF Snapshot Archive" in the File Repository would mistakenly not be deleted during this process. (Ticket #244073)

Bug fix: When using the [stats-table] Smart Variable with one or more unique event names appended to it (in order to limit the table data to specific events), the resulting stats table would mistakenly always display counts from all events for the given field instead of the specified events. (Ticket #244162)

Version 14.5.23(released on 2024-11-12)

Major bug fix: In several places in a project where survey links are generated, such as using the Smart Variable [survey-link] or the EM developer method REDCap::surveyLink(), those might return a blank value instead of a real URL. Additionally, if a survey has the "Allow participants to download a PDF of their responses at end of survey?" option set to "Yes" on the Survey Settings page, participants would get a 404 error in their browser when clicking the PDF Download button after completing the survey, thus preventing them from downloading the survey. Bug emerged in the previous version. (Ticket #244103, 244176)

Version 14.5.22(released on 2024-11-07)

Minor security fix: Due to a ReDoS (Regular expression Denial of Service) vulnerability discovered in the Vue third-party library that is bundled in REDCap, the Vue library has been upgraded to a newer version that does not contain the vulnerability.

Bug fix: In certain cases, when creating a new project using a Project XML file that contains Custom Record Status Dashboards, the "Select instruments/events" attribute might not get set correctly during the import, thus causing that dashboard not to display any instruments when viewing it. (Ticket #243909)

Bug fix: In some rare cases when upgrading from a REDCap version lower than 14.3.1, the upgrade page might mistakenly fail to load completely. Bug emerged in REDCap 14.3.1 Standard. Note: This was supposedly fixed in the previous release, but mistakenly it was not.

Bug fix: When certain record-based [survey-X] Smart Variables are utilized on a survey or data entry form (e.g., CALCTEXT([survey-access-code])), in which the record has not been created yet, duplicate rows might mistakenly be added for the resulting record in the Participant List.

Bug fix: When clicking the "Download all" button when viewing the PDF Snapshot Archive in the File Repository, any PDF snapshots created using a logic-based snapshot trigger would mistakenly not be included in the downloaded zip file. (Ticket #243743)

Bug fix: When enabling MyCap on a project that has existing records, the MyCap participant code would mistakenly not get populated for fields with the action tag @MC-PARTICIPANT-CODE.

Bug fix: When importing data using the Data Import Tool or API, it would mistakenly not be possible to import Missing Data Codes for a Slider field. (Ticket #243896)

Bug fix: When uploading user role assignments via CSV on the User Rights page, if the username in the CSV file has trailing spaces, those spaces might mistakenly not get removed when saving the user role assignments in the project. (Ticket #243138b)

Version 14.5.21(released on 2024-10-31)

Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into the value of a Text field or Notes field by authenticated users on a data entry form or by survey participants on a survey. It can only be exploited by entering text containing the HTML "embed" tag when dynamic piping is happening on the current page via JavaScript. Bug emerged in REDCap 14.5.0.

Bug fix: If a user assigned to a Data Access Group is viewing the Notification Log for "Alerts & Notifications", in which one or more alerts have been set as a recurring alert, the page would mistakenly display future notifications for records not in the user's DAG. (Ticket #243195)

Bug fix: If a user is importing data via the API or Data Import Tool, in which the user is not assigned to a DAG and the data import file contains the "redcap_data_access_group" field, if the import file contains multiple records and the "Overwrite data with blank values?" setting is set to "Yes", then any records that are currently assigned to a DAG but have a blank value for the "redcap_data_access_group" field in the import file would get correctly unassigned from their current DAG, but the Record List Cache would mistakenly not get updated to reflect this DAG unassignment. This means that until the Record List Cache is reset, the record might appear to be in a DAG even though it is technically not assigned to a DAG anymore. (Ticket #242983)

Bug fix: If an alert has been created with the "When to send the alert" setting as "Send the alert X [units] after the day (beginning at midnight) that the alert was triggered", then downloading the alerts as a CSV file and then re-uploading them would result in an error for this particular setting. (Ticket #237215)

Bug fix: In rare cases, a fatal PHP error might occur on a survey when using PHP 8. (Ticket #243300)

Bug fix: In some cases, the Background Data Import process might mistakenly fail to finalize itself even after all records appear to have been successfully imported. (Ticket #243425)

Bug fix: In some rare cases when upgrading from a REDCap version lower than 14.3.1, the upgrade page might mistakenly fail to load completely. Bug emerged in REDCap 14.3.1 Standard.

Bug fix: The "Download form display logic setup" drop-down option in the Online Designer form-view would mistakenly not be visible because it would be obscured by the table immediately below it. (Ticket #243052)

Bug fix: The API method "Export a List of Files/Folders from the File Repository" would mistakenly require API Import privileges. It should only require API Export privileges and File Repository privileges in the project. (Ticket #243161)

Bug fix: The Email Users page would mistakenly list users that do not have the "Display user on 'Email Users' page?" checkbox checked for them on the Browse Users page in the Control Center. (Ticket #234149)

Bug fix: When downloading a PDF of a survey instrument or when REDCap is storing a PDF Snapshot of a survey instrument, certain HTML tags that exist in the survey instruction text might mistakenly get stripped out before being properly processed into line breaks, etc. for the PDF. Bug emerged in REDCap 14.5.0. (Ticket #243240)

Bug fix: When uploading user-DAG assignments via CSV on the Data Access Groups page, if the username in the CSV file has trailing spaces, those spaces might mistakenly not get removed when saving the user-DAG mappings in the project, which could cause the DAG page's table not to display all DAG users in the "Users in group" column. (Ticket #243138)

Bug fix: When using Multi-Language Management, if a field has the @LANGUAGE-SET action tag, the language-switching functionality will not work for it if the field is embedded. (Ticket #243593)

Version 14.5.20(released on 2024-10-24)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a Text field or Notes field whose value is being piped on the same

page of a survey or data entry form. This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug emerged in REDCap 14.5.0.

- Bug fix: If an email contains a piped File Upload field variable using the ":inline" piping option (e.g., [my_file:inline]), for certain email servers and certain email configurations in REDCap (e.g., SMTP), the file would mistakenly not get attached to the email as a regular attachment if the file is not an image file. (Ticket #242935b)

- Bug fix: If an email contains a piped File Upload field variable using the ":link" piping option (e.g., [my_file:link]), clicking the download link in the email would mistakenly display the error message "NOTICE: This file is no longer available for download" rather than downloading the file. (Ticket #242935)

- Bug fix: In certain situations, one of the Clinical Data Pull (CDP) cron jobs for CDIS might crash unexpectedly.

- Bug fix: Modifying the value of a drop-down field, specifically one that has autocomplete enabled, would mistakenly not trigger the "Save your changes?" dialog or the "Reason for change" dialog (if enabled) in the project. (Ticket #242610)

- Bug fix: When data is exported from the Database Query Tool while "query context" was used in the query, this context was not properly evaluated and the page crashed during the export.

- Bug fix: When exporting data via the Export Records API method with parameter type=eav, if any duplicate values somehow exist in the backend data table for a single field, those duplicates would mistakenly be output in the resulting data that is returned from the API. (Ticket #242493)

- Bug fix: When importing data into a longitudinal project (whether via API, Data Import Tool, Mobile App, or data in a Project XML file), in which data for a repeating event or repeating instrument is being imported when the first instrument in the project is not designated for

the event of data being imported, in certain situations the form status field for the first
instrument might mistakenly receive a "0" (Incomplete) value during the import, even when
that field is not included in the data being imported. This inadvertently creates data values
that are automatically orphaned and never accessible in the user interface except in reports
and data exports. (Ticket #242590)

- Bug fix: When the e-Consent Framework is enabled for a survey, the "Save & Mark Survey as
  Complete" button would mistakenly be displayed when viewing the instrument as a data
  entry form. Clicking this save button would mark the survey as complete and log it as if an e-
  Consent certification took place, when in fact it did not because the certification was
  essentially bypassed. e-Consent surveys should only ever be completed on the survey page
  itself and not on a data entry form. Going forward, the "Save & Mark Survey as Complete"
  button will no longer be displayed on the data entry form for any survey instrument that has
  the e-Consent Framework enabled. (Ticket #242860)

- Bug fix: When uploading a file for a File Upload field, in which the file exceeds the system-
  level maximum file size setting for File Upload fields, the file would mistakenly remain on the
  server for 30 days until it was then permanently deleted. Going forward, the file will never be
  initially stored in the system if it exceeds the file size limit.

- Bug fix: When using the "Go to field" functionality in the Online Designer (Ctrl-G or Cmd-G)
  and searching for a field by typing in part of the variable name or field label, a JavaScript
  error would be thrown in the browser console if the current instrument does not have any
  fields. (Ticket #242884)

Version 14.5.19(released on 2024-10-17)

- Major bug fix: In some extremely rare cases, it might be possible that the same return code could be generated for two different participants taking the same public survey. In certain situations, this could possibly allow one participant to inadvertently view the responses of another participant. (Ticket #241815)

- Bug fix: If a record is deleted when the data privacy/GDPR feature "Delete a record's logging activity when deleting the record?" is enabled in a project, the email log associated with that record would mistakenly not get deleted along with the regular logging information. Note: This fix will not retroactively remove the email logging of already-deleted records in projects with this feature enabled, but it will prevent this issue from occurring in the future. (Ticket #242184)

- Bug fix: If data exists for a field used in branching logic or in a calculation in a longitudinal project, in which the data is orphaned from a previously-repeating instrument or event (i.e., it is no longer repeating but had data collected for it back when it was repeating), then some of the orphaned data might mistakenly be used on a survey/form for cross-event branching logic and calculations, thus causing the branching/calc not to behave as expected.

- Bug fix: In very specific situations after submitting the first page of a multi-page survey, the Required Field dialog might mistakenly be displayed saying that a field that is not present on the first page (but is present on the second page) has a missing value. (Ticket #236511)

- Bug fix: Minor text error in the Smart Variable documentation.

- Bug fix: Multi-instrument PDF Snapshots were likely to be malformed in larger/complex projects when MLM was enabled. (Ticket #242031)

- Bug fix: The Custom Event Label might cause significant performance issues to arise on the Record Home Page for certain projects.

- Bug fix: The cron job responsible for fetching data from the EHR system via CDIS might be unable to retrieve a valid FHIR access token under specific conditions, causing the fetch

process to fail. Additionally, the EHR ID might mistakenly not get logged in the FHIR Logs database table during CDIS processes.

- Bug fix: When a project is utilizing the Survey Queue together with the Survey Login feature, in which a survey participant has already logged in to a survey but then later reopens that same survey during the same "session", the icon/link to the Survey Queue would mistakenly not appear at the top-right of the first page of that survey as it should, even when some surveys exist in the participant's survey queue. (Ticket #242182)

- Bug fix: When a repeating instrument is enabled as a survey, and a participant navigates to that survey with "&new" appended to the URL to denote that a new repeating instance should be created from that response, branching logic and/or calculations on the survey page would mistakenly not work as expected if the fields used in the branching/calculations exist on a different instrument. Bug emerged in REDCap 14.5.14 LTS and 14.6.8 Standard Release.

- Bug fix: When certain video types (e.g., MP4) are added to the Embed Media URL of a Descriptive field, the video might not be playable for certain mobile browsers, such as Mobile Safari on iOS, if the project has MLM enabled on the current form/survey. (Ticket #241505b)

- Bug fix: When creating a new project via a Project XML file, in which the project contains one or more logic-based PDF Snapshot triggers, it might cause the project not to be fully created and thus not accessible to the user afterward.

- Bug fix: When exporting a Project XML file containing data for a longitudinal project that has repeating instruments, the resulting XML might be malformed in the file, thus causing some of the repeating instrument data not to get transferred to a new project created from the XML file.

- Bug fix: When moving an entire matrix of fields in the Online Designer to the top of another instrument, an error would result, thus preventing the matrix from being moved successfully.

- Bug fix: When moving an entire matrix of fields in the Online Designer, especially when moving them to another instrument, some fields in the matrix may not get moved successfully and/or the fields in the instrument might be messed up in various ways in the backend database, thus causing things not to display correctly for the instrument. (Ticket #236128, #241606)

- Bug fix: When uploading an Instrument Zip file or when copying an instrument in the Online Designer, if a field in the instrument has branching logic that contains an inline comment with and odd number of single quotes and/or double quotes, it would prevent the instrument from being uploaded or copied, respectively. (Ticket #241955)

- Bug fix: When using Multi-Language Management, floating matrix headers were not aligned properly on surveys for right-to-left languages. (Ticket #222689b)

- Bug fix: When using Twilio or Mosio telephony features in a project, in which an Automated Survey Invitation is set to be triggered and sent using the "participant's preference" for the ASI invitation type, if the mappable invitation preference field is being utilized in the project, then if a user sets the value for the invitation preference field on a form/survey, in which the ASI gets triggered and one or more calculated fields from other forms/events get subsequently triggered from the form/survey save, then the ASI will be sent/scheduled using the project's default value for delivery preference rather than using the participant's already-set delivery preference (from the invitation preference field). (Ticket #242434)

- Bug fix: When using Twilio or Mosio, it would mistakenly not send SMS messages to U.S. phone numbers with certain newer area codes, specifically 235, 324, 329, 353, 436, 624, 645, 686, 728, and 861.

Version 14.5.18(released on 2024-10-09)

- Major bug fix: If a project has one or more [non-e-Consent] PDF Snapshots enabled to be triggered by the completion of a specific survey, in which that same survey has had the e-Consent Framework enabled in the past but is currently disabled for the survey, in certain situations the active PDF Snapshots would mistakenly not get triggered and saved when the survey is completed by a participant. Bug emerged in REDCap 14.5.11 LTS and 14.6.5 Standard. (Ticket #241710)
- Bug fix: When a participant has completed an e-Consent survey, in which a consent form has been defined on the e-Consent Framework page for that survey, and then a PDF of that response is later downloaded or a PDF Snapshot of that response is later saved, the resulting PDF would mistakenly not always contain the consent form that the participant saw when they completed the survey, but (especially when MLM is not being used) they would see a newer version of the consent form, assuming a newer version of the consent form has been added to that survey. (Ticket #241501)
- Bug fix: When certain video types (e.g., MP4) are added to the Embed Media URL of a Descriptive field, the video might not be playable for certain mobile browsers, such as Mobile Safari on iOS. (Ticket #241505)
- Bug fix: When exporting a Project XML file that contains e-Consent Framework settings, if the project is longitudinal and the e-Consent settings have a "Last name field" or "Date of birth field" defined, the e-Consent settings might not get successfully imported into the new project created using the Project XML file. Bug emerged in REDCap 14.5.0.

Version 14.5.17(released on 2024-10-03)

- Major security fix: If a malicious user is logged in and has access to at least one report in one project, they could potentially manipulate the URL of specific REDCap end-points in order to view the results of any report for any project, even when they do not have access to that report or project.

- Major bug fix: Some of the AJAX end-points used by the Email Users page in the Control Center would mistakenly allow non-administrators to access them (if a user knows how), which could allow normal users to possibly view the list of all users (usernames, names, and emails) in the system.

- Bug fix: An issue would occur for Clinical Data Pull (CDP) projects in which entries in the redcap_ddp_records database table were incorrectly marked with a "future date count" > 0 if no temporal fields were mapped but date fields were present in the project. This would cause affected records not to be queued for automatic fetching in the background.

- Bug fix: For some server configurations, the MyCap logo displayed on the Multi-Language Management setup page might either not be displayed or might cause the whole page not to be displayed in MyCap-enabled projects. (Ticket #241449)

- Bug fix: In very rare situations, when a person receives a file via Send-It, they would not be able to download it because it may appear to have already expired prematurely.

- Bug fix: The instrument view of the Online Designer would mistakenly throw a JavaScript error. This would not cause any issues, but would show up in the browser console. (Ticket #241201)

- Bug fix: The question-mark popover in Step 2A option 3 when adding/editing an alert on the Alerts & Notifications page would mistakenly display escaped HTML in the popover rather than interpreting the HTML tags.

- Bug fix: When a radio or drop-down field has numeric-only choice codes, in which the field has a blank/null value and is used in the concat_ws() function, the field would mistakenly be

represented as "NaN" (in JavaScript) and as "NAN" (in PHP) in the result of concat_ws(). (Ticket #241098)

- Bug fix: When a survey has the e-Consent Framework enabled and also has "Save & Return Later" enabled with the "Allow respondents to return without needing a return code" option checked, the survey would mistakenly display a Return Code when the participant clicks the "Save & Return Later" button, and it would also ask for a Return Code when loading the survey page after having not completed it. Bug emerged in REDCap 14.5.15 and 14.6.9. (Ticket #241142)

- Bug fix: When clicking a value displayed in the results of a Data Quality rule, which opens the data entry form in a new tab, it would mistakenly not put the focus on the field if the field is a Notes field type. (Ticket #241058)

- Bug fix: When deleting a user account when viewing an individual account on the Browse Users page in the Control Center, the User Search text box on the page would mistakenly no longer be functional for searching unless the page is reloaded. (Ticket #241142)

- Bug fix: When the first field on a given instrument has a section header above it, and then in the Online Designer a user attempts to add a field between the section header and the field immediately below it, if the project is in draft mode while in production, the newly added might get added but would end up in a weird limbo state so that the field might not be visible afterward. (Ticket #241530)

- Bug fix: When using MLM for translating survey invitations, specifically those sent via SMS, it could cause a fatal PHP error for the cron job when using PHP 8. (Ticket #92266b)

- Bug fix: When using Multi-Language Management, the wrong message was shown on the Misc tab for the base language on the MLM setup page.

- Bug fix: When using the READONLY action tag on the Secondary Unique Field on a survey that has the SUF prefilled via URL variables, the field would mistakenly be editable and not

read-only. Note: This occurs only on the SUF when viewed specifically in survey mode, and only when prefilling is being performed. Also, this was supposedly fixed in REDCap 14.5.8 LTS and 14.6.2 Standard, but it was apparently only fixed in specific use cases. (Ticket #237623b)

Version 14.5.16(released on 2024-09-26)

- Bug fix: For certain PHP versions, a JavaScript error might occur on the Project Setup page when enabling the Mosio feature.
- Bug fix: For projects in draft mode using the e-Consent Framework that have had a field modified or deleted on an e-Consent survey, the notice displayed to the user prior to submitting their drafted changes for approval (which mentions that the user should probably change the e-Consent version number) is no longer applicable in v14.5.0+ because the version number is no longer necessarily connected to the survey or its fields anymore in v14.5.0+ but instead is connected only to the consent form displayed on the survey. Given this, it no longer makes sense to display this notice to the user. Thus, the notice will no longer appear to users in this specific situation. (Ticket #240518)
- Bug fix: If the Survey Base URL is being used together with Clickjacking Prevention in the REDCap installation, it would prevent any of the "Custom Surveys for Project Status Transitions" survey pages from loading in a user's browser. (Ticket #240644)
- Bug fix: The text of some dialogs that appear on PROMIS surveys were mistakenly not available to be translated via Multi-Language Management. (Ticket #239286)

Version 14.5.15(released on 2024-09-20)

- Major bug fix: When importing data (via Data Import Tool, API, Mobile App, etc.) into a project that contains Data Access Groups, an erroneous message might be returned stating that the records being imported cannot be modified because they do not belong to the user's DAG, in which it names existing records in the project (not the records being imported). This would prevent the data import process from starting, and if using the Background Data Import, that process might mistakenly fail midway through the import, thus needing to be re-imported. Bug emerged in the previous version. (Ticket #240514)

- Bug fix: Further fixes for a possible upgrade error with regard to foreign keys on specific tables that occur for some installations under specific circumstances.

- Bug fix: If a survey has the e-Consent Framework enabled and also has "Save & Return Later" enabled with "Allow respondents to return and modify completed responses", this combination could cause major issues with regard to the state of the data of a participant's informed consent if they are allowed to modify their own completed e-Consent response. In this specific situation going forward, the "Allow respondents to return and modify completed responses" setting will be automatically disabled and thus will prevent participants from modifying their completed e-Consent response. Additionally, the "Allow respondents to return and modify completed responses" setting will be disabled on the Survey Settings page if the current survey has the e-Consent Framework enabled, and it will display a note beneath the setting to inform users why it is disabled. (Ticket #240265)

- Bug fix: The page number that is displayed near the top right of multi-page surveys would mistakenly not be fully right-aligned on the page when using a non-fixed width setting for the survey page.

- Bug fix: When exporting data to SPSS, any field labels longer than 256 bytes would result as an error when loaded into SPSS.

- Bug fix: When using Shibboleth authentication for REDCap, and a survey participant opens a survey page that contains an inline PDF, the PDF might mistakenly not be displayed but would display a login page inside an iframe. (Ticket #240240)

- Bug fix: When using the Data Resolution Workflow along with Data Access Groups in a project, if a user attempts to assign a data query to a user, in some situations the drop-down list of assignable users would mistakenly list users that are not currently eligible to be assigned to the data query because they are not currently assigned to the record's DAG. It should only list users that are currently in the record's DAG (or users not in any DAG) if the record itself is assigned to a DAG. This bug was supposedly fixed in REDCap 13.10.2 but mistakenly was not. (Ticket #213770b)

Version 14.5.14(released on 2024-09-18)

- Major bug fix: Resolved an issue in the CDIS module that caused errors and disrupted normal operations in environments running PHP versions lower than 8.0. This bug affected: CDP auto-adjudication process, Mapping helper usage, and Data Mart operations. The fix ensures proper handling of user data, allowing CDIS to function smoothly across different PHP versions. Bug emerged in the previous release. (Ticket #240182)

- Bug fix: Fix possible upgrade error with regard to foreign keys on specific tables that occurs for some installations under specific circumstances.

- Bug fix: When a repeating instrument is enabled as a survey, and a participant navigates to that survey with "&new" appended to the URL to denote that a new repeating instance should be created from that response, the survey page would mistakenly get pre-filled with existing data if instance 1 of the instrument contains data and was created via a data entry

form. When "&new" is appended to a survey URL, the survey should never get pre-filled with any saved data. (Ticket #239909)

- Bug fix: When executing a custom data quality rule on a multi-arm project, in which the rule's logic implies that only records in certain arms should be returned in the results, the results might mistakenly return false positives of data from arms in which the records do not actually exist. (Ticket #237137)

- Bug fix: When exporting the Logging page as a CSV file, some logged events (e.g., "Invalid SMS response") might mistakenly say "Record 101" rather than just "101" in the record column of the CSV file. This is inconsistent with how the record name is displayed in that column for other logged events. (Ticket #239394)

- Bug fix: When reports or data exports are sorted by a multiple choice field that has only integers as its choice codes, the data for that field would mistakenly be sorted as a text string rather than appropriately sorted as a number.

- Bug fix: When using Shibboleth authentication, in which the "URL for Shibboleth SP Session Initiator" is defined, the user might not get redirected back to their current page after performing a successful login.

- Bug fix: When using Twilio or Mosio, it would mistakenly not send SMS messages to U.S. phone numbers with certain newer area codes, including 787 and 939. This bug was supposedly fixed in REDCap 14.0.33 LTS and 14.4.1 Standard Release, but mistakenly it was not. (Ticket #234300b)

- Bug fix: When using surveys with enhanced radios/checkboxes together with LH orientation and an RTL language for Multi-Language Management, the standard radios/checkboxes would mistakenly be visible, and the order of the enhanced radios was not following proper RTL alignment.

- Bug fix: When viewing a survey page with date or datetime fields, in which the "Size of survey text" setting is "Large" or "Very large", the values inside the date/datetime fields might appear truncated/cut off on the page. Note: This does not affect the actual value from being saved. (Ticket #239174)

Version 14.5.13(released on 2024-09-17)

- Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who is logged in could potentially exploit it by manipulating an HTTP request to a specific External Module Framework endpoint. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. This vulnerability exists in REDCap 11.0.0 and higher.
- Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who is logged in could potentially exploit it by manipulating an HTTP request to the Data Import Tool page while uploading a specially-crafted CDISC ODM XML file. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. This vulnerability exists in REDCap 6.12.0 and higher.
- Major security fix: A Cross-Site Request Forgery (CSRF) Bypass vulnerability was found in which a malicious user could potentially exploit it by manipulating an HTTP request to any URL in the system by tricking an authenticated user to click a specially-crafted link that could bypass the CSRF check and submit information (including changing REDCap system configuration values) on behalf of the user or admin. This vulnerability exists in REDCap 13.4.0 and higher.
- Major security fix: A Local File Inclusion (LFI) vulnerability was discovered in which a malicious user could potentially exploit it by setting the path of the hook function file on the

General Configuration page to a value containing specific characters in order to bypass the check that ensures that the file path points to a PHP file. The user must have "Modify system configuration pages" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way that can be exploited on the following pages: Alerts & Notifications, Stats & Charts, and the main REDCap Home Page. This vulnerability can only be exploited by authenticated users. Bug exists in all REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on certain Clinical Data Mart (CDM) related pages, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must have "Access to all projects and data with maximum user privileges" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on several Control Center pages, in which a malicious user who has co-opted a REDCap admin account could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must have "Modify system configuration pages" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Edit Project Settings page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The

user must have "Access to all projects and data with maximum user privileges" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Online Designer page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must be logged in to REDCap in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Send-It upload page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must be logged in to REDCap in order to exploit this. This bug affects all known REDCap versions.

Version 14.5.12(released on 2024-09-15)

- Major bug fix: In rare cases where radio field choices are being piped on a form or survey, the page might mistakenly never fully load due to a JavaScript error.

- Bug fix: Mapped fields in projects marked as both CDP and CDM were not displaying correctly in the CDIS Mapping Helper tool.

- Bug fix: Some text inside red boxes throughout REDCap would mistakenly appear in a much lighter red color than intended.

- Bug fix: When users are deleting multiple fields in the Online Designer, in some rare cases a race condition might occur that scrambles the field order and results in fields being suddenly in the wrong location.

- Bug fix: When using the MyCap "App Design" page, a JavaScript error would occur when clicking the "Publish" button. This issue prevents a success message box from appearing on the page.

Version 14.5.11(released on 2024-09-05)

- Major bug fix: When the e-Consent Framework has been set up but then later disabled for a given survey, a PDF Snapshot would mistakenly still get saved to the File Repository and/or specified File Upload field whenever a participant completes the survey. (Ticket #239030)
- Bug fix: MyCap participants would mistakenly not receive any push notifications upon a user (e.g., study coordinator) sending them an announcement via the MyCap messaging interface in the project.
- Bug fix: Radio fields with the action tags READONLY and DEFAULT or SETVALUE would mistakenly not pipe correctly on the page.
- Bug fix: Some unwanted text would mistakenly be displayed at the bottom of the Edit Project Settings page. (Ticket #238981)
- Bug fix: When opening the "Edit Branching Logic" dialog via the Quick Modify Fields popup on the Online Designer, the branching logic text box in the dialog would mistakenly retain the previous value entered by the user while on that same current page. The text box's value should be cleared out each time the dialog is opened. (Ticket #238833)
- Bug fix: When performing a data import on the Data Import Tool page, in some rare situations, the import process might mistakenly fail due to a fatal PHP error when using PHP 8. (Ticket #238912)

- Bug fix: When using "OpenID Connect" or "OpenID Connect & Table-based" authentication, and a user logs out of REDCap and then later logs back in again, the login process might mistakenly fail silently when re-logging again. (Ticket #237124)

- Bug fix: When using Multi-Language Management in a project with MyCap enabled, the language ISO codes displayed for MyCap in the "Add New Language" dialog on the MLM setup page were incorrect for many of the languages listed. Those ISO codes have been corrected.

- Bug fix: When viewing a report that has report logic that includes checkbox fields that reference Missing Data Codes (e.g., [my_checkbox(NA)] = "1"), the report might mistakenly not return items/data that should be returned, specifically when displaying data for repeating instruments.

Version 14.5.10(released on 2024-08-29)

- Bug fix: Alerts with conditional logic containing datediff() with "today" or "now" as a parameter might mistakenly get triggered multiple times by the cron job, thus resulting in duplicate alerts being sent. This behavior appears to be sporadic and occurs very seldom for most installations. (Ticket #237341)

- Bug fix: Horizontally-aligned enhanced radios/checkboxes on surveys that do not have a question number column would mistakenly not be spaced out consistently between each choice on a given horizontal line. Note: This fix is slightly different from a similar one from last week, which did not get completely fixed.

- Bug fix: If a user has received a confirmation link via email for registering a new email address with their REDCap account, and then the REDCap server is upgraded to a new REDCap version after the email is received, the link in the email would mistakenly redirect to

the wrong place in the new version, thus preventing the user from being able to complete the email registration process. (Ticket #238619)

- Bug fix: In certain specific situations, logged events related to clicking Project Bookmarks might mistakenly be displayed on the Logging page when filtering by a specific record in the project. (Ticket #238547)

- Bug fix: In some cases when inline PDFs are attached to Descriptive fields, and a user downloads the PDF of the instrument, if the iMagick PHP extension is installed on the web server, the first page of the inline PDF might mistakenly get truncated in the resulting REDCap-generated PDF of the instrument.

- Bug fix: In some cases when inline PDFs are used as consent forms in the e-Consent Framework, and a user downloads the PDF of the instrument, if the iMagick PHP extension is installed on the web server, there would mistakenly be a blank page following the inline PDFs in the resulting REDCap-generated PDF of the instrument. (Ticket #237921)

- Bug fix: Several missing LOINC codes were added to the CDIS mapping features. Additionally, several Clinical Notes types were missing and not mappable, specifically pathology study, diagnostic imaging study, and laboratory report.

- Bug fix: The CSV file download option for the Choices Editor inside the Edit Field dialog for multiple choice fields in the Online Designer would mistakenly not do anything. (Ticket #238818)

- Bug fix: When a Data Entry Trigger is triggered on a data entry form for a record in a Data Access Group, the unique DAG name would mistakenly not get sent in the request to the Data Entry Trigger URL. Note: This issue does not occur on survey pages, and it also does not occur on data entry forms when a record is being assigned to a DAG while also being created there on the form. (Ticket #238727)

- Bug fix: When comparing two records in the Data Comparison Tool, the coded values of multiple choice fields would be mistakenly wrapped in escaped HTML italic tags, which would cause the tags to be visible (rather than interpreted) on the page. Bug emerged in REDCap 14.0.14 LTS and 14.2.1 Standard. (Ticket #238437)

- Bug fix: When copying a project via the "Copy the Project" page for a project that contains a repeating survey with a repeating Automated Survey Invitation, the ASI's recurrence settings (e.g., "How many times to send it") would mistakenly not get copied into the new project. Bug emerged in REDCap 12.5.0. (Ticket #238218)

- Bug fix: When downloading a PDF of "All forms/surveys with saved data" or "All forms/surveys with saved data (compact)" when some instruments contain embedded fields, some of the embedded fields might mistakenly not get converted into data values or underscores (if they have no value) in the resulting PDF. (Ticket #238683)

- Bug fix: When modifying a PDF Snapshot, some of the snapshot settings (specifically the checkbox options) might mistakenly not get saved successfully after being changed, and no error would be displayed to notify the user that their desired settings were not saved. This issue only affects web servers running PHP 7.3 or 7.4. (Ticket #236067)

- Bug fix: When participants are taking a survey that contains fields with the @HIDDEN-SURVEY action tag, in which the participant is using a non-standard web browser, the fields might mistakenly be displayed instead of hidden on the survey page. (Ticket #238129)

- Bug fix: When selecting instruments for the scope of a PDF Snapshot, the "Update" and "Cancel" buttons may disappear when scrolling downward when many instruments exist in the box, thus possibly causing confusion with regard to how to save one's selected instruments. To fix this, the buttons now float at the top of the box regardless of scrolling. (Ticket #238698)

- Bug fix: When the Confirmation Email option has been enabled, specifically with the "Include PDF of completed survey as attachment" checkbox checked, for a survey that has the e-Consent Framework enabled, the PDF attached to the email received by the participant would mistakenly contain the record name of the participant's record in the filename of the PDF. The record name should not be included in the PDF filename for PDFs received by participants. (Ticket #223899)

- Bug fix: When the Top Usage Report page displays a row that is a "Project" type, the project link displayed in that row would mistakenly be an invalid URL if the project title ends with text enclosed in parentheses. (Ticket #238523)

- Bug fix: When using Clinical Data Pull for CDIS, in the "launch from EHR" context of a CDIS project, events were not logged properly when a patient was added to a project. This improper logging prevented the record list cache in REDCap from rebuilding correctly, leading to issues when saving records in projects with auto-incrementing record IDs. (Ticket #234550)

- Bug fix: When using certain screen readers, such as JAWS, the individual options of drop-down fields might mistakenly not be able to be read by the screen reader. (Ticket #237629)

Version 14.5.9(released on 2024-08-22)

- Bug fix: Deleting fields via the Online Designer for projects with several hundred fields might cause the page to hang for unacceptable amounts of time.

- Bug fix: HTML "abbr" tags were mistakenly disallowed as an allowed tag that users can use in field labels, survey instructions, and other user input. Bug emerged in REDCap 14.5.4 Standard and 14.5.5 LTS.

- Bug fix: Horizontally-aligned enhanced radios/checkboxes on surveys that do not have a question number column would mistakenly not be spaced out properly with some space between each horizontal choice.

- Bug fix: If a Notes field has both the RICHTEXT and READONLY action tag at the same time, the "Source code" button in the toolbar of the rich text editor would still be clickable and could be used to modify the field's value, which should not be allowed in this situation. (Ticket #237348b)

- Bug fix: If editing a matrix of fields, in which one of the fields has its variable name changed, that field's branching logic would mistakenly be erased when saving the changes to the matrix. (Ticket #236685)

- Bug fix: Some CDIS-related text on the Edit Project Settings page was mistakenly not translatable via language INI files. (Ticket #238036)

- Bug fix: Some EM Framework related language text that stems from translated INI language files might mistakenly not appear as translated on the page in certain places. (Ticket #238038)

- Bug fix: The Upgrade page's link to the REDCap ChangeLog on the REDCap Community website was outdated. (Ticket #237664)

- Bug fix: When attempting to upload the Survey Queue via a CSV file when using certain browsers, such as Firefox, the upload process might mistakenly fail with an unknown error. (Ticket #233684)

- Bug fix: When executing Data Quality rules in certain browsers and operating systems (e.g., Firefox on Linux), the "export

- view" links to export and view the DQ results might mistakenly not be visible on the page.

- Bug fix: When using Multi-Language Management while the Secondary Unique Field is enabled, the duplicate value message might not be translated via MLM when the secondary unique check is triggered by pre-filling a field from a URL parameter. (Ticket #237182)

- Bug fix: When using the EHR Launch for Clinical Data Pull in CDIS, there could be possible compatibility issues, resulting in an HTTP 401 error, when using certain external authentication methods. (Ticket #237765)

Version 14.5.8(released on 2024-08-15)

- Bug fix: A missing LOINC code was added to the CDIS mapping features.

- Bug fix: For certain MySQL/MariaDB configurations, the upgrade SQL script might mistakenly fail when upgrading from pre-14.1.1 to any post-14.1.1 version. The upgrade script has been updated for more compatibility to prevent this issue going forward.

- Bug fix: HTML "input" tags were mistakenly disallowed as an allowed tag that users can use in field labels, survey instructions, and other user input. Bug emerged in REDCap 14.5.4 Standard and 14.5.5 LTS. (Ticket #237448)

- Bug fix: If a Notes field has both the @richtext and @readonly action tag at the same time, the field would mistakenly not be displayed as a rich text editor but as a regular textarea field, which would contain visible HTML tags inside it if the field already has a value. (Ticket #237348)

- Bug fix: In the Online Designer, when editing a CALCTEXT field whose calculation contains references to fields with ":value" appended - e.g., [field:value], normal users might never be able to successfully edit the field to change its CALCTEXT syntax. Note: Administrators are able to modify the field though. This issue was caused by the [field:value] syntax, which is not necessary since fields should be referenced simply as [field] in logic and calculations.

Going forward, using the [field:value] notation, which is technically not incorrect, will no longer cause the Edit Field popup to hang when saving a field in the Online Designer. (Ticket #236945)

- Bug fix: Some PHP 8 specific errors might occur on the MLM setup page in projects that do not have MyCap enabled.

- Bug fix: When using LDAP authentication with PHP 8, an LDAP user that logs in with an incorrect password might mistakenly result in a fatal PHP error during the login process. (Ticket #237359)

- Bug fix: When using both MyCap and Multi-Language Management in a project, the MLM setup page (inside the "MyCap help" popup and "add/edit language" popup) was mistakenly not displaying the list of available language codes currently supported by the MyCap mobile app.

- Bug fix: When using both MyCap and Multi-Language Management in a project, the MLM setup page would mistakenly display a "MyCap" tab under the User Interface section. That tab was not meant to be added since it cannot be used yet.

- Bug fix: When using the EHR Launch for Clinical Data Pull in CDIS, there could be possible compatibility issues when using Internet Explorer as the default browser in the EHR.

- Bug fix: When using the EHR Launch for Clinical Data Pull in CDIS, there could be possible compatibility issues when using certain external authentication methods.

- Bug fix: When using the READONLY action tag on the Secondary Unique Field on a survey that has the SUF prefilled via URL variables, the field would mistakenly be editable and not read-only. Note: This occurs only on the SUF when viewed specifically in survey mode, and only when prefilling is being performed. (Ticket #237623)

Version 14.5.7(released on 2024-08-08)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report). This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

- Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a specific API parameter's value that is used in a specific API method. This vulnerability can be exploited only by users with a valid API token. Bug exists in all REDCap versions.

- Major bug fix: If Multi-Language Management is enabled on a project, the datepicker for date/datetime fields would mistakenly appear in right-to-left mode all the time. Bug emerged in 14.5.4 Standard and 14.5.5 LTS.

- Bug fix: In some situations, the record name and "upcoming calendar events" button that appears above the table on the Record Home Page might mistakenly appear too narrow on the page. (Ticket #236702)

- Bug fix: In very specific situations, a user exporting the data for a report might mistakenly fail with a PHP error when using PHP 8. (Ticket #236555)

- Bug fix: When upgrading from a version of REDCap below 14.5.0, in some specific situations the upgrade might fail due to an SQL error. (Ticket #236740)

- Bug fix: When using Clinical Data Pull for CDIS, the auto-adjudication interface would be incorrectly displayed on the record dashboard after disabling CDP in the project or at the system level.

- Bug fix: When using MyCap together with Multi-Language Management, the "Notification Settings" tab was mistakenly not appearing in the correct location on the MyCap setup page.
- Bug fix: When using MyCap together with Multi-Language Management, the "version" attribute and list of languages in the MyCap config JSON (that is consumed by the MyCap mobile app) was mistakenly not getting updated automatically whenever a user clicks on the "Save" button on the MLM setup page.

Version 14.5.6(released on 2024-08-01)

- Major bug fix: When using the Multi-language Management feature in the MyCap mobile app, some important task settings information might mistakenly not get pulled from the REDCap server into the MyCap app on the mobile device, thus resulting in text from the fallback language being used in the mobile app instead of the desired MLM language.
- Bug fix: On the Configuration Check page, the External Service Check for Google reCAPTCHA API services might mistakenly return a false positive saying that the service can't be reached when it actually can.
- Bug fix: The Quick-Modify Fields feature would not allow users to copy branching logic when it was just added (or would allow users to copy it when it was just removed).
- Bug fix: When using Form Display Logic, in which the "Hide forms that are disabled" checkbox is checked but no conditions are defined in the Form Display Logic setup dialog, the Record Home Page would mistakenly not display any instruments in the table for any records. (Ticket #236229)
- Bug fix: When using Multi-Language Management, the "Save & Return Later" page might mistakenly not display the desired language for the participant. (Ticket #236220)

- Bug fix: When using a rich text consent form with the e-Consent Framework, the consent form text might all be mistakenly bolded when being viewed on the survey page. (Ticket #236369)

Version 14.5.5(released on 2024-07-30)

- New LTS branch based off of REDCap 14.5.4 (Standard) Note: Please see the Standard Release ChangeLog for the full list of new features and changes released between the previous LTS and this new LTS branch.

Version 14.0.43(released on 2024-09-18)

- Major bug fix: Resolved an issue in the CDIS module that caused errors and disrupted normal operations in environments running PHP versions lower than 8.0. This bug affected: CDP auto-adjudication process, Mapping helper usage, and Data Mart operations. The fix ensures proper handling of user data, allowing CDIS to function smoothly across different PHP versions. Bug emerged in the previous release. NOTE: Despite the fact that the 14.0 LTS branch has been retired and thus no longer receives regular non-security bug fixes, this bug fix is being issued solely because a major security fix in the previous version (14.0.42) caused this specific bug. (Ticket #240182)

Version 14.0.42(released on 2024-09-17)

- Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who is logged in could potentially exploit it by manipulating an HTTP request to a specific External Module Framework endpoint. If successfully exploited, this

could allow the attacker to remotely execute arbitrary code on the REDCap server. This vulnerability exists in REDCap 11.0.0 and higher.

- Critical security fix: A Remote Code Execution vulnerability was found in which a malicious user who is logged in could potentially exploit it by manipulating an HTTP request to the Data Import Tool page while uploading a specially-crafted CDISC ODM XML file. If successfully exploited, this could allow the attacker to remotely execute arbitrary code on the REDCap server. This vulnerability exists in REDCap 6.12.0 and higher.

- Major security fix: A Cross-Site Request Forgery (CSRF) Bypass vulnerability was found in which a malicious user could potentially exploit it by manipulating an HTTP request to any URL in the system by tricking an authenticated user to click a specially-crafted link that could bypass the CSRF check and submit information (including changing REDCap system configuration values) on behalf of the user or admin. This vulnerability exists in REDCap 13.4.0 and higher.

- Major security fix: A Local File Inclusion (LFI) vulnerability was discovered in which a malicious user could potentially exploit it by setting the path of the hook function file on the General Configuration page to a value containing specific characters in order to bypass the check that ensures that the file path points to a PHP file. The user must have "Modify system configuration pages" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way that can be exploited on the following pages: Alerts & Notifications, Stats & Charts, and the main REDCap Home Page. This vulnerability can only be exploited by authenticated users. Bug exists in all REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on certain Clinical Data Mart (CDM) related pages, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must have "Access to all projects and data with maximum user privileges" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on several Control Center pages, in which a malicious user who has co-opted a REDCap admin account could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must have "Modify system configuration pages" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Edit Project Settings page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must have "Access to all projects and data with maximum user privileges" administrator privileges in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Online Designer page, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. The user must be logged in to REDCap in order to exploit this. This bug affects all known REDCap versions.

- Medium security fix: A Blind SQL Injection vulnerability was found on the Send-It upload page, in which a malicious user could potentially exploit it and execute arbitrary SQL

commands on the database by manipulating an HTTP request in a specially-crafted way. The user must be logged in to REDCap in order to exploit this. This bug affects all known REDCap versions.

Version 14.0.41(released on 2024-08-12)

Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a specific API parameter's value that is used in a specific API method. This vulnerability can be exploited only by users with a valid API token. Bug exists in all REDCap versions.

Note: This separate security fix has been implemented after the fact since the REDCap Development Team recently changed their Extended LTS policy to now include medium security fixes (instead of only major and critical security fixes).

Version 14.0.40(released on 2024-08-08)

Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report). This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

Version 14.0.39 (released on 2024-07-30)

CHANGES IN THIS VERSION:

1. **Critical bug fix:** When attempting to load any data entry form or survey page that utilizes Multi-Language Management, or if viewing the MLM setup page in a project or Control Center, the page would always crash with a fatal PHP error. Bug emerged in REDCap 14.0.38. (Ticket #236349)

STS Change Log:

Version 14.5.4(released on 2024-07-30)

- Improvement: Multi-Language Management can now be utilized by MyCap. Users will see a new "MyCap" tab on the MLM setup page, which will allow them to translate their custom MyCap elements that will appear to participants in the MyCap Mobile App. Participants will be given the choice to use any of the project's MLM languages after opening and viewing the MyCap Mobile App.

- Improvement: REDCap now supports the "s" HTML tag for strikethrough (note: the "strike" HTML tag was already supported).

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Improvement: The "strikethrough" styling button has been added to the toolbar in the rich text editor in all the places where the editor is used.

- Improvement: When using MyCap in a project, users can now customize the notification time (default 8:00AM) for MyCap notifications to participants using the MyCap mobile app.

- Major bug fix: When editing a user's privileges on the User Rights page, it would not be possible to grant a user access to the File Repository, despite checking the checkbox for it. Additionally, if any user previously had File Repository privileges and then another privilege was modified for the user on the User Rights page (excluding CSV imports and API imports), it would mistakenly remove their File Repository privileges. Bug emerged in REDCap 14.5.2.

- Change/improvement: If a custom primary key field has been added to any given REDCap database table that does not have an auto-incrementing field that serves as the primary key, the "database structure is incorrect" warning in the Control Center will no longer recommend that this extra field (and its key) be deleted. This should help institutions where

their local IT support is recommending or forcing them to add primary keys to all REDCap database tables (for various reasons).

- Bug fix: A JavaScript error might occur on some MyCap pages if using a non-English language for the project.

- Bug fix: A duplicated language string in English.ini might cause an incorrect phrase to be displayed on the upgrade page. (Ticket #235989)

- Bug fix: If the REDCap Base URL contains a port number, logging out of REDCap might mistakenly send the user to an incorrect URL that does not contain the port, thus resulting in an error. (Ticket #236221)

- Bug fix: The user interface for the date/time picker for date-validated and datetime-validated fields was mistakenly not translatable via Multi-Language Management. (Ticket #236211)

- Bug fix: When uploading an attachment file in the Edit Alerts dialog on the Alerts & Notifications page, the error message might not always be correct in all cases.

Version 14.5.3(released on 2024-07-25)

- Improvement: More user experience improvements for the Online Designer, including a new dismissible popup that alerts the user about the new "drag-n-drop" behavior for moving fields in the Online Designer. Additionally, users can now limit the deactivation/reactivation to certain action tags in the Quick Modify Field(s) popup. In previous versions, users could only deactivate/reactivate all action tags for the selected fields, but now users may provide specific actions tags that will be deactivated/reactivated.

- Change/improvement: The internal service check on the Configuration Check page that checks the main REDCap survey end-point now works even when the REDCap system is set as "Offline".

- Change: REDCap has been verified to be fully compatible with PHP 8.3.

- Bug fix: If a project is in Production status and currently in Draft Mode, and then a user moves the project to Analysis/Cleanup status, the Online Designer would mistakenly still be accessible when it should instead display the message "Note: This page can only be accessed when the project is in Development or Production status". (Ticket #235798)

- Bug fix: If a user manipulates some of the URL parameters on the Calendar page so that the parameter's value is in scientific notation format instead of an integer, it would cause the page to crash with a fatal PHP error.

- Bug fix: Rapid Retrieval caching on Windows servers might mistakenly cause cache files to be invalidated/deleted prematurely, thus negating the positive benefits of the Rapid Retrieval feature. This has been fixed, in which it appears to have affected only Windows web servers. (Ticket #235297)

- Bug fix: When a PDF Snapshot trigger has been defined, in which the snapshot's scope includes an instrument that has the e-Consent Framework enabled and the snapshot is set to be stored in the File Repository, if a user has marked that e-Consent instrument's Form Status as "Complete" on a data entry form without having completed the instrument as an e-Consent survey, the "PDF utilized e-Consent Framework" icon would mistakenly be displayed for the snapshot in the PDF Snapshot Archive table in the File Repository. That icon should only appear when the snapshot contains a completed e-Consent response that was completed as a survey. Note: This will not fix the issue retroactively for already-stored snapshots, but it will prevent the issue going forward. Bug emerged in REDCap 14.5.0.

- Bug fix: When a participant is taking a survey as an SMS conversation using Twilio/Mosio, in which branching logic is used on some fields, in very specific situations those fields might mistakenly get skipped when they should not be skipped. (Ticket #235586)

- Bug fix: When upgrading from a version of REDCap below 14.5.0, in some specific situations the upgrade might fail due to an SQL error. (Ticket #235758)

- Bug fix: When using "OpenID Connect" or "OpenID Connect & Table-based" authentication, the user might not get correctly logged out of REDCap for some configurations. (Ticket #235539)

- Bug fix: When using the Field Bank in the Online Designer to search for fields, it might mistakenly show answer choices that say "Login to see the value." for specific items. (Ticket #228217b)

Version 14.5.2(released on 2024-07-18)

- Major bug fix: If upgrading from REDCap 14.5.0 or 14.5.1, the upgrade script for upgrading to 14.5.0 or 14.5.1 from an earlier version would have not properly converted the "Save a PDF of completed survey response to a File Upload field" survey setting into its equivalent PDF Snapshot format for 14.5.X if the survey had neither the e-Consent Framework enabled nor the PDF Auto-Archiver enabled. This incorrect conversion would mistakenly cause a PDF Snapshot of the entire record (i.e., snapshot scope="all instruments") to be stored to the File Upload field rather than a PDF Snapshot of only the current survey/event/instance (i.e., snapshot scope="single survey response"). Upgrading to 14.5.2 and higher will fix this issue so that surveys in those specific situations will only save the current survey response to the File Upload field, as it did in pre-14.5.0 versions.

- Major bug fix: When Data Access Groups are utilized in a project, especially when the DAG Switcher is being actively used, it is possible in specific scenarios that a user assigned to a DAG might mistakenly be able to see logged events on the Logging page for records in another DAG. For example, this could happen if a user created/modified a record for one

DAG, and then switched to another DAG, a user in the second DAG would mistakenly be able to view logged events for the record in the first DAG merely due to the fact that the first user created/modified that record. (Ticket #235432)

- Change/improvement: Small change in JavaScript to improve loading speed and calculation speed on data entry forms and survey pages. (Ticket #235138)

- Change/improvement: Small change in JavaScript to improve loading speed slightly on data entry forms and survey pages in specific situations. (Ticket #235136)

- Change/improvement: When a user moves a project to production and they opt to delete all records during the process, this is now specifically denoted on the Logging page, which will now list the logged event as "Move project to Production status (delete all records)".

- Bug fix: In some cases when inline PDFs are attached to Descriptive fields, and a user downloads the PDF of the instrument, if the iMagick PHP extension is installed on the web server, there would mistakenly be a blank page following the inline PDFs in the resulting REDCap-generated PDF of the instrument. Bug emerged in REDCap 14.5.0 Standard. (Ticket #222014b)

- Bug fix: Messages in REDCap Messenger that contain HTML hyperlinks might mistakenly get mangled and not display as a hyperlink correctly in a Messenger conversation.

- Bug fix: The BioPortal Ontology Service recently began returning data in a slightly unexpected format from its web service, thus causing all BioPortal fields on surveys and data entry forms not to work any longer. (Ticket #235501)

- Bug fix: When deleting a file from the File Repository via the API, it would mistakenly require that the user have "Delete Record" privileges, which are not required for this API method. (Ticket #235363)

- Bug fix: When upgrading from a version of REDCap below 14.5.0, in some specific situations the upgrade might fail due to an SQL error. (Ticket #235260)

- Bug fix: When users attempt to view the "General Notifications" or "System Notifications" threads in REDCap Messenger, those threads would mistakenly not open for normal users but would only open for REDCap administrators. Bug emerged in REDCap 14.0.33 LTS and 14.4.1 Standard.

- Bug fix: When using Custom Mappings for fields in CDIS projects, the Custom Mappings might mistakenly not get prioritized and thus might get overridden by the default mappings in REDCap.

- Various updates and fixes for the External Module Framework, including 1) Fixed a bug preventing $module->getChoiceLabel() from correctly matching integer values, 2) Displayed a warning when a development copy of the External Module Framework is installed & out of date, and 3) Misc. security scan improvements.

Version 14.5.1(released on 2024-07-15)

- Improvement: In the "Move Field" dialog in the Online Designer, the user may now choose "Insert at top of this form" or (if the field is part of a matrix) "Insert at the top of the matrix group" from the field drop-down.

- Major bug fix: Some specific external authentication methods, such as Shibboleth and possibly AAF, might no longer work and might result in a fatal PHP error. Bug emerged in the previous version. (Ticket #235223, #235211)

- Change: Added 2 new data tables and 3 new log_event tables to help long-term performance going forward.

- Bug fix: During the check to ensure that all non-versioned files are accounted for, in some specific situations the process might mistakenly fail with a fatal PHP error when using PHP 8. (Ticket #234877)

- Bug fix: The table displayed in the PDF Snapshot Re-Trigger dialog on data entry forms would mistakenly be missing a column header. (Ticket #235190)

- Bug fix: When using Entra ID (formerly Azure AD), OpenID Connect, or the "X & Table-based" version of either of those for authentication in REDCap, a user's original location (their URL before logging in) would mistakenly not be preserved after having authenticated, and in some cases the logout process might not function 100% correctly, thus redirecting the user to a URL ending with "?logout=1" or sometimes a more generic URL of the REDCap installation, rather than the exact URL when they logged out. (Ticket #217736, #234817)

Version 14.5.0(released on 2024-07-11)

- New features: Enhanced e-Consent Framework and PDF Snapshot Functionality

- Overview - A new page named "Settings for e-Consent & PDF Snapshots" (linked from the Online Designer) serves as the new location where users can enable and set up the e-Consent Framework for a given survey and also set up triggers for storing PDF Snapshots. In previous versions, the e-Consent Framework and PDF Snapshot settings all existed on the Survey Settings page as several disparate options, but now they have been consolidated on this new page as two separate tabs. While these two exist as separate features, there is some overlap of functionality since the e-Consent Framework does ultimately store a copy of the PDF Snapshot for the e-Consent response. In addition to moving these features to the new page, both have been given enhancements, which are detailed below. View a 5-minute overview video of the new features: https://redcap.link/econsent2vid

- Overall Benefits of the New Features - Streamlined Consent Process: Simplify and enhance the electronic consent process for both researchers and participants. Improved Data Integrity: Ensure secure and organized storage of consent forms and survey responses.

Enhanced Compliance: Meet regulatory standards such as ICH and FDA requirements with robust version control and audit trails.

- Improved PDF Snapshot Functionality: Audit Trails: Improved, detailed audit trails for consent form completions and PDF snapshot generations.

- Improved PDF Snapshot Functionality: Automatic Saving: Save PDF copies of survey responses (i.e., snapshots) to the project's File Repository or to specified File Upload fields. In previous versions, this would have been set up using separate features on the Survey Settings page, but now they can be set up as specific settings of a PDF Snapshot trigger.

- Improved PDF Snapshot Functionality: Custom Logic-based Triggers: Create custom triggers for generating PDF snapshots based on specific conditions using conditional logic. Whenever data is being saved for a record (on a survey, form, API, data import, etc.), if the logic of the snapshot trigger evaluates as True, then a PDF snapshot will be saved to whatever location is specified. Note: Logic-based triggers can only be triggered once per record, whereas survey-completion-based triggers (including e-Consent surveys) will store a new snapshot every time the survey is completed (because surveys may possibly be completed multiple times if certain Survey Settings are defined).

- Improved PDF Snapshot Functionality: File Naming Customization: Customize the file names of PDF snapshots using static text or piping, appended with date-time stamps.

- Improved PDF Snapshot Functionality: Note: Non-e-Consent PDF Snapshot triggers will always store the PDF in the default MLM language, but an e-Consent PDF Snapshot trigger will always store the snapshot in the participant's chosen language.

- Improved PDF Snapshot Functionality: Snapshot Re-triggering: Perform re-triggering of PDF Snapshots while on a data entry form. If the user has "View & Edit" Data View privileges on the current instrument, they will see a "Trigger Snapshots" link in the button box at the top-left of the page. This will allow them to trigger or re-trigger any given PDF snapshot (although

"survey completion" snapshot triggers specifically require that the survey be completed first). Additionally, for logic-based triggers, the logic does not have to currently be True in order to trigger/re-trigger it.

- Improved PDF Snapshot Functionality: Snapshot Scope: The "scope" of the snapshot must be defined when creating a new snapshot trigger. The scope refers to the data content inside the PDF, i.e., which instruments are included in the snapshot (a single instrument, multiple instruments, or all instruments/events). Note: The PDF snapshot created by completing an e-Consent survey will only ever include just that single survey response. But for non-e-Consent snapshots, users may define the scope of the snapshot.

- Improved PDF Snapshot Functionality: Support for Multi-Form Consents: Combine multiple forms and/or signatures into a single PDF snapshot. Define a PDF snapshot that contains multiple instruments in order to potentially capture multiple signatures, and then store the snapshot in the File Repository or a File Upload field.

- Improved PDF Snapshot Functionality: Vault Storage Integration: If using the system-level feature "e-Consent Framework: PDF External Storage Settings (for all projects)", all PDF snapshots generated via completed e-Consent surveys will automatically be stored on the external server (i.e., "The Vault"). This feature existed in previous versions and continues to function in the same way. Noted new feature: If a multi-instrument PDF snapshot is being stored in the File Repository, in which it contains at least one completed e-Consent survey response, that snapshot will automatically be stored in the Vault. However, a project-level setting named "Store non-e-Consent governed PDF Snapshots on the External Storage server if the snapshot contains a completed e-Consent response" exists on the "Edit Project Settings" page that is set to Yes/Enabled by default, in which it can be disabled if the REDCap administrator wants only e-Consent governed PDF snapshots to be stored in the Vault and

thus not store multi-instrument snapshots that happen to contain an e-Consent response in the Vault.

- Improvement/bug fix: A new project-level setting "Hide closed/verified data queries from Data Quality results" has been added that can be used with the Data Resolution Workflow. This setting defaults to an Enabled/Checked value, and it can be changed in the DRW/Field Comment Log section of the Additional Customizations dialog on the Project Setup page. If users prefer for closed and/or verified data queries in the DRW to always be visible in results on the Data Quality page, they can uncheck this new setting in the project. NOTE: Beginning in 14.3.13 through (and including) 14.4.1, a mistake was introduced regarding a change in the behavior of closed/verified data queries, in which they were no longer automatically hidden from Data Quality results (whereas in previous versions they were always hidden). That change was a mistake and thus was a bug, which is now fixed here by reverting the default behavior back to its pre-14.3.13 behavior and also by the addition of this new setting that allows users to have both behaviors (i.e., to either hide or show closed/verified data queries from Data Quality results). The default behavior of this setting is the same as the behavior prior to REDCap 14.3.13.

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Improvements to the Online Designer General user interface improvement that utilizes newer icons. New "Go to field" feature (invoked via Ctrl-G or Cmd-G) allows users to search for a variable by name and then navigate directly to its location in the Online Designer, even if the field is on a different instrument than the current one. Improved and expanded "Quick modify field(s)" popup will appear when users Ctrl-click (or Cmd-click) one or more fields or check the new checkboxes located on the far right of each field. Additions to this popup include the ability to edit the following for multiple fields: branching logic, action tags/field

annotation, custom alignment, required status, identifier status, and multiple choice options (including the ability to copy choices - with new choice of location for copied fields, import choices from an existing field, convert a field to a different multiple choice field, and also append new choices using a full-blown choice editor). NOTE: When updating actions tags for one or more fields via the "Quick modify field(s)" popup, there is a new action tag named @DEACTIVATED-ACTION-TAGS that is only used in the Online Designer for the purpose of deactivating (and thus possibly reactivating) action tags. The difference between deactivating action tags and removing action tags from fields is that deactivating them leaves the action tags in a state/format so that they can be easily reactivated later, whereas removing action tags would make it very difficult to restore the action tags of many fields having many different action tags. For example, if a field has the @HIDDEN action tag and is then deactivated, its field annotation will then appear as the following: @DEACTIVATED-ACTION-TAGS @.OFF.HIDDEN, and if reactivated, it will go back to @HIDDEN again. The "Quick modify field(s)" popup also includes an additional, large selector popup to allow users to select many fields on the current instrument that match certain criteria by clicking one or more icons (e.g., clicking the slider icon and then clicking the "add new selections" button will automatically select all slider fields on the page to use for the "Quick modify field(s)" popup). This makes it easy to select many fields on the page very quickly when they all match a certain criteria (i.e., field type, field validation). Change: The drag-field feature to "drag-n-drop" a field to a new location on the instrument now operates differently. Inside of clicking and holding anywhere on a field, the user must now click and hold specifically on the Move icon for the given field in order to ready the field for being moved.

- Change/improvement: The Configuration Check page now checks to ensure that the MySQL-specific setting "Generated Invisible Primary Key" (GIPK) is disabled. GIPK was introduced in

MySQL 8.0.30. If enabled on the MySQL server, a warning will appear on the page telling the admin how to disable it since GIPK is not compatible with REDCap.

- Change: In a MyCap-enabled project, if users switch from classic mode (i.e., non-longitudinal) to longitudinal data collection mode or from longitudinal to classic (via the setting at the top of the Project Setup page), the MyCap task settings and Active task formats will no longer be erased in the project when changing that setting. In previous versions, all MyCap task settings and Active task formats would be completely erased in the project when moving to/from longitudinal mode.

- Enhanced e-Consent Framework: Audit Trails: Improved, detailed audit trails for consent form completions and PDF snapshot generations.

- Enhanced e-Consent Framework: Change/improvement: When a user views a completed/signed e-Consent response on a data entry form, in which a consent form was used on the survey, near the top of the page will be displayed the version of the consent form that was used. Also, the consent form itself (i.e., the inline PDF or rich text) displayed on the page will always be the consent form under which the participant originally consented. For example, if a participant consented using consent form v2.0, then even though a new consent form (v3.0) has been added to the project at some point afterward, the data entry form for that participant's response will always display consent form v2.0 so that the user will always see the survey response and its consent form exactly as the participant originally viewed it.

- Enhanced e-Consent Framework: Change/improvement: When reviewing draft mode changes, if a consent form's anchor Descriptive field is deleted or moved to another instrument, it now gets listed as a critical issue in the list of drafted changes.

- Enhanced e-Consent Framework: Change/improvement: When using MLM together with the e-Consent Framework, downloading an instrument PDF of a completed e-Consent survey

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response (or if the e-Consent survey response is included in a generated PDF that contains non-e-Consent instruments), the e-Consent survey response itself in the PDF will always be rendered in the language in which the participant originally consented.

- Enhanced e-Consent Framework: Custom Headers and Footers: Add custom headers and footers to PDF snapshots created via the e-Consent Framework, including the use of text fields, smart variables, and piping.

- Enhanced e-Consent Framework: Custom Notes: An optional custom notes field can be utilized for each e-Consent survey for bookkeeping purposes. The custom notes are neither displayed on the survey nor anywhere else in the application.

- Enhanced e-Consent Framework: Customizable Consent Forms with Version Control: Design consent forms and manage new versions of consent forms while maintaining historical versions for audit purposes. During the setup process for consent forms, their location can be set in relation to a single Descriptive field on the survey. A consent form can exist as an inline PDF or as rich text. A consent form can be associated with a specific MLM language and/or a Data Access Group if the project users wish to have the consent form be used for a specific language (chosen by the participant) and/or DAG (to which the record has been assigned). This allows for language-specific consent forms and DAG-specific consent forms, if needed.

- Enhanced e-Consent Framework: File Naming Customization: Customize the file names of PDF snapshots for e-Consent responses using static text or piping, appended with date-time stamps.

- Bug fix: If conditional logic, branching logic, or calculations are being evaluated by server-side processes when submitting a survey page (e.g., alerts, ASIs), in which the logic/calc contains one or more [aggregate-X] Smart Variables, the logic/calc might mistakenly not get evaluated correctly and thus might behave unexpectedly. (Ticket #233984)

- Bug fix: In a MyCap-enabled project, the "Days Offset" value of an event would not automatically populate on the Task Setup page for longitudinal projects.

- Bug fix: The "MyCap participants that have joined a project" count on the System Statistics page mistakenly included participants from practice projects.

- Bug fix: The MyCap Participant Management page mistakenly displays all participants when there are no records in the user's DAG. (Ticket #233473)

- Bug fix: The email sent to the survey participant after clicking the "Save & Return Later" button on a survey might mistakenly appear to be missing the main survey link back to the survey if the survey has no survey title defined (i.e., the title was left blank). (Ticket #234831)

- Bug fix: Various user interface elements, such as Bootstrap-style drop-down lists and certain buttons/links, might mistakenly appear with a larger or smaller font than intended. Bug emerged in the previous version.

- Bug fix: When enabling a new instrument for MyCap, the task status defaults to "Not Active".

- Bug fix: When exporting the results of a Data Quality rule in a project that does not have any Data Access Groups, the resulting CSV file might mistakenly not contain any results but would be empty. Bug emerged in REDCap 14.3.13 (Standard).

- Bug fix: When exporting the results of a Data Quality rule that returns more than 10,000 discrepancies, the resulting CSV file would mistakenly only include 10,000 results instead of all the results. (Ticket #229449b)

- Bug fix: When fields in a calculated field are being added together using plus signs (e.g., [field1] [field2]), as opposed to using the "sum" function, the field values might mistakenly get concatenated/joined together as text instead of being added together mathematically. Bug emerged in REDCap 14.0.32 LTS and 14.4.0 Standard Release. (Ticket #234858)

- Bug fix: When performing piping in a repeating instance context, the wrong repeating instance might mistakenly be assumed in certain situations when no data is saved yet. (Ticket #234557)

- Bug fix: When using an "X & Table-based" authentication, and a Table-based user clicks the "Reset password" button on their Profile page, it might mistakenly not actually trigger the password reset process. (Ticket #234884)

- Bug fix: When viewing the "View Task Details (all)" dialog in the Online Designer for MyCap-enabled projects, "Invalid Format" would mistakenly be displayed for MyCap tasks created from PROMIS measures.

- New action tag @CONSENT-VERSION: This action tag represents the version of the consent form being used by the e-Consent Framework for the current e-Consent survey context (i.e., current record, event, survey, data access group, MLM language, etc.). NOTE: This action tag only adds a new value to the field when its field value is blank and only when the instrument is being completed in an e-Consent survey context. Also, this action tag can only be used if the e-Consent Framework has been enabled for a survey and only if one or more consent forms have been defined for that survey.

Version 14.4.1(released on 2024-07-03)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report). This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into the record name when creating a new Calendar event on the Calendar page, specifically in the Calendar popup. This vulnerability can be exploited by authenticated users only. Bug exists in all REDCap versions.

- Medium security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into the contents of a file that is uploaded via the API and then downloaded via the API using various file import/export API methods. This vulnerability can be exploited only by users that possess a REDCap API token. Bug exists in all REDCap versions.

- Medium security fixes: Several access control vulnerabilities were discovered in REDCap Messenger in which a malicious user could potentially exploit them by sending specially crafted HTTP requests that would allow them to perform the following actions: read and export any conversation in the system, add a message to any conversation, add themselves as a conversation leader on any conversation, upload a file to any conversation, and export a list of all users of a conversation. Bug exists in REDCap 7.4.0 and later.

- Change/improvement: Stats for Mobile Toolbox (MTB) tasks and MyCap tasks created from PROMIS measures were added to the System Statistics page in the Control Center.

- Bug fix: A fatal PHP 8 error might occur in a specific situation when a participant is taking an adaptive or auto-scoring instrument (i.e., a PROMIS assessment) from the REDCap Shared Library. (Ticket #234346)

- Bug fix: Some PHP errors might mistakenly occur when using Azure Blob Storage when performing certain tasks. (Ticket #234248)

- Bug fix: When a field is embedded in a checkbox or radio field's choice label while that checkbox/radio field is also piped somewhere on the current page, the value of the embedded field might mistakenly not get saved correctly when a user modifies it and saves the page. (Ticket #233917b)

- Bug fix: When a participant is attempting to enter data for a biomedical ontology field while on a survey page, the ontology field would not function correctly and would not fetch any values from the BioPortal web service. This issue occurs on survey pages only. Bug emerged in the previous version.

- Bug fix: When taking a survey, malicious survey participants could possibly alter the "start time" of their response by carefully manipulating hidden elements on the first page of a survey. Note: This does not affect the security of the survey but might affect data quality.

- Bug fix: When using Clinical Data Pull for CDIS, a JavaScript error might occur when adding a patient to a project in the "Launch from EHR" process, thus preventing the patient from being added. (Ticket #234249)

- Bug fix: When using Twilio or Mosio, it would mistakenly not send SMS messages to U.S. phone numbers with certain newer area codes, including 787 and 939. (Ticket #234300)

- Bug fix: When viewing a public report that contains the record ID field, if the Secondary Unique Field has been defined in the project and has also been tagged as an identifier field, then the public report would mistakenly not display and would output an error message even if the setting "Display the value of the Secondary Unique Field next to each record name displayed?" is disabled. (Ticket #234403)

Version 14.4.0(released on 2024-06-27)

- New feature: Background Data Import option for the API - Similar to using the Background Data Import on the Data Import Tool page, users may now utilize the feature when making a call to the Import Records API method. They can simply pass the API parameter "backgroundProcess" with a value of 1 (for Yes) or 0 (for No, which is the default) to invoke this option. The API will return a "success" message with "true" or "false" regarding if the data was successfully accepted. Note: This option works with any data format: CSV, JSON, or XML.

- Improvement: "Survey Notifications" and "Survey Confirmation Emails" were added as new filter options to the "Type" drop-down filter on the Email Logging page. Note: This change is not retroactive, meaning that any survey notification emails or confirmation emails that were sent prior to the upgrade to REDCap 14.4.0 will not show up when filtering by these new options but will instead only show up when Type is set to "all types".

- Improvement: The Email Logging page now has its own separate user privilege. Previously, only users with "User Rights" privileges could access the Email Logging page. Now, users must explicitly be given "Email Logging" privileges in order to access the Email Logging page. Note: During the upgrade to REDCap 14.4.0 or higher, any users with "User Rights" privileges will automatically be given "Email Logging" privileges in order to keep continuity with their current access to the Email Logging page.

- Improvement: When using Multi-Language Management, the Twilio/Mosio text messaging text ("To begin the survey, visit [link]" and voice call text ("To begin the phone survey, call [phone]" are now available for translation on the MLM setup page. (Ticket #233030)

- Change/improvement: The Data Access Group page in a project might be very slow to load in certain circumstances where many records exist in the project. (Ticket #233650)

- Change/improvement: The email that administrators receive when a user submits an API token request now contains the user's email address in the email body. Previously, the email body only contained the username and first/last name of the requestor. (Ticket #233507)

- Change: The button text was changed from "Cancel import" to "Halt import" for greater clarity for Background Data Imports that are still processing on the Data Import Tool page.

- Bug fix: A rare issue might occur when non-checkbox fields from a repeating instrument or repeating event are referenced inside branching logic or calculated fields. (Ticket #233509)

- Bug fix: Embedded fields might mistakenly get hidden when also piped on the same form under very specific circumstances. (Ticket #233917)

- Bug fix: Fixed a bug preventing the External Module "View Logs" page from working on Google App Engine.

- Bug fix: Fixed several PHP 8 related errors. (Ticket #233266)

- Bug fix: If the Send-It feature has been disabled at the system level, the "Share" dialog for files stored in the File Repository would mistakenly still display an option to share the file using Send-It. (Ticket #233493)

- Bug fix: In some very specific situations, a @CALCTEXT action tag that contains a plus sign ("") character might produce an unexpected result. (Ticket #233189)

- Bug fix: In specific scenarios when viewing MDY or DMY formatted date fields on a report, the date values might mistakenly appear mangled on the page. (Ticket #211780)

- Bug fix: Resolved an issue with the link to the Mapping Helper in the CDIS panel menu. (Ticket #226611)Bug fix: When using Multi-Language Management, a text string shown in partial survey completion emails when there is no survey title was mistakenly not available for translation. (Ticket #233149)

- Bug fix: The month and year drop-downs inside the datetime pickers for the "start time" and "end time" filters on the Logging page would not work and would mistakenly not change the start/end times after a new option was selected for those drop-downs. (Ticket #233815)

- Bug fix: Under certain circumstances where quote characters are next to equal signs, CALCTEXT expressions might not be parsed correctly and thus might produce a JavaScript error. (Ticket #233927)

- Bug fix: When a user has "read-only" data viewing access to an instrument that contains a biomedical ontology field, the ontology field would appear to be editable on the page, despite the fact that the user is not able to submit the page or modify the field's saved value. (Ticket #233940)

- Bug fix: When clicking the "Add new template" button on the Project Template page in the Control Center, the popup might time out and never be displayed if tens of thousands of projects exist in the system. To prevent this, an auto-complete drop-down will replace the regular drop-down when more than 5000 projects exist. (Ticket #233451)

- Bug fix: When creating a new alert on the Alerts & Notifications page, in which the Twilio, Mosio, and Sendgrid services for alerts have been disabled at the system level, the "Email to send email-failure errors" setting would mistakenly not be displayed after clicking the "Show more options" link in the "Create new alert" dialog. (Ticket #233629)

- Bug fix: When exporting the Participant List via CSV on the Participant List page, some columns might mistakenly have the wrong header labels in the CSV file. (Ticket #233958)

- Bug fix: When modifying fields in the Online Designer, in which a field is embedded in the field label or notes of another field, the green box saying "Field is embedded elsewhere on page" might mistakenly not appear immediately after the field has been modified. (Ticket #233598)

- Bug fix: When the HTML tags "iframe" or "embed" are added to any user input that is then output on a page in REDCap (e.g., field labels, survey instructions), any text or tags that occur after the iframe/embed tags would mistakenly be removed along with the iframe/embed tags themselves, thus truncating the text. Note: iframe/embed tags are not allowed and are always removed for security purposes.
- Bug fix: When using Multi-Language Management, the MLM setup page would fail to load in projects that have not yet set up any languages. Bug emerged in the previous release. (Ticket #233304)
- Bug fix: When using Twilio, in which one or more Twilio voice call options are enabled in the project, the voice call options would mistakenly not be displayed in any drop-downs listing all the enabled delivery preferences. Bug emerged in REDCap 13.4.0. (Ticket #233599)
- Bug fix: When viewing the "Stats & Charts" page for a report in a longitudinal project, in which a user clicks the link for the "Missing" column for a given field after having selected the Live Filter of an event that contains data for a repeating instrument (although not for the field in question), the "missing values" list of records that is returned after clicking the "Missing" link might mistakenly display extra values that are not applicable. (Ticket #232841)

Version 14.3.14(released on 2024-06-13)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into any user input that is then output on a page in REDCap (e.g., field labels, survey instructions, data displayed on a report). This vulnerability can be exploited by authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

- Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a specific API parameter's value that is used in several file-related and survey-related API methods. This vulnerability can be exploited only by users with a valid API token. Bug exists in all REDCap versions.

- Bug fix: AJAX requests in External Modules were mistakenly not working on pages that lack REDCap page headers. (Ticket #232369)

- Bug fix: Embedding required fields into matrix groups hidden by branching logic would cause the page to crash, preventing it from being saved. (Ticket #232140)

- Bug fix: For some servers, the new Top Usage Report page in the Control Center would mistakenly not display any results. Bug introduced in the previous version.

- Bug fix: If a date, time, or datetime validated field was embedded inside the choice label of a radio or checkbox field, the width of the date/time/datetime field would mistakenly be too wide. (Ticket #232271)

- Bug fix: If alerts have been set up with an Alert Type of "SMS" or "Voice Call", the log entry on the Logging page for each alert sent would mistakenly be missing the recipients' phone numbers.

- Bug fix: If the Survey Base URL setting has been defined on the General Configuration page in the Control Center, any images that are uploaded using the rich text editor to a field label, survey instructions, etc. might not be viewable when viewing them on the survey page. (Ticket #231843)

- Bug fix: The "Administrator?" column in the "View User List by Criteria" table on the Browse Users page in the Control Center was mistakenly never updated when granular Admin Privileges were introduced to REDCap. That column currently only denotes if the user has

"Access to all projects and data" privileges when it should instead display a checkmark if the user has at least one of the seven possible admin rights. (Ticket #232602)

- Bug fix: The MyCap API call "getStudyFile" was not returning any file contents for the requested file.

- Bug fix: Too many unnecessary database queries would mistakenly be executed during the Background Data Import process.

- Bug fix: When a calculated field is using a datetime field inside a datediff() function while also using "today" as a parameter (as opposed to using "now"), it might result in an incorrect calculated result on the page (although the server-side calculation process would typically correct this). (Ticket #231434)

- Bug fix: When executing a custom Data Quality rule in a longitudinal project, in which the rule's logic references a field with a blank/null value (e.g., [field]=""), the rule would mistakenly not return results from events that contain no data. (Ticket #231374)

- Bug fix: When exporting data via the Export Records API method in EAV format, in which the "fields" parameter is not provided, the API would mistakenly not return data for all project fields in the output of the API request but might instead only return the record ID field and (if the API parameter DataAccessGroups=false) the __GROUPID__ field. (Ticket #232249)

- Bug fix: When importing data for a repeating instrument, in which one of the fields on the repeating instrument is the Secondary Unique Field, in certain situations REDCap might mistakenly return an error and prevent the import process from occurring. (Ticket #229881)

- Bug fix: When importing data via the Background Data Import process in a MyCap enabled project, it might mistakenly create duplicate entries for the same record in the MyCap Participant List. (Ticket #229177)

- Bug fix: When using Multi-Language Management, "Download PDF" buttons for each language on the MLM setup page were mistakenly disabled when the project is in production mode. (Ticket #232952)

- Bug fix: When using Multi-Language Management, the survey queue page, when called directly, would mistakenly not take the language preference field into account. (Ticket #233093)

- Bug fix: When using WebDAV for file storage in REDCap, the Configuration Check page might mistakenly not display the WebDAV path on the page in one of the checks but would instead just display two double quotes where the path should be displayed.

- Bug fix: When using right-to-left languages in Multi-Language Management, the email content for translated ASIs or Alerts would mistakenly not appear in the user's/participant's email client as right-to-left. (Ticket #232158)

- Bug fix: When using the Clinical Data Mart feature for CDIS, users not having Data Mart privileges might mistakenly be able to access a Data Mart page. (Ticket #232792)

- Bug fix: When using the datetime picker on datetime fields, in which the field already has a value, clicking on the time sliders in the datetime picker would mistakenly cause the picker to close immediately. Bug emerged in the previous version. (Ticket #232350)

Version 14.3.13(released on 2024-05-30)

- Medium security fix: Numerous REDCap endpoints that are called via AJAX on certain pages that are oriented around project design were mistakenly not enforcing the Project Design & Setup rights requirement. This could allow someone with access to the project that does not have Design rights to access information they should not, and in the worst cases, make specific design changes to the project (e.g., copy or delete a field) when they do not have the

rights to do so. Note: In order to exploit this, the user would have to have access to the project and would have to know the specific endpoints/URLs to call (and also must know some specific parameters to use). Additionally, this only affects endpoints that require Project Design & Setup rights. Bug exists in all versions of REDCap.

- Improvement: Ability to import clinical notes via CDIS - Users may now import clinical note documents for patients using Clinical Data Pull or Clinical Data Mart. Note: If using Epic, the institution will be required to upgrade to v4 of the REDCap app in the Epic "Show Room" (formerly known as "App Orchard").

- Improvement: For users that are not assigned to a Data Access Group, the Data Quality page will now display a DAG drop-down filter (next to the record drop-down filter) to allow them to apply any Data Quality rule only to records assigned to the selected DAG.

- Improvement: IP exceptions for the Rate Limiter - On the General Configuration page in the Control Center, you may now set IP address or IP range exceptions for the Rate Limiter (if enabled) so that specific IP addresses will not be banned. This will be useful if performing security scans on your server, in which you can add the IP address of the scanning tool so that it does not get banned while performing scans. (Ticket #119954)

- Improvement: In the Online Designer when Ctrl-clicking multiple checkbox or radio fields to display the "Modify multiple fields" options, a new option to "Convert to matrix group" will appear, thus allowing users to merge the selected fields into a matrix. When merging fields into a matrix, the confirmation dialog will note that only the choices for the first field selected will be preserved (in case the selected fields have different choices). Additionally, the action will remove all field notes from the fields and will also remove all section headers (except for the first field's section header, if it exists). (Ticket #230591)

- Improvement: In the Online Designer when editing a matrix of fields, a new button will appear at the bottom left of the "Edit Matrix of Fields" dialog that says "Save & split matrix

into separate fields". When clicked, it will convert the matrix into separate fields. (Ticket #230591)

- Improvement: New "Top Usage Report" page in the Control Center - This page displays the most active projects, users, pages, specific URLs, External Modules, cron jobs, etc. within a given period of time. It can be used to quickly identify where server resources are being spent under periods of high load.

- Change: When using the Data Resolution Workflow in a project, it has always been the case that the results of data quality rules would automatically "exclude" fields that have a data query with "closed" status. Many users have complained about this behavior and have stated that the discrepancies should still be displayed in the data quality rule results regardless of the field's data query status. From now on, such fields will no longer be automatically "excluded" simply because they have a data query with "closed" status.

- Bug fix: If a user is creating a new project and selects the option to "Upload a REDCap project XML file", then chooses a file, but then selects another option (i.e., Empty project, Use a template), the Project XML file might mistakenly still be used to create the project, and in some cases might result in a fatal PHP error. (Ticket #232084)

- Bug fix: In REDCap generated PDFs that contain data for repeating instruments and/or repeating events, the repeating instance number was mistakenly not displayed in the PDF's right header above the page number. The absence of the instance number added ambiguity and made the specific instances not easily discernible from each other in the PDF.

- Bug fix: It might be possible for users/participants to bypass the @FORCE-MINMAX action tag's requirement and enter an out-of-range value for a datetime field if they tab out of the field while the datetime picker is still visible. (Ticket #231611)

- Bug fix: When attempting to delete one or more scheduled survey invitations via the right-hand checkbox in the Survey Invitation Log table by clicking the "Delete all selected" button,

the invitations would fail to be deleted if the record does not exist yet (i.e., participant was

added to the Participant List manually, but the participant has not yet taken the survey).

(Ticket #231754)

- Bug fix: When executing Data Quality rules that return more than 10,000 discrepancies, in

  which one or more discrepancies have been previously "excluded" by a user, the total

  number of discrepancies displayed on the page would mistakenly be listed as 10000 minus

  the number of exclusions (which is incorrect) rather than the total discrepancies minus the

  number of exclusions. (Ticket #229449)

- Bug fix: When using a large font-size for text in the rich text editor, the text might mistakenly

  overlap with other text or action buttons in some places. (Ticket #231737)

- Various bug fixes and under-the-hood changes for CDIS.

Version 14.3.12(released on 2024-05-23)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a

  malicious user could potentially exploit it by inserting custom HTML and JavaScript in a

  specially crafted way into any user input that is then output on a page in REDCap (e.g., field

  labels, survey instructions, data displayed on a report). This vulnerability can be exploited by

  authenticated users and also by survey participants entering data. Bug exists in all REDCap

  versions.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a

  malicious user could potentially exploit it by inserting custom HTML and JavaScript in a

  specially crafted way into any user input that is then output on a page in REDCap (e.g., field

  labels, survey instructions, data displayed on a report). This vulnerability can be exploited by

authenticated users and also by survey participants entering data. Bug exists in all REDCap versions.

- Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a specific API parameter's value that is used in the API File Import, File Export, and File Delete methods. This vulnerability can be exploited only by users with a valid API token. Bug exists in all REDCap versions.

- Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML and JavaScript in a specially crafted way into a specific API parameter's value that is used in the API File Import, File Export, and File Delete methods. This vulnerability can be exploited only by users with a valid API token. Bug exists in all REDCap versions.

- Minor security fix: An authenticated user could make a simple request to a very specific REDCap end-point, in which it would reset the REDCap Base URL and thus make the application temporarily unusable to users accessing REDCap in a web browser.

- Minor security fix: An authenticated user could make a simple request to a very specific REDCap end-point, in which it would reset the REDCap Base URL and thus make the application temporarily unusable to users accessing REDCap in a web browser.

- Improvement: "Phone (France)" was added as a new field validation. After upgrading, an administrator will need to enable it on the Field Validation Types page in the Control Center.

- Improvement: "Phone (France)" was added as a new field validation. After upgrading, an administrator will need to enable it on the Field Validation Types page in the Control Center.

- Improvement: A new system-level setting "Total maximum cron instances" was added, which allows one to control the maximum number of concurrent cron processes for the REDCap cron job. The setting defaults to the value "20". Increasing this value will allow more cron

processes to be spawned concurrently, which may be useful if you are using system-intensive External Modules such as API Sync or Flight Tracker. It is generally advised to leave this setting at its default value unless the cron job is either causing server performance issues (because too many jobs are running simultaneously) or if certain cron jobs aren't running often enough to get everything done that they need to get done.

- Improvement: A new system-level setting "Total maximum cron instances" was added, which allows one to control the maximum number of concurrent cron processes for the REDCap cron job. The setting defaults to the value "20". Increasing this value will allow more cron processes to be spawned concurrently, which may be useful if you are using system-intensive External Modules such as API Sync or Flight Tracker. It is generally advised to leave this setting at its default value unless the cron job is either causing server performance issues (because too many jobs are running simultaneously) or if certain cron jobs aren't running often enough to get everything done that they need to get done.

- Bug fix: In the previous version, it was mistakenly thought that the variable name "calculate" needed to be added to the reserved variable name list, but that turned out not to be true. Because of some new underlying code fixes, that variable name is still allowed. (Ticket #231128b)

- Bug fix: Long choice labels for fields used in Smart Charts, specifically bar charts, might mistakenly appear as too wide on the chart and thus might overlap with other text, making it hard to read.

- Bug fix: Long choice labels for fields used in Smart Charts, specifically bar charts, might mistakenly appear as too wide on the chart and thus might overlap with other text, making it hard to read.

- Bug fix: The survey queue was mistakenly not translated in MLM-enabled projects when it was displayed on the survey page itself (as opposed to when specifically viewing the survey queue page after completing the survey).

- Bug fix: The survey queue was mistakenly not translated in MLM-enabled projects when it was displayed on the survey page itself (as opposed to when specifically viewing the survey queue page after completing the survey).

- Bug fix: When exporting an instrument PDF, the word "Confidential" would fail to be displayed in the PDF's left header by default (this excludes participant-facing PDFs, which should not display this text).

- Bug fix: When exporting an instrument PDF, the word "Confidential" would fail to be displayed in the PDF's left header by default (this excludes participant-facing PDFs, which should not display this text).

- Bug fix: When making a call to the Export Logging API method for a longitudinal project, the event name would mistakenly be omitted in the API response. (Ticket #210938)

- Bug fix: When making a call to the Export Logging API method for a longitudinal project, the event name would mistakenly be omitted in the API response. (Ticket #210938)

Version 14.3.11(released on 2024-05-16)

- Minor security fix: The Clinical Data Pull (CDP) feature in CDIS contained a vulnerability in which a malicious user could potentially re-use a URL utilized during the "launch from EHR" process when accessing the CDP "patient portal" page, in which it might potentially allow them to access unauthorized PHI. This vulnerability is only accessible if CDP is enabled on the REDCap server.

- Improvement: Administrators will now see an icon/link in the User Actions popup when clicking a username on a project's User Rights page, in which the icon/link will take the admin to view the user's account on the Browse Users page in the Control Center. (Ticket #230772)

- Improvement: In a MyCap-enabled project, all MyCap tasks can now be manually set as Active or Not Active at any time on the MyCap settings page in the Online Designer. Setting a MyCap task as "not active" will prevent the task from appearing in the MyCap mobile app for participants. Note: The previous release enabled this feature specifically for MyCap active tasks, while this change makes this feature available to all MyCap tasks (not just active tasks).

- Major bug fix: When exporting data via the Export Records API method in EAV format with rawOrLabel="label", the value of "False" would mistakenly be returned as most of the multiple choice field values. Bug emerged in the previous release. (Ticket #230389)

- Change/improvement: The accuracy of the External Service Checks on the Configuration Check page was improved and are now able to better exclude false positive results.

- Bug fix: A missing LOINC code was added to the CDIS mapping features.

- Bug fix: If the Custom Account Expiration Email setting (found at the bottom of the User Settings page in the Control Center) is not used (no custom text is defined), in which REDCap uses the default Account Expiration Email text instead, the resulting email sent out to users might mistakenly contain some braces/curly brackets in certain places.

- Bug fix: In a MyCap-enabled project, some minor issues could occur via the "Create/Edit MyCap Task" and "Fix warnings" popups when the project is in production and enters draft mode.

- Bug fix: The variable name "calculate" has been added to the reserved variable name list because it could cause various unexpected issues on forms/surveys if a field has that variable name. (Ticket #231128)

- Bug fix: When a report has advanced filter logic that contains inline comments, and a user selects a Live Filter on the report page, it might cause the report page to crash with a fatal error, thus not displaying the report.

- Bug fix: When comparing two revisions/snapshots on the Project Revision History page, in which more than two columns in a given row of the comparison table display the "Preview Change" link, clicking the "Preview Change" link would only work for the left-most column that contains the link and not for any other columns. (Ticket #230991)

- Bug fix: When importing some instruments from the REDCap Shared Library that contain calc fields, line breaks existing in a calculation might mistakenly get converted to HTML "BR" tags when being imported into a project, thus causing the calculated field to throw an error when viewing it on a form/survey.

- Bug fix: When viewing the API documentation or the Documentation for Plugins, Hooks, & External Modules, the main part of the page and its content would mistakenly appear invisible if the browser window is at a specific width range. (Ticket #231012)

- Various updates and fixes for the External Module Framework, including the following: 1) Fixed a bug preventing module system file settings from being saved, 2) Added support for the [data-table] smart variable in SQL fields when using $module->getChoiceLabel(), 3) Improved rendering for module README files in Markdown format, 4) Expanded module AJAX APIs to support public dashboards & reports, and 4) Misc. security scan improvements.

Version 14.3.10(released on 2024-05-09)

- Improvement: In a MyCap-enabled project, active tasks can now be set as Active or Not Active at any time on the MyCap settings page in the Online Designer. Setting an active task

as "not active" will prevent the task from appearing in the MyCap mobile app for participants. Note: This is not for all MyCap tasks but only for MyCap active tasks.

- Improvement: In the Online Designer when viewing the fields of a specific instrument, a yellow star is now displayed to the right of the variable name for identifier fields to denote to users which fields are identifiers.

- Improvement: When clicking on a user's username in the user table on the User Rights page, in which the user is assigned to a user role, a "Remove from project" button was added inside the "User actions" popup that allows the user to be removed from a project directly without having to un-assign them from the role first.

- Major bug fix: Alerts with conditional logic containing datediff() with "today" or "now" as a parameter might mistakenly not get triggered by the cron job, thus causing some alerts not to get sent when they should. Bug emerged in REDCap 14.2.0 Standard. Note: This does not affect any LTS versions. (Ticket #229617)

- Major bug fix: The API Delete Users method was mistakenly not checking if a user had API Import/Update privileges in the project in addition to User Rights privileges in order to successfully make a call to the API method. This bug was supposedly fixed in REDCap 13.7.28/14.0.5 LTS and 14.0.4 Standard, but mistakenly it was not. (Ticket #230626)

- Major bug fix: When the system-level setting "Allow normal users to create new projects?" is set to "No", normal (non-admin) users would mistakenly get the error "You do not have Create Project privileges!" when submitting the Create New Project page. In that situation, all users should be able to view and submit that page (unless they are not allowed to create projects via the user-level setting). Bug emerged two releases ago. (Ticket #230244)

- Change: The text in the help dialog for the option "Rename records?" on the Data Import Tool has been changed slightly for improved clarity and to reduce confusion. (Ticket #228096b)

- Bug fix: A fatal PHP error might occur for PHP 8 when loading the Form Display Logic setup dialog. (Ticket #230223)

- Bug fix: If REDCap surveys are embedded via an iframe on external web pages, in some situations the survey page might go completely blank when the page loads. (Ticket #229885)

- Bug fix: The Export Survey Link API method would mistakenly return a survey link when provided with an instrument and event in which the instrument is not designated for that particular event. In that case, the API should instead return an error. (Ticket #230491)

- Bug fix: The variable name "field_label" has been added to the reserved variable name list because it could cause some instruments to become no longer accessible in the Online Designer if a field has "field_label" as its variable name. (Ticket #230669)

- Bug fix: When MLM is active, piping would mistakenly not work on (first) survey pages when in "start over" mode.

- Bug fix: When a user simply clicks a field in the Online Designer, it would mistakenly call the "field reorder" script even though no fields were actually being reordered on the page. This would sometimes cause the whole table to be reloaded and also could cause annoying issues such as multiple fields getting deselected when attempting to use the "Modify multiple fields" feature.

- Bug fix: When exporting data via the Export Records API method in EAV format and providing the API parameter exportDataAccessGroups=true, the DAG designations would mistakenly not get output from the API request. (Ticket #230389)

- Bug fix: When using Multi-Language Management, the mouseover tooltips for date/datetime/time validated fields would mistakenly fail to be updated with translations on MLM-enabled surveys and data entry forms. (Ticket #230546)

- Bug fix: When using an iOS device to enter data for a date/datetime/time validated field that has an accompanying datetimepicker calendar widget, the field would mistakenly lose focus

with each character entered into the Text field, thus causing the user/participant to have to keep putting focus back on the field for each character needing to be entered. Bug emerged in REDCap 14.0.19 LTS and 14.3.2 Standard. (Ticket #230017)

- Bug fix: When using the rich text editor, REDCap's default font (i.e., Open Sans) was mistakenly not listed in the font-family list in the editor's toolbar. (Ticket #230315)

- Bug fix: When viewing an individual email on the Email Logging page, in which the email contains a "mailto" link in the email body, the "mailto" link would mistakenly get mangled when displaying the email inside the dialog on the page. (Ticket #230319)

- Bug fix: When viewing the Record Status Dashboard or a report, if the Rapid Retrieval feature is working on the page to provide a cached version of the page, and if the RR's cache was stored when REDCap was on a previous version, in which that previous REDCap version has been removed from the web server, some images (e.g., form status icons) might not display correctly on the page and other links might lead to a 404 "does not exist" error. (Ticket #230224)

Version 14.3.9(released on 2024-05-03)

- Major bug fix: When the system-level setting "Allow normal users to create new projects?" is set to "No", normal (non-admin) users would mistakenly get the error "You do not have Create Project privileges!" when navigating to the Create New Project page. In that situation, all users should be able to view that page. Bug emerged in the previous release. (Ticket #230090)

- Change: The text for the option "Rename records?" on the Data Import Tool has been changed slightly for improved clarity and to reduce confusion. (Ticket #228096)

- Bug fix: When exporting then importing a Project XML file, the two sub-options for the Secondary Unique Field (i.e., "Display the value..." and "Display the field label...") would mistakenly not get transferred to the new project but would resort to their default values. (Ticket #229880)

Version 14.3.8(released on 2024-05-02)

- Improvement: Mobile Toolbox measures have been added for use in the MyCap mobile app. The Mobile Toolbox (MTB) is a research platform that includes a library of cognitive and other tests that can be administered remotely on a smartphone. The MTB's measures include smartphone versions of assessments from the NIH Toolbox, the International Cognitive Ability Resource, and the Patient Reported Outcomes Measurement Information System. A list of all available MTB tasks in REDCap can be viewed via the "Import Active Task" button in the Online Designer for any MyCap-enabled project.

- Improvement: New "Download SQL" button was added to the REDCap install page to make it easier to fetch the generated install SQL as a file rather than obtaining it from the webpage via copy-and-pasting. (Ticket #229260)

- Improvement: The Codebook page now has checkboxes that can be toggled by the user to remember the collapsed state of the tables on the page on a per-project basis for the user. (Ticket #229673)

- Major bug fix: When viewing the User Rights page and the survey page when using certain PHP versions, the page might mistakenly crash with a fatal PHP error. (Ticket #229976)

- Change: Small changes to the redcap_log_view_requests database table to improve general application performance.

- Bug fix: Certain queries on the project Logging page might mistakenly take too long to run for certain projects, thus making the page unnecessarily slow. (Ticket #229219)

- Bug fix: If using Multi-Language Management and reCAPTCHA is enabled for the public survey, the reCAPTCHA page might mistakenly throw a JavaScript error when MLM is active.

- Bug fix: Problematic code was causing the cron job to crash in certain unknown situations. (Ticket #229536)

- Bug fix: When downloading an instrument PDF when the field label or section header text of a field is very long, in some cases the text in the PDF might mistakenly run over and obscure the PDF's footer text. (Ticket #205997)

- Bug fix: When the system-level setting "Allow normal users to create new projects?" is set to "No", and a user does not have the user-level option "Allow this user to request that projects be created for them..." checked on the Browse Users page, if the user knows how to navigate to the Create New Project page (even though the links to that page have been removed in the user interface), it would mistakenly display that page and would allow them to submit a request to create a project. Note: The project would not get created unless the admin mistakenly approved it while not realizing that this user should not be able to request new projects be created. (Ticket #229702)

- Bug fix: When users are not allowed to create or copy projects on their own, and they submit a "Copy Project" request to an administrator, in which the "Warning about miscellaneous attachments" dialog is displayed to the user on the Copy Project page, when the admin goes to approve the request, that dialog would mistakenly be displayed again (it should only be displayed initially to the user, not the admin) and thus would block the admin from successfully approving the request. (Ticket #228954)

- Bug fix: When viewing the Stats & Charts page for Report B in a longitudinal project, in which one or more events are selected for Report B, the Stats & Charts page would mistakenly not

filter the data on the page to those selected events but would instead display data from all events. (Ticket #228030)

Version 14.3.7(released on 2024-04-29)

- Major bug fix: In specific situations when using Multi-Language Management in a project when the web server is running PHP 8.0 or higher, every project page would crash with a fatal PHP error. (Ticket #229529)

- Change: The video "Full Project Build" was added as a new video on the project left-hand menu and on the Training Videos page.

- Bug fix: Fixed several different SQL queries used in various places in the REDCap code that were silently failing in specific cases.

- Bug fix: When exporting a project's data to Stata, multiple choice fields would mistakenly have a "label values" entry in the Stata syntax file even when not all choice codings are integers. The "label values" entries should only be added to the Stata syntax file when a multiple choice field has an integer code for every choice. (Ticket #229277b)

Version 14.3.6(released on 2024-04-26)

- Major bug fix: When the "href" attribute of any hyperlink has a value of "#" for any label or other user input, the entire label text would mistakenly be completely removed (i.e., would be blank) when output on the page. (Ticket #229451)

- Bug fix: When importing the Survey Queue settings via CSV file, an error might mistakenly be returned if certain things, such as condition_surveycomplete_form_name, do not have a value, even when not needed. (Ticket #229186)

Version 14.3.5(released on 2024-04-25)

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom JavaScript/HTML in a specially crafted way into the "href" attribute of hyperlinks placed inside labels and other user input that is then output onto the webpage. The user must be authenticated into REDCap in order to exploit this, with one exception: a malicious survey participant could inject the JavaScript/HTML into a Text or Notes field whose value is then viewed on a report (i.e., it would appear as a hyperlink in the report that would have to be clicked by the user to be exploited). Bug exists in all versions of REDCap. (Ticket #228857)

- Medium security fix/protection: All usages of the PHP function iconv() have been replaced in the REDCap code due to a vulnerability (CVE-2024-2961) discovered in Glibc (GNU C Library). Note: This is not a vulnerability in REDCap but in a PHP library. This vulnerability can be remediated at the web server level via configuration settings, but this security fix/protection seeks to protect all REDCap installations in the event that their IT support is not able to remediate this vulnerability at the server level. (Ticket #229281)

- Medium security fix: A Base Tag Hijacking vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom HTML in a specially crafted way into labels and other user input that is then output onto the webpage. The user must be authenticated into REDCap in order to exploit this, with one exception: a malicious survey participant could inject the HTML into a Text or Notes field whose value is then viewed on a report. Bug exists in all versions of REDCap. (Ticket #229158)

- Improvement: The Database Query Tool in the Control Center now has the ability to utilize "Smart Variables Context", which can be enabled on the page via checkbox option on the DQT menu so that administrators may provide the literal values of certain Smart Variables that can be piped into the query from text boxes on the page. Also, a link or button to navigate directly to the Database Query Tool has been added to several project pages, such

data entry forms, survey pages, the Edit Field dialog in the Online Designer, etc. to allow admins to open the DQT directly with the current context values (e.g., project-id, record-name, event-id) already pre-filled on the page. This will make it much, much easier to execute queries on a specific project and/or record with less copy-and-pasting. Note: This feature will not be displayed if the DQT has not been enabled yet.

- Improvement: The rich text editor used throughout REDCap now has a new drop-down option in the editor's toolbar for setting the "font family" and "font size" of any text in the editor.

- Improvement: When using MyCap in a longitudinal project, users can now decide on the event display format (ID, Label, or None) for titles of MyCap tasks displayed in the Upcoming Tasks section.

- Change/improvement: A few more pages were added to the "Navigate to page" widget to allow users to go to specific pages via PID and keyboard shortcuts.

- Change: The video "A Brief Overview of REDCap" was replaced with a new video.

- Various changes/improvements to the External Module Framework, including 1) Allow external module ajax requests to work on dashboards & reports, 2) Added an instance parameter to the resetSurveyAndGetCodes() method, 3) Improve performance of the disabled modules dialog, and 4) Misc. security scan script improvements.

- Bug fix: A query used on the Data Access Groups page was incompatible with certain versions of MySQL that have ONLY_FULL_GROUP_BY set in the SQL Mode, thus causing the query to fail for some installations. The query has been replaced with an equivalent query that is compatible with all supported versions and configurations of MariaDB/MySQL. (Ticket #228974)

- Bug fix: Certain options on the instrument view of the Online Designer, such as Form Display Logic settings and survey-related settings, would mistakenly not function on the page for MyCap enabled projects. (Ticket #228963)

- Bug fix: In certain situations when exporting a report, the survey completion timestamps would mistakenly be date shifted in the resulting export file if the "shift all dates" checkbox is checked while the "shift all survey completion timestamps" is not checked. (Ticket #228879)

- Bug fix: Survey pages might mistakenly display text inside P tags in labels as different font sizes in different situations. (Ticket #228686)

- Bug fix: The Smart Variables [event-number] and [event-id] would mistakenly not return a numerical value but a string, causing special functions that expect numeric values to fail to produce the correct result (e.g., mod()). (Ticket #228953)

- Bug fix: When accessing a project that is enabled as a Project Template, if the current user is an administrator that is currently impersonating another user in the project, the "Project is used as a template" box would mistakenly be displayed on the Project Home Page. That should only be displayed when the user is an admin with "Modify system configuration pages" rights and while not impersonating a non-admin user. (Ticket #229370)

- Bug fix: When an instrument contains an inline PDF attached to a Descriptive field, and the instrument is then downloaded as a PDF, the first page of the generated PDF might mistakenly have text that runs off the bottom of the page if the inline PDF is displayed (via iMagick conversion to an image) on the first page of the generated PDF. (Ticket #228282)

- Bug fix: When copying a project, the survey setting "Display page numbers at top of survey page" would mistakenly not get copied to the new project. (Ticket #229243)

- Bug fix: When exporting a project's data to Stata, multiple choice fields would mistakenly have a "label define" entry in the Stata syntax file even when not all choice codings are

integers. The "label define" entries should only be added to the Stata syntax file when a multiple choice field has an integer code for every choice. (Ticket #229277)

- Bug fix: When regular users (non-admins) import data dictionaries containing Dynamic SQL fields, in certain cases REDCap might refuse to import the file, mistakenly stating that the query has changed when in fact it has not. (Ticket #229148)

- Bug fix: When renaming a record on the Record Home Page, in which the new record name is the same as the old record name but with leading zeros (or vice versa), if both the old and new record names are integers, REDCap would not rename the record and would mistakenly take the user to another page to create a new record under the new record name provided, which is confusing.

- Bug fix: When using Google Cloud Storage for file storage in the system, uploading/downloading a file via Send-It for a File Upload field might mistakenly not work successfully. Additionally, file downloads might also fail when using GCS when downloading files attached to data queries in the Data Resolution Workflow dialog. (Ticket #226875c)

- Bug fix: When using Multi-Language Management and applying or canceling draft mode changes in projects where MLM is active, there would always be a message/warning that MLM settings/translations have been modified even when this is not actually the case. (Ticket #228877)

- Bug fix: When using Twilio or Mosio for a survey that is taken as an SMS Conversation, if the survey is a repeating instrument, branching logic might not work successfully for fields that have branching logic referencing fields on the same instrument. (Ticket #227028)

- Bug fix: When using the search capability for the Biomedical Ontology feature for a Text field on a form/survey, if the user's search returned the message "[No results were returned]", and the user then clicked on that message, it would mistakenly display a bunch of HTML below the field when instead it should not display anything below the field. (Ticket #229124)

- Bug fix: When utilizing Microsoft Azure Blob Storage for file storage in REDCap, some operations (specifically the "delete file" action) might mistakenly fail for specific server configurations because the CURL options for VERIFY_HOST and VERIFY_PEER were mistakenly not being set to FALSE in the API request to Azure.

Version 14.3.4(released on 2024-04-18)

- Improvement: New built-in PDF Viewer

- This built-in PDF viewer remediates an old gap of functionality in which iOS and Android devices are not able to display more than the first page of an inline PDF. So whenever REDCap is displaying an inline PDF (e.g., for a Descriptive field, when using the INLINE action tag on a File Upload field, or on the e-Consent certification page), if the current device is iOS or Android or if it lacks a native PDF viewer, then REDCap's built-in PDF Viewer will be utilized automatically. For all other devices, the device's native PDF viewer will be used.

- Notable change: Previous versions of REDCap would not attempt to display an inline PDF on the certification page of an e-Consent survey, in which it would say "This browser does not support inline PDFs. Please open the PDF in a new tab.". But now, it will actually display the inline PDF for all devices on the e-Consent certification page, whether using the device's native PDF viewer or if using REDCap's PDF viewer.

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Improvement: Videos hosted by the VidYard video service (vidyard.com) can now be utilized for the "Embed media" option on Descriptive Text fields. Thus, VidYard URLs (e.g., https://share.vidyard.com/watch/XYZXYZ) are now fully compatible, similar to how YouTube and Vimeo URLs have always been.

- Improvement: When moving one or more fields in the Online Designer, a new option will appear in the field selection drop-down to allow the user to move a field to an empty instrument (i.e., an instrument with no defined fields). In previous versions, fields could only be moved to an instrument containing at least one field (not counting the Form Status field).

- Change: All hard-coded references to "redcap.vanderbilt.edu" have been changed to "redcap.vumc.org" to reflect the recent change of the Vanderbilt REDCap server's domain name. Note: The old URL will continue to work and automatically redirect to the new URL until April 2025.

- Change: New MLM tip added at the bottom of the "Forms/Surveys" tab on the MLM setup page. The tip reads as follows: "Tip: Choose your "ASI Language Source" wisely - If ASIs have been translated in your MLM setup, it is typically recommended that you utilize the "Language preference field" option for determining the translation to be used for an ASI survey invitation. Choosing "User's or survey respondent's active language" as the ASI Language Source can have unexpected results. For example, if a participant's survey response triggers the ASI, the ASI's invitation text will be output in the correct language since it uses what the participant has chosen previously. However, if the ASI is triggered by an action of the project user, such as a data import or saving a data entry form, the ASI's text will be in the language of the project user, which may not be the language that the participant prefers."

- Change: When copying a project via the Other Functionality page, a new note appears below the copy project option that says "NOTE: The new project will not contain the project's logging history (audit trail), but if you wish to obtain it, you may freely download it any time at the top of the Logging page.". This will help users understand upfront that the logging does not get copied during this process. (Ticket #228253)

- Various fixes and changes to the External Module Framework, including the following: 1) Made it possible to download a list of users that have Project Design rights for all projects where a given module is enabled (appears as a new button in the View Usage dialog in the Control Center), 2) Queued all External Module AJAX requests to prevent them from getting canceled by REDCap's duplicate query protection, and 3) Miscellaneous security scan improvements.

- Bug fix: After editing the Survey Queue settings in the Online Designer, the SQ button might mistakenly display multiple green check mark icons. (Ticket #228741)

- Bug fix: Data Quality rules A and B will now return checkbox fields in the list of discrepancies if none of the checkbox options have been checked for a given checkbox field. This reverts a change made in REDCap 13.7.10 LTS and 13.9.0 Standard (via Ticket #212048), which is now considered to have been a mistake. This has been changed because the previous behavior was considered to be inconsistent with regard to how checkboxes, especially required checkboxes, are treated on survey pages and data entry forms. For example, if a checkbox field is required and no checkboxes are checked, the Required Field alert is displayed to the user, which implies that a checkbox field with no checked checkboxes is considered to be a field with a missing value. Thus, to provide more consistency with how checkboxes are treated throughout REDCap, this fix has been applied to correct this issue. (Ticket #217798)

- Bug fix: If some surveys are set as inactive in a project, then the Copy Project page might mistakenly have the "Survey Queue and Automated Survey Invitation settings" option unchecked and disabled. (Ticket #228742)

- Bug fix: In certain situations on a data entry form, the Custom Event Label might not display correctly and/or might get overwritten by the Custom Record Label (or vice versa). Bug emerged in REDCap 14.2.2. (Ticket #228503)

Version 14.3.4(released on 2024-04-18)

- Bug fix: When a Text or Notes field containing HTML tags in its value is being piped to another place on the same page/instrument, the HTML tags would mistakenly not be interpreted but instead would be escaped in its final piped form. This issue would only occur when the field has a SETVALUE or DEFAULT action tag. Bug emerged in 13.7.27 LTS and 14.0.3 Standard. (Ticket #228818)
- Bug fix: When completing a survey, a JavaScript error might occur during certain parts of the survey that might cause other important processes to be blocked on the page. (Ticket #228785)
- Bug fix: When using the Field Bank in the Online Designer to search for fields, it might mistakenly show answer choices that say "Login to see the value." for specific items. (Ticket #228217)

Version 14.3.3(released on 2024-04-11)

- Major bug fix: If a project is deleted by a user, when that project is eventually deleted from the database 30 days later, if the project's data is stored in the redcap_data2, redcap_data3, or redcap_data4 database table, the data might mistakenly not get removed from those data tables when the project as a whole is deleted. This could leave orphaned data in those data tables. Note: During the upgrade process, REDCap will automatically delete any orphaned data still present in the redcap_data2, redcap_data3, and redcap_data4 database tables. Bug emerged in REDCap 14.0.0.
- Major bug fix: When the e-signature functionality has been enabled on an instrument, the e-signature checkbox at the bottom of the data entry form would mistakenly be displayed and would be clickable even when the whole record is locked. If the whole record is locked, the e-

signature checkbox should remain disabled. Additionally, it might be possible in certain situations (e.g., simultaneous users locking and editing a record) for a user to lock, unlock, or e-sign an instrument while the whole record is locked. Server-side checks have now been added to prevent that. (Ticket #225320)

- Change: When editing a MyCap task's settings in the Online Designer, if a task is scheduled one time then the "allow retroactive" option will now not be available.

- Improvement/change: When uploading static attachment files to an alert on the Alerts & Notifications page, the maximum allowed attachment size has been increased from 10 MB to 20 MB. Please note that sending attachments larger than 10 MB might cause the email to be rejected by certain email providers.

- Bug fix: When accessing an instrument in the Online Designer right after creating a new project from scratch (i.e., when only the Record ID field exists), some instructional text at the top would mistakenly be too wide and might be partially covered up by other things on the page. (Ticket #228129)

- Bug fix: When editing some previously-saved content using the rich text editor (i.e., editing the body of an alert, ASI, project dashboard, or field label), in which an inline image was uploaded and saved by a user while on an earlier REDCap version, the inline image in the rich text editor would mistakenly appear as a broken image inside the editor if that older REDCap version's directory has been removed from the REDCap web server. (Ticket #228239)

- Bug fix: When exporting a query as a CSV file on the Database Query Tool page, the first line of the CSV file would mistakenly contain a line of HTML. Bug emerged in REDCap 14.3.0.

- Bug fix: When importing a data dictionary, it would be possible to import fields that have a variable name ending with an underscore character. This should not be allowed, and thus it now displays an error message when attempting to do so. (Ticket #227821)

- Bug fix: When importing the Survey Queue settings via CSV file, an error might mistakenly be returned if certain things, such as condition_surveycomplete_form_name, do not have a value, even when not needed. (Ticket #227928)

- Bug fix: When moving one or more fields in the Online Designer, in which the user chooses to create a new instrument and then move the field to the newly created instrument (via the last drop-down option in the "Move field to another location" dialog), the process would place the Form Status field on the new instrument so that it would mistakenly be located above the new fields rather than below them. Bug emerged in the previous version.

- Bug fix: When opening REDCap Messenger while in a project, and then attempting to create a new conversation, the project's left-hand menu would mistakenly cover over the "Create new conversation" dialog. Bug emerged in REDCap 14.0.16 LTS and 14.2.2 Standard. (Ticket #228033)

- Bug fix: When performing an initial install of REDCap on certain versions of MySQL, the install SQL script might mistakenly fail during the creation of the MyCap project template. (Ticket #228041)

- Bug fix: When the "Auto-suspend users after period of inactivity" setting is enabled, users who recently had their account created but had not logged in yet would mistakenly get auto-suspended. (Ticket #224747)

- Bug fix: When the PDF Auto-Archiver is enabled for a survey, the IP address of the participant would mistakenly be stored in the PDF Survey Archive table in the File Repository. It was intended that the participant's IP address should only be stored when completing a survey with the e-Consent Framework enabled.

- Bug fix: When using Clinical Data Mart for CDIS, revisions were failing to be imported using the Data Mart import feature.

- Bug fix: When using MyCap in a project and a MyCap task exists, if a user switches the project from classic to longitudinal (or vice-versa) then task schedules might remain orphaned.

- Bug fix: When using the Mapping Helper for CDIS, the status mapping for different types of Condition resources was inaccurately handled.

Version 14.3.2(released on 2024-04-04)

- Improvement: When moving one or more fields in the Online Designer, a new option will appear at the end of the field selection drop-down to allow the user to auto-create an instrument while moving the field(s) to that new instrument. Note: The new instrument will be named "New Instrument" by default, although the user can always rename it after the fact. (Ticket #227034)

- Various updates and fixes to the External Module Framework, including 1) Added validation button and use of Logic Editor for JSON settings, and 2) Miscellaneous security scan script improvements.

- Bug fix: Automated Survey Invitations were mistakenly not getting triggered when set up with a survey completion condition together with conditional logic in which the "OR" option is selected. (Ticket #227693)

- Bug fix: The datetimepicker calendar widget used for datetime fields would mistakenly inject numbers at the end of the field value when typing a datetime value that has a time beginning with "23:". The Datetimepicker library has been updated to a newer version, which resolves this issue. (Ticket #227636)

- Bug fix: The two new hooks "redcap_module_project_save_after" and "redcap_project_delete_after" that were added in the previous version were mistakenly

added as traditional hooks when instead they should have only been added as EM-only hooks that can only be utilized by External Modules. This has been corrected.

- Bug fix: When a participant is completing an e-Consent survey on a mobile device, and thus it is unable to display the inline PDF of their response at the end of the survey, although they are able to view the PDF by clicking the button on the page to view it in another tab, the "Working..." popup would mistakenly appear for 20 seconds before disappearing. Instead, it should only appear very briefly before revealing the page.

- Bug fix: When using Google Cloud Storage for file storage in the system, uploading/downloading a file via Send-It for a File Upload field might mistakenly not work successfully. Additionally, file downloads might also fail when using GCS when downloading files attached to data queries in the Data Resolution Workflow dialog. (Ticket #226875b)

- Bug fix: When using Multi-Language Management, a piping issue would occur when viewing survey pages for participant-specific survey links only. (Ticket #227555)

- Bug fix: When using MyCap, there is some missing text that is utilized for displaying notes inside the repeating instruments popup (for longitudinal projects).

- Bug fix: When using the piping parameter ":inline" when piping a File Upload field, in which a unique event name (or event-based Smart Variable) is not prepended to the field but [first-instance] or [last-instance] is appended to the field (e.g., [my_upload_field:inline][last-instance]), the piping would fail to work correctly.

- Bug fix: When viewing a report in a longitudinal project or a project containing repeating instruments/events, it now displays the text "('records' = total available data across all events and/or instances)" near the top of the report. In previous versions, it did not display any clarifying text for non-longitudinal projects that had repeating instruments, which caused confusion for users regarding the meaning of the word "records" in "Total number of records queried".

Version 14.3.1(released on 2024-03-28)

- Minor security fix: The TinyMCE library embedded in REDCap was upgraded to its latest version (7.0.0) due to a XSS (Cross-site Scripting) vulnerability in the library's previous version.

- New hook: redcap_project_delete_after - Allows custom actions to be performed after a delete action has been initiated. This allows for close control of the delete operation on a project.

- New hook: redcap_project_save_after - Allows custom actions to be performed after a project has been saved from a newly created, copied, or modified project. This allows for close control of the create, copy, and modify operations on a project.

- Improvement: MyCap now supports repeating instrument functionality for longitudinal projects. In previous versions, repeating instruments were only supported for class/non-longitudinal projects.

- Major bug fix: Users with API Import/Update privileges could successfully call the API method "Import User-DAG Assignments" without having Data Access Groups privileges in the project. Data Access Groups privileges should always be required when creating/renaming/deleting DAGs and when importing/exporting user-DAG assignments.

- Bug fix: If the E-signature feature is disabled system-wide via the Modules/Services Configuration page in the Control Center, the user rights option "Locking/Unlocking with E-signature authority" would mistakenly still appear when adding/editing a role or user. Additionally, if the E-signature feature is enabled system-wide but is not available for a specific user to use (e.g., if using Entra ID authentication but not using Two-Factor Authentication with the E-signature 2FA PIN option enabled), the user rights option

"Locking/Unlocking with E-signature authority" would mistakenly still appear for that specific user. (Ticket #227220)

- Bug fix: The order of the alerts as displayed in the "Re-evaluate Alerts" dialog mistakenly does not match the order of the alerts on the Alerts & Notifications page. (Ticket #227234)

- Bug fix: Users with API Export privileges could successfully call the API method "Export DAGs" without having Data Access Groups privileges in the project.

- Bug fix: Users with API Export privileges could successfully call the API method "Export Repeating Instruments and Events" without having Project Design/Setup privileges in the project.

- Bug fix: Users with API Export privileges could successfully call the API method "Export User-DAG Assignments" without having Data Access Groups privileges in the project. Data Access Groups privileges should always be required when creating/renaming/deleting DAGs and when importing/exporting user-DAG assignments.

- Bug fix: Users with API Export privileges could successfully call the API methods "Export Users", "Export User Roles", and "Export User-Role Assignments" without having User Rights privileges in the project.

- Bug fix: Users with API Import/Update privileges could successfully call the API method "Import Project Settings" without having Project Design/Setup privileges in the project.

- Bug fix: Users with API Import/Update privileges could successfully call the API method "Import Repeating Instruments and Events" without having Project Design/Setup privileges in the project. It was instead checking for User Rights privileges instead of Project Design/Setup privileges.

- Bug fix: Users with API Import/Update privileges could successfully call the API methods "Import DAGs" and "Delete DAGs" without having Data Access Groups privileges in the project.

- Bug fix: When a survey participant submits the first page of a survey and gets the "Some fields are required" prompt because some required fields were left empty, the "start time" of the response would mistakenly not get stored in the backend database, thus preventing REDCap from displaying the start time or duration of the survey at any time afterward, including via Smart Variables (e.g., [survey-time-started], [survey-duration]). Note: This only occurs when required fields are left empty on the first page of the survey, not on subsequent pages. While this fix will prevent the issue from occurring in the future, it will unfortunately not be able to retroactively fix the issue for already-affected responses that are missing their start time and duration values. (Ticket #226240)
- Bug fix: When using CDP, encounter diagnosis mappings and potentially other kinds of conditions in CDP projects were not being applied correctly, causing data not to be imported correctly from the EHR. (Ticket #227307)
- Bug fix: When using Google Cloud Storage for file storage in the system, uploading/downloading a file via Send-It for a File Upload field might mistakenly not work successfully. Additionally, file downloads might also fail when using GCS when downloading files attached to data queries in the Data Resolution Workflow dialog. (Ticket #226875)
- Bug fix: When using Multi-Language Management and adding a system language to a project where the language set on the Control Center's General Configuration page differs from the language set in a project (via Edit Project Settings page), the "The original values of some translated items have changed" message would mistakenly be shown. (Ticket #227077)
- Bug fix: When using Multi-Language Management, some MLM AJAX calls might mistakenly not work when using Shibboleth authentication. (Ticket #225282)
- Bug fix: When using MyCap and viewing the Online Designer, the "Enable" MyCap buttons for PROMIS battery instruments are now disabled since these are not yet supported in the MyCap mobile app.

- Bug fix: When using the randomization feature, while a radio strata field exists on the same instrument as the randomization field, after the record is randomized on the data entry form, the strata field's "reset" link (for resetting its value) would mistakenly still appear on the page until the page is refreshed or returned to later. The "reset" link should be immediately hidden after randomization has occurred. (Ticket #226998)

Version 14.3.0(released on 2024-03-21)

- New action tags: @MC-PARTICIPANT-JOINDATE-UTC and @MC-PARTICIPANT-TIMEZONE - These action tags will capture the MyCap participant's timezone and also the install date/time (in UTC time) of the MyCap participant whenever the participant joins a project via the MyCap mobile app. NOTE: This is used only for the MyCap mobile app. The fields' values are not generated when viewing the data entry form but only when the MyCap app is making a call to REDCap when the participant joins the project. Additionally, while these action tags can be added to a new field in already-existing MyCap projects, a field with this action tag will be auto-added to any projects where MyCap is enabled in the project after the fact and for any new projects created using the MyCap project template.
- New feature: Custom Query Folders - For improved organization, Custom Queries on the Database Query Tool page can now be organized into folders. Additionally, custom queries can be exported and imported using a CSV file.
- Improvement: API examples in C Sharp (C#) code were added to the API Playground.
- Improvement: In the Online Designer, the variable name for each field on the page is clickable, and when clicked, will copy the variable name to the user's clipboard.
- Improvement: In the Online Designer, when a user attempts to click into the variable name field in the Edit Field popup while the project is in production, the dialog that notes that the

variable name is not editable when in production will now also display the variable name as clickable in the dialog's text, and when clicked, will copy the variable name to the user's clipboard.

- Improvement: In the Online Designer, when a user clicks on the green button "Field is embedded elsewhere on this page" on an embedded field in the table, the page will scroll up to where the field is embedded and flash a red border around the container field. This will make it easier for users to find where a field is embedded.

- Improvement: When viewing a user on the Browse Users page in the Control Center, it now lists a new row "Number of users of which user is a sponsor" in the table. It will list how many sponsees the user has and also a link to open a dialog that will list the username and first/last name of all their sponsees. (Ticket #225819)

- Bug fix: If a project has a repeating Automated Survey Invitation, and then later the survey instrument is set to be no longer repeating (via the Project Setup page settings), the ASI would continue to function as if the survey was still a repeating instrument.

- Bug fix: In specific situations when downloading an instrument PDF in a longitudinal project, the process would mistakenly crash when using PHP 8. (Ticket #226047)

- Bug fix: Multi-language Management mistakenly failed to translate a number of survey exit pages (survey offline, response limit reached), and the language selector would be inaccessible. (Ticket #226237)

- Bug fix: The "characters/words remaining" message mistakenly was not translated on data entry and survey pages when using Multi-language Management. (Ticket #226676)

- Bug fix: When a confirmation email is defined for a survey on the Survey Settings page, and then later the user selects "No" to disable the confirmation email on that page, it would mistakenly not disable the confirmation email setting after clicking the Save Changes button.

Note: This would only be noticeable if the user returned to the page afterward. (Ticket #226697)

- Bug fix: When a regular user (non-admin) is uploading a CSV data file via the Background Data Import, the upload process might mistakenly fail due to a PHP error if the user is not assigned to a Data Access Group. (Ticket #226639)

- Bug fix: When an inline image is used in the body of an alert, the image might mistakenly not be displayed (i.e., a broken image icon would appear) when a user views an already-sent alert message in the Notification Log. (Ticket #226089)

- Bug fix: When taking a survey using a mobile device, in certain situations the Submit button might be partially obscured by the browser window and thus might not be clickable. (Ticket #226895)

- Bug fix: When the datediff() function is used in a calculated field, in which it contains "today" or "now" as one of the two parameters and the other parameter is a DMY or MDY formatted date/datetime field from another event and also exists on a repeating event or repeating instrument, a calculation error message might appear on the survey page or data entry form, thus preventing the page from working correctly. (Ticket #226037)

- Bug fix: When using CDIS, a query in the code was structured incorrectly so that it might mistakenly not return recently modified records in certain use cases, thus affecting CDIS' ability to import data from the EHR effectively.

- Bug fix: When using CDIS, some mapping for Adverse Events were not being pulled, such as causality.

- Bug fix: When using CDP or DDP Custom, the "database" icon would mistakenly not be displayed next to a mapped field on the data entry form for right-aligned Notes fields. (Ticket #226554)

- Bug fix: When using CDP or DDP Custom, the Record Status Dashboard page might mistakenly attempt to automatically pull data from the EHR for records on the page when viewing that page as an administrator that is not a user in the project. Instead, it will now only do this for project users.

- Bug fix: When using the Data Resolution Workflow while a project is in Analysis/Cleanup status with data as Read-only/Locked, users might still be able to submit a data entry form after navigating to the form in a specific way from the Resolve Issues page. Users should not be able to submit a data entry form while in Analysis/Cleanup status with data as Read-only/Locked. (Ticket #226735)

- Bug fix: When using the Stats & Charts page in a longitudinal project, in which some data had been collected on specific instruments and then later those instruments were undesignated for certain events, thus orphaning some of the data, the charts displayed on the page would mistakenly include the orphaned data for the undesignated instruments when they should be excluding that data. (Ticket #30382)

- Bug fix: When utilizing the project-by-project Unicode Transformation process, which is done using a cron job via Step 2 on the Unicode Transformation page, the data in the Data Resolution Workflow related table might mistakenly not get transformed (i.e., the comments for data queries in DRW).

Version 14.2.2(released on 2024-03-07)

- Improvement: The Custom Event Label, if being used in a longitudinal project, will now display at the top of the data entry form in the yellow event bar. In previous versions, it only appeared above each event column on the Record Home Page. Now it appears in both places.

- Improvement: Users may now use "now" or "today" (wrapped in quotes) instead of a field variable in the special functions day(), month(), and year() in order to capture a specific date component of today's date.

- Change: The Configuration Check page will no longer display a warning if any REDCap database tables have "compressed" row_format. REDCap now allows both "compressed" and "dynamic" as the row_format. (Ticket #224878)

- Bug fix: A fatal error might occur when calling REDCap::saveData() when providing "array" data in an incorrect format to the method while running PHP 8. (Ticket #225896)

- Bug fix: If a participant attempts to load a survey using a non-public survey link after the participant's record has been deleted in the project, they would be mistakenly redirected to the REDCap login page, which is confusing. Instead, an appropriate error message is now displayed to let them know the survey is no longer active or that they are no longer a participant. (Ticket #225427)

- Bug fix: If matrix field labels contain tags, the downloaded PDF of the instrument might mistakenly display the field labels overlapping each other.

- Bug fix: It is possible to perform data imports in which the record name contains a line break or carriage return character. Those characters should not be allowed in record names. (Ticket #224506)

- Bug fix: Modifying the value of a Notes field that has the @RICHTEXT action tag would mistakenly not cause the "Save your changes" prompt to be displayed if a user attempts to leave the page afterward. (Ticket #225367)

- Bug fix: The API Playground's example R code for the API Export File method was not correct and has been fixed. (Ticket #101454b)

- Bug fix: The API method "Export a File from the File Repository" would mistakenly output an incorrect MIME type for a file being exported. (Ticket #225517)

- Bug fix: The query cache efficiency check on the Configuration Check page might mistakenly display a false positive saying that the MySQL query cache is not efficient when actually it is. (Ticket #225731)

- Bug fix: The special function concat_ws() would mistakenly include fields with blank values in its output. It is expected that blank values should not be included. For example, if we have @CALCTEXT(" and ", [dob1], [dob2], [dob3), it would mistakenly output "2024-03-01 and and 2024-03-01" when field "dob2" is empty/blank, whereas it should instead output "2024-03-01 and 2024-03-01".

- Bug fix: When CDIS is enabled, specifically Clinical Data Mart, with one or more EHRs defined on the CDIS page in the Control Center, the My Projects page might mistakenly crash in certain situations when using PHP 8. (Ticket #225890)

- Bug fix: When a project's first instrument is a repeating instrument, and a user is performing a data import of new (not existing) repeating instances for another repeating instrument in the project, new empty instances would mistakenly get created for the first instrument when new instances should only get added for the desired repeating instrument. (Ticket #224932)

- Bug fix: When calling the "Import Users" API method and providing the data payload in CSV format, the "forms_export" privileges provided in the CSV might mistakenly not get parsed correctly, which might cause the API script to return an error, specifically when using PHP 8, or it would mistakenly set the user's data export rights to "No Access" across the board for all instruments.

- Bug fix: When creating an alert in a longitudinal project, the "Email To" option would display an event-ambiguous email field (i.e., "Any Event") that could be chosen. However, in many situations, this might cause the alert not to be sent (or it is attempted to be sent with a blank sender address). To prevent this issue, the "Any Event" field options are now no longer displayed as choices for the "Email To" field for alerts. (Ticket #224839)

- Bug fix: When exporting data to R, any backslashes in the R syntax file would mistakenly not get escaped. Now all backslashes are replaced with a double backslash in the resulting R code. (Ticket #225046)

- Bug fix: When using Double Data Entry as DDE person 1 or 2, records that are locked at the record level would not appear to be locked and might mistakenly allow a user to modify a locked record. (Ticket #225431)

- Bug fix: When using MLM, importing UI translations would mistakenly not be possible in projects with subscribed languages, even when UI overrides are explicitly allowed.

- Bug fix: When using a mobile device and attempting to open Messenger, the Messenger panel might mistakenly be obscured and not viewable in certain contexts.

- Bug fix: When using the Clinical Data Pull in CDIS, specifically when launching the CDP window in an EHR context, an undefined JavaScript function might produce a JavaScript error, thus causing certain things not to function correctly on the page.

- Bug fix: When using the Clinical Data Pull in CDIS, the "address-district" demographics field was mistakenly missing, and thus EHR data could not be pulled for it.

- Bug fix: When viewing scheduled alerts on the Notification Log page for alerts that are recurring, the scheduled send time might mistakenly appear to be incorrect in the Notification Log if the alerts are set to recur every X minutes/hours/days, in which X is a number with a decimal (i.e., not an integer). Note: This does not appear to prevent the alert from being sent at the appropriate time, but this is simply a display issue in the Notification Log. (Ticket #225860)

- Bug fix: When viewing the Stats & Charts page in a longitudinal project, the page might mistakenly crash in very specific scenarios when running PHP 8. (Ticket #225493)

- Bugfix: When MLM is active, matrix headers mistakenly were shown over each line of a matrix field when output as an instrument PDF. (Ticket #225203)

Version 14.2.1(released on 2024-02-29)

- Major security fix: A Stored Cross-site Scripting (XSS) vulnerability was discovered in the File Repository in which a malicious user could potentially exploit it by inserting HTML tags and/or JavaScript in a very specific way inside the folder name of a folder created in the File Repository. The user must be logged in to REDCap and also must have File Repository privileges in the project in order to exploit this. Bug emerged in REDCap 13.1.0.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into a field's data value when viewed on the Data Comparison Tool page. The user must be authenticated into REDCap in order to exploit this in a project. Bug exists in all REDCap versions for the past 10 years.

- Major security fix: A Stored XSS (Cross-site Scripting) vulnerability was discovered in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into specific translated labels when using Multi-Language Management. The user must be authenticated into REDCap in order to exploit this in a project. Bug exists in all REDCap versions beginning with v12.0.0.

- Bug fix/change: The "Azure AD" authentication is now referred to as "Microsoft Entra ID (formerly Azure AD)" in the REDCap user interface due to the fact that Microsoft renamed the product to "Microsoft Entra ID" at the end of 2023.

- Bug fix: A fatal PHP error might occur for PHP 8 when viewing the Record Home Page or Record Status Dashboard for a record on an arm that has no events. (Ticket #225089)

- Bug fix: If a user assigned to a Data Access Group is importing records via the Background Data Import, those records would mistakenly not get assigned to the user's DAG. In addition,

if record auto-numbering has been selected for the import, it would also not prepend the record names with the DAG ID number and a dash. (Ticket #224833)

- Bug fix: If using certain versions of MariaDB, the "YOUR REDCAP DATABASE STRUCTURE IS INCORRECT!" error message might display as a false positive in the Control Center, even when nothing is wrong with the database table structure.

- Bug fix: The Copy Project page would mistakenly have the wrong label for the "Copy Project Dashboards" checkbox. Bug emerged in the previous version.

- Bug fix: When Double Data Entry is enabled, and the current user is either DDE person #1 or #2, in which Form Display Logic has been defined in the project, the Form Display Logic might mistakenly not work correctly when viewing the Record Home Page. (Ticket #225125)

- Bug fix: When entering text for an alert message when adding/editing an alert on the Alerts & Notifications page, in which the field list menu would appear after entering the "[" character, clicking a field in the field list would mistakenly not inject that variable name into the alert message. (Ticket #224895)

- Bug fix: When using "OpenID Connect & Table-based" authentication, clicking the "Logout" link in REDCap might mistakenly result in a logout error in the Identity Provide/SSO service. Bug emerged in REDCap 13.10.4. (Ticket #224757)

- Bug fix: When using the Data Resolution Workflow, a fatal PHP error for PHP 8 in certain situations when data is being saved in certain contexts, such as data imports, when some data values have been "Verified". (Ticket #225198)

- Bug fix: When using the repeatable settings in the External Modules configuration dialog, removing a single repeating setting instance would mistakenly remove all repeating instances in the dialog. Bug emerged in REDCap 13.11.0. (Ticket #225171)

Version 14.2.0(released on 2024-02-22)

- Medium security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered on the Data Quality page in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into parameters in certain AJAX requests.

- New feature: Account Expiration Email Templates - At the bottom of the User Settings page in the Control Center, administrators may optionally customize the email text of the account expiration emails that are sent to users prior to the users' impending expiration. Two text editors exist on the page, in which admins may define text for users with sponsors and also for users without sponsors. If no custom text is provided, stock text will be utilized in the outgoing emails to users. (Ticket #58767)

- New feature: Project Dashboard Folders - Project Dashboards in a project can now be organized into folders. If a user has Project Setup & Design privileges, they will see an "Organize" link on the left-hand project menu above the Project Dashboards panel. They will be able to create folders and then assign their Project Dashboards to a folder, after which the Project Dashboards will be displayed in collapsible groups on the left-hand menu. (Ticket #137183)

- Improvement: If using CDIS, new data fields "Legal Sex" and "Sex for Clinical Use" can now be mapped for Clinical Data Pull projects and also will be included in Clinical Data Mart projects. Note: Currently, only Epic is providing data for these fields, but other EHR systems will likely add them too in the near future.

- Improvement: New "Test Run" option when re-evaluating Alerts and Automated Survey Invitations - When performing the "Re-evaluate" feature for Alerts and ASIs, a new toggle that says "Enable Test Run?" can be clicked in the dialog, which will perform a test run (dry run) to simulate what would have happened (e.g., schedule or send alerts/invitations) but without actually doing anything. This will allow users to feel more confident if they actually need to perform a real re-evaluation of Alerts or ASIs so that they know beforehand how

many records will be affected during the re-evaluation. In addition, users may download a CSV file of all affected record names afterward, whether using the test run option or not.

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Improvement: The Project Home Page now contains an icon in the Current Users table to allow users to download the current user list as a CSV file.

- Bug fix: If the @SETVALUE action tag exists on a field on an e-Consent survey, it would mistakenly allow the field's value to be overridden even when the e-Consent setting "Allow e-Consent responses to be edited by users" is not checked. (Ticket #225008)

- Bug fix: If using CDIS, the Clinical Data Pull mapping tool might mistakenly throw a JavaScript error. Additionally, Descriptive fields were mistakenly being excluded from the CDP mapping tool.

- Bug fix: The EHR launch process in CDIS might mistakenly fail in specific situations where Azure AD is the authentication method in REDCap.

- Bug fix: The Rapid Retrieval caching system might mistakenly fail with a fatal PHP error in some specific instances. (Ticket #224840)

- Bug fix: The developer method REDCap::getUserRights() would mistakenly not return instrument-level Data Export Rights information. (Ticket #224887)

Version 14.1.6(released on 2024-02-15)

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Improvement: The "Help & FAQ" page has been updated with new content (thanks to the FAQ Committee).

- Change/improvement: All logged events concerning Alerts & Notifications will now additionally display the alert's Unique Alert ID in order to make it easier to discern alerts from each other if alerts are reordered or moved after being created (i.e., if their alert number changes over time). (Ticket #222857)

- Change: The "Email Alerts" converter that migrates alerts from the Email Alerts external module to alerts in "Alerts & Notifications" has been officially removed. This feature was technically removed four years ago, but there still existed an Easter Egg in the redcap_config database table that would allow it to be used during emergency situations.

- Several bug fixes for the External Module Framework.

- Bug fix: If any text used in an outgoing SMS text message contains an HTML hyperlink, in which the link's text is virtually the same as the link's URL, it would mistakenly display the URL in parentheses after the link text in the resulting SMS message. It should only do this when the link text is different from the URL. (Ticket #109648)

- Bug fix: If the Custom Event Label is used in a longitudinal project and contains any HTML tags, all the tags would mistakenly get stripped out when exporting the project's Project XML file. (Ticket #224571)

- Bug fix: In places that display a drop-down list of records for the "Test logic with a record" feature, most notably in the branching logic dialog, Survey Queue setup dialog, and ASI setup dialog, the dialog might mistakenly never load if the project contains many thousands of records. For now on, it will display a normal drop-down list if the project contains 1000 records or fewer, and if the project contains more than 1000 records, it will instead automatically revert to displaying an auto-suggest text box to allow the user to manually enter the record name (rather than attempting to display an extremely long drop-down). (Ticket #224531)

- Bug fix: In some cases when inline PDFs are attached to Descriptive fields, and a user downloads the PDF of the instrument, if the iMagick PHP extension is installed on the web server, there would mistakenly be a blank page following the inline PDFs in the resulting REDCap-generated PDF of the instrument. (Ticket #222014)

- Bug fix: When an Automated Survey Invitation with conditional logic is being evaluated when a record's data is being saved, in which the conditional logic references a field in a repeating instrument or repeating event where the field does not have an X-instance Smart Variable appended or an instance number appended to itself, the logic might not get evaluated as expected.

- Bug fix: When the "Auto-suspend users after period of inactivity" setting is enabled, users who recently had their account created but had not logged in yet would mistakenly get auto-suspended. Bug emerged in the previous version. (Ticket #224266)

- Bug fix: When using the datediff() function in which the Daylight Saving Time barrier is crossed when calculating the result of two datetime values, in specific cases the result might mistakenly be one hour off if using units of "h", "m", or "s" for the function. (Ticket #223682)

Version 14.1.5(released on 2024-02-08)

- Improvement: Administrators are now able to view survey pages even when the system or a project is in "offline" status. Note: The admin must have logged into REDCap (i.e., they have a session cookie) before the system/project was taken offline in order to access a survey page. (Ticket #223524)

- Improvement: Enhanced settings for importing email addresses from EHRs via Clinical Data Interoperability Services (CDIS) - Previous versions of REDCap had a CDIS feature to allow or disallow projects from importing the email addresses of patients from the EHR, in which it

was either completely disallowed or an admin could enable the feature on an individual project via the Edit Project Settings page. The new features provide more options so that it can be 1) disabled for all projects, 2) enabled for all projects, or 3) allow individual projects to decide (via the admin-only setting on the Edit Project Settings page). (Ticket #223068)

- Improvement: When using CDIS in a project, a new status indicator for FHIR access tokens will appear underneath each user in the Current Users table on the Project Home page. This feature helps team members and admins quickly see who needs to update their access token, essential for CDIS background fetch processes.

- Various updates to the External Module Framework, including adding the "redcap_module_api_before" hook and miscellaneous security scan improvements.

- Bug fix: In some rare cases, the "collation_connection" setting for the REDCap database connection might mistakenly be taking effect, which could thus lead to possible encoding issues when pulling information from or storing information in the REDCap database.

- Bug fix: It might be possible for users or participants to manipulate an HTTP request in a specially-crafted way in order to upload files of any file type into a Signature field on a data entry form or survey. Note: This does not pose a security issue of any kind, and if certain file extensions are defined in the "Restricted file types for uploaded files" list in the Control Center, then those file types will be blocked immediately and not saved in the system.

- Bug fix: On certain pages/dialogs, the calendar datepicker popup might mistakenly fail to be displayed when expected (e.g., when editing an alert). Bug was supposedly fixed in the previous version but still persists in some places throughout the application. (Ticket #223627)

- Bug fix: The simultaneous user prevention check on data entry forms would mistakenly prevent multiple users from accessing and editing different repeating instances of the same record-event-instrument in a project.

- Bug fix: When importing Form Display Logic via a CSV file, the checkboxes for the FDL's optional settings would mistakenly all become unchecked after the import. (Ticket #223666)

- Bug fix: When the "Auto-suspend users after period of inactivity" setting is enabled, users who have not been added to any projects might mistakenly not get auto-suspended. (Ticket #223659)

- Bug fix: When the Rapid Retrieval caching feature is using file-based storage and is utilizing the alternate storage location (instead of using REDCap temp for storage), it might store some of the RR files in the REDCap temp directory by mistake. (Ticket #223738)

- Bug fix: When uploading a CSV file to add or rename Data Access Groups on the DAG page in a project, in which the user provides a unique group name in the CSV file for a DAG that does not yet exist, the error message provided would be confusing as to what the problem is. In this situation, a more detailed error message is provided to inform the user that the unique group name is only used for renaming DAGs and should be left blank when creating new DAGs. (Ticket #223526)

- Bug fix: When using Google Cloud Storage for file storage in the system, uploading a file on the main Send-It page might mistakenly not work successfully. (Ticket #221098b)

- Bug fix: When utilizing the project-by-project Unicode Transformation process, which is done using a cron job via Step 2 on the Unicode Transformation page, if processing individual projects that do not have any surveys enabled, it would mistakenly execute several unnecessary, long-running SQL queries on each project lacking surveys, which would make the overall process take much longer to fully complete than it should.

Version 14.1.4(released on 2024-01-30)

- Major security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered in the Database Query Tool in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into saved queries on the page. The user must be an admin and must be authenticated into REDCap in order to exploit this. Bug emerged in REDCap 12.3.0.

- Major security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered on the "Importing instrument from the REDCap Shared Library" page in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into input elements on the page. The user must be authenticated into REDCap in order to exploit this. Bug exists in all REDCap versions for the past 10 years.

- Major security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered on the Alerts & Notifications page in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into parameters in certain AJAX requests. The user must be authenticated into REDCap in order to exploit this. Bug emerged in REDCap 9.0.0.

- Major security fix: A Reflected XSS (Cross-site Scripting) vulnerability was discovered on the confirmation page displayed for users who have put in specific requests to the REDCap administrator (e.g., requested a project be moved to production) in which a malicious user could potentially exploit it by inserting custom JavaScript in a specially crafted way into the URL. The user must be authenticated into REDCap in order to exploit this. Bug exists in all REDCap versions for the past 10 years.

- Medium security fix: A Broken Access Control vulnerability was discovered in which a logged-in user who is not a REDCap administrator could create Custom Application Links and have those open on the left-hand menu for any and all projects in the system. Only admins should

be able to create, modify, and delete Custom Application Links in the Control Center. This could be used to trick users into navigating to potentially malicious websites.

- Medium security fix: Lower-level REDCap administrators (e.g., with "Manage user accounts" rights) could potentially escalate their own admin privileges by utilizing information from certain tables in the database via the Database Query Tool page. Going forward, only administrators with 'Admin Rights' privileges, 'Modify system configuration pages' privileges, or 'Access to all projects and data with maximum privileges' privileges are allowed to access the Database Query Tool.

- Medium security fix: There is a possibility in very specific situations that a malicious user might be able to reactivate another user's session and take it over after the other user has logged out of REDCap. This would require obtaining the other user's session ID.

- Minor security fix: Cross-site Request Forgery (CSRF) protection was mistakenly not applied to the user action of deleting arms on the Define My Events page.

- Minor security fix: If a logged-in user has specific knowledge of the REDCap system, they might be able to manipulate the parameters of a specific AJAX endpoint in order to send custom crafted emails impersonating any email sender (i.e., they can set the email's From address to anything they wish).

- Major bug fix: On certain pages/dialogs, the calendar datepicker popup might mistakenly fail to be displayed when expected (e.g., when composing survey invitations). Bug emerged in the previous version. (Ticket #223277)

- Bug fix: A fatal error would occur when using Azure AD authentication. Bug emerged in REDCap 14.1.2. (Ticket #223173)

- Bug fix: For Step 2 when editing an alert and setting "Send it how many times?" to "Multiple times on a recurring basis", the number interval of the recurrence could mistakenly only be 4 characters long at the maximum. (Ticket #223020)

- Bug fix: If the first instrument in a project is taken as a public survey, it can end up with two different (but equally valid) return codes, assuming the survey has "Save & Return Later" enabled. However, it could be confusing for users to see two different return codes and think something is wrong. For consistency, the return code on the data entry form will now match the return code displayed to the participant on the survey page. (Ticket #208079)

- Bug fix: In some situations, it might be possible for a user or admin to duplicate the process of moving a project to production status, which would inadvertently cause the project to end up in Analysis/Cleanup status instead. (Ticket #222935)

- Bug fix: In very specific situations when using branching logic on a multi-page survey that is a repeating instrument/survey, some survey pages might get mistakenly skipped if the repeating instance number is greater than "1" when all fields on the page have branching logic that references field values on the current repeating instance. (Ticket #223126)

- Bug fix: Since Microsoft will soon be deprecating their Azure Storage PHP client libraries that are currently used by REDCap, the Azure Storage library has now been replaced in REDCap with new custom-built methods for making calls directly to the Azure Blob Storage REST API. (Ticket #216356)

- Bug fix: The Rapid Retrieval caching feature might mistakenly cause some API calls to hang and eventually time out. (Ticket #223083)

- Bug fix: When a REDCap administrator has limited data export privileges in a project and then calls the Export Report API method, REDCap would mistakenly remove many of the fields in the resulting data set, which should not happen to administrators. (Ticket #223259)

- Bug fix: When using Multi-Language Management, certain types of fields (yesno, truefalse, matrix field choices) would fail to be properly piped when the fields do not exist on the same form. (Ticket #222446)

- Bug fix: When using the @if action tag on a survey question, in which the participant is returning to the survey via their "Save & Return Later" return code, the @if logic might mistakenly not get evaluated correctly on the page to which they return, thus possibly utilizing the wrong action tags for the field. Note: This does not occur for subsequent pages in the survey after returning to the survey but only to the initial page loaded upon their return. (Ticket #223291)

Version 14.1.3(released on 2024-01-25)

- Various updates and fixes for the External Modules Framework, including 1) Fixed a module setting race condition when using a "Read Replica" database server, and 2) Displayed logged parameters on the View Logs page for External Modules.
- Bug fix: If a file in the Recycle Bin in the File Repository is permanently deleted by a REDCap admin, the file would be marked as having been permanently deleted but would mistakenly still exist in the file storage system. (Ticket #222787)
- Bug fix: If an administrator is not a user in a project but clicks the "Create API token now" button on the project's API page, the token would not be created (as expected) but it would mistakenly log the event "Create API token for self" as if it was created. (Ticket #222977)
- Bug fix: The simultaneous user prevention check on data entry forms would mistakenly prevent multiple users from accessing and editing different repeating instances of the same record-event-instrument in a project.
- Bug fix: When Rapid Retrieval is disabled, REDCap might still be creating *.rr cache files in the temp folder. (Ticket #223076)

- Bug fix: When downloading an Instrument Zip file or various CSV files, the process might crash due to a fatal PHP error if the user has Space or Tab as their preferred "Delimiter for CSV file downloads" (as defined on their Profile page). (Ticket #222524)

- Bug fix: When the calendar datepicker popup is displayed near the rich text editor, in some situations part of the calendar might mistakenly get covered up by the editor's toolbar. (Ticket #223011)

- Bug fix: When upgrading from a version prior to REDCap 14.0.1, an SQL error might occur during the REDCap upgrade with regard to an "alter table" statement for the database table "redcap_outgoing_email_sms_log".

- Bug fix: When using CDIS, a project's Edit Project Settings page might be missing a Save button if the REDCap server lacks configurations for at least one FHIR system. (Ticket #222919)

- Bug fix: When using CDIS, an issue might occur if REDCap is using Azure AD OAuth2 & Table-based authentication method, particularly during an EHR launch for Clinical Data Pull.

- Bug fix: When using Clinical Data Pull for CDIS, the CDP cron job might mistakenly miss some records when fetching EHR data in the background.

- Bug fix: When using Multi-Language Management, floating matrix headers were not aligned properly on surveys for right-to-left languages. (Ticket #222689)

- Bug fix: When using Multi-Language Management, the Forms/Surveys tab on the MLM setup page might fail to load due to a JavaScript error.

- Bug fix: When using multiple EHR systems with Clinical Data Pull for CDIS, the incorrect FHIR base URL was being used for data retrieval during the background fetch process of CDP projects. This error not only hindered the data fetch process when fetching EHR data, but it also led to the internal FHIR token manager inadvertently deleting valid access tokens for users.

- Bug fix: When using the text "month", "day", or "year" followed by an opening parenthesis inside quotes in a @CALCTEXT equation, the calculation would not get parsed correctly, thus resulting in a calculation error on the survey page or data entry form. (Ticket #222973)
- Bug fix: When viewing the "Stats & Charts" page for any report that has one or more Live Filters selected on the page, and then the user selects an instrument and/or record in the Display Options box near the top of the page, all Live Filter selections would mistakenly get reset back to a blank value. (Ticket #222699)

Version 14.1.2(released on 2024-01-18)

- Major bug fix: When a user views a report and modifies the "report_id" parameter in the URL while on the report's "Stats & Charts" page or when editing the report, in which the report_id is changed to the report_id of a report in another project to which the user does not have access, the user would mistakenly be able to view the report name and the number of results returned from that report from the other project. Note: No identifying data or record names from the other project are able to be accessed using these methods; only the report name and the total count of results returned from the report can be extracted.
- Change: The "Copy Project" page now contains more informational text when copying a project containing surveys. The new text explains that when copying all records, the survey completion time for any survey responses will not be copied with the normal project data because the completion times are considered to be equivalent to project logging, which never gets copied during this process. (Ticket #222256)
- Various changes and fixes for the External Modules Framework, including fixing a bug that was preventing link editing in rich text module settings caused by a conflict between Bootstrap dialogs and TinyMCE.

- Bug fix: If a project is being moved back to Production status from Analysis/Cleanup status, the process of moving it back to Production would mistakenly not clear out the "inactive_time" timestamp in the backend database for the project. This issue has no impact on the application. (Ticket #222175)

- Bug fix: If a user was given "Edit Access" rights to a specific report, but they have been given "Add/Edit/Organize Reports" user privileges for the project, if they append "&addedit=1" to the URL when viewing the report, it might appear that they can edit the report. However, clicking the "Save Report" button on the page would actually do nothing and would forever say "Working". So while they aren't able to bypass any report access privileges, it could be confusing because it appears as though maybe they could. (Ticket #222150)

- Bug fix: When erasing all data in a project or deleting all records when moving a project to production, the process might mistakenly not delete the 'Survey Login Success' and 'Survey Login Failure' logged events in the project if the Survey Login feature is being utilized. (Ticket #222429)

- Bug fix: When erasing all data in a project or deleting all records when moving a project to production, the process might take a disproportionately large amount of time to complete (or it might get stuck) if the project contains a large amount of data points (i.e., several million or more rows). The process now deletes data from the redcap_dataX table in smaller batches rather than attempting to delete all rows with a single query.

- Bug fix: When saving the Survey Login settings in the Online Designer, the confirmation dialog would mistakenly not be displayed due to a JavaScript error.

- Bug fix: When upgrading to REDCap 14.1.1 from any earlier version, an SQL error might occur in some rare cases when performing the REDCap upgrade process due to a foreign key constraint in the redcap_ehr_user_map database table. (Ticket #222084)

- Bug fix: When using Clinical Data Mart in CDIS, the CDM data fetching process might fail when using specific versions of MySQL/MariaDB, specifically MySQL versions prior to 8.0 and MariaDB versions prior to 10.2.1. (Ticket #219308)

- Bug fix: When using Clinical Data Mart in CDIS, there were issues in the list of mappable items within CDM projects, in which the following condition types were not mappable as generic entries: encounter-diagnosis-list, problem-genomics-list, problem-medical-history-list, and problem-reason-for-visit-list.

- Bug fix: When using Clinical Data Pull in CDIS, an out-of-memory error could occur when handling large volumes of data being pulled from the EHR.

- Bug fix: When using Clinical Data Pull in CDIS, some CDP projects with the auto-adjudication feature enabled might display the adjudication count as a negative number. (Ticket #134564)

Version 14.1.2(released on 2024-01-18)

- Bug fix: When using Multi-Language Management, instruments with matrix fields would fail to load due to a JavaScript error. This bug was introduced in the previous version. (Ticket #222211)

- Bug fix: When viewing the Record Status Dashboard when Data Access Groups exist in a project, in certain situations the RSD page might load a bit slowly due to an excessive amount of SQL queries being run. This was fixed in the previous version, but it only covered specific situations. (Ticket #221998b)

Version 14.1.1(released on 2024-01-11)

- Major security fix: An SQL Injection vulnerability was found on a Calendar-related page, some MyCap-related pages, the Define My Events page, the Online Designer, the Record

Home Page, and other places, in which a malicious user could potentially exploit it and execute arbitrary SQL commands on the database by manipulating an HTTP request in a specially-crafted way. In order to exploit these, the user must be logged in as a REDCap user. Bugs exist in all REDCap versions for the past 10 years.

- Major security fix: Several Reflected XSS (Cross-site Scripting) and Stored XSS vulnerabilities were discovered in which a malicious user could potentially exploit them by inserting custom JavaScript in a specially crafted way into specific URLs or POST parameters in several places, including the Data Quality page, Custom Application Links, Report Folders, and other places. The user must be authenticated into REDCap in order to exploit these in a project. Bugs exist in all REDCap versions for the past 10 years.

- Improvement: If a user has a sponsor, their sponsor's username, name, and email will be listed at the top of their Profile page. (Ticket #138684)

- Major bug fix: The Clinical Data Mart in CDIS might mistakenly not work at all and thus might not allow users to pull any data from the EHR. Bug emerged in REDCap 14.1.0 Standard.

- Bug fix: An error might occur during the "refresh token" process in CDIS. If an HTTP error occurred while refreshing the token, it was not correctly caught and handled.

- Bug fix: During the cache file creation process for Rapid Retrieval, concurrent write attempts could lead to PHP errors and potentially high CPU usage in some specific cases. (Ticket #221459)

- Bug fix: If a record contains multiple consecutive spaces in its record name, some things might not display correctly on certain pages when viewing the record, such as the floating table of repeating instances when clicking on the "stack" status icon for a repeating instrument on the Record Home Page or Record Status Dashboard.

- Bug fix: In certain situations when using Clinical Data Pull for CDIS, the process might stop with a fatal PHP error for some PHP version.

- Bug fix: The "Create new API token for user" dialog might mistakenly display the option "External Modules API", which is not a published feature yet. (Ticket #221904)

- Bug fix: The upgrade process might unexpectedly stop due to an SQL error in the upgrade SQL script when upgrading to or higher than REDCap 14.0.1 in some cases.

- Bug fix: Usernames with apostrophes could not be added to a project or assigned to a user role through the user interface on the User Rights page. (Ticket #221933)

- Bug fix: When using Clinical Data Mart in CDIS, the CDM auto-fetch feature was not properly scheduling a fetch process.

- Bug fix: When using Clinical Data Pull in CDIS, conditions or medications were not shown in the CDP adjudication dialog unless a specific status was specified.

- Bug fix: When using Multi-Language Management, in which the highlighting feature for untranslated items is enabled, some items would mistakenly be highlighted on the page that should not be highlighted. (Ticket #221418)

- Bug fix: When using Multi-Language Management, the MLM setup page might not sort the choices of multiple choice fields in the correct order as seen in the Codebook and Online Designer. (Ticket #221888)

- Bug fix: When using the Background Data Import process, in which an error occurs, if a user goes to download the CSV file containing the list of errors for the import batch, the first letter of the error message in a given row might be missing.

- Bug fix: When using the Survey Queue, in which survey participants are added initially via the Participant List, if neither the Designated Email field nor the Participant Identifier is used in the project, and the Survey Response Status is "Anonymous*", the Survey Queue's "Get link to my survey queue" popup would mistakenly display the participant's email address, thus breaking the participant's anonymity in the project. Going forward, it will no longer display the participant's email address in that popup in this situation. (Ticket #221804)

- Bug fix: When viewing the Record Status Dashboard when Data Access Groups exist in a project, in certain situations the RSD page might load a bit slowly due to an excessive amount of SQL queries being run. (Ticket #221998)

- Various CDIS-related bug fixes, especially related to EHR user mapping when using multiple EHR systems

Version 14.1.0(released on 2024-01-04)

- New Multi-EHR functionality for Clinical Data Interoperability Services (CDIS)- Multiple electronic health record systems (EHRs) can now be defined on the CDIS page in the Control Center, whereas in previous versions only one could be defined. This will allow users to pull clinical data from many different EHR systems, if they desire. After a REDCap administrator has defined one or more EHR systems on the CDIS page, any given REDCap project can utilize a specific EHR connection. Note: A project can only be connected to one single EHR. The first EHR connection will serve as the default, and thus whenever CDP or Data Mart is enabled in a project, it will initially point to the default connection, but this can be changed after the fact to point to one of the other EHR connections that are defined in the Control Center. As previously, all users attempting to pull data from any EHR connection will need to have signed in through the EHR (either using the Standalone Launch or CDPs EHR Launch) in order to obtain a FHIR access token for that specific EHR. Thus the user must still have a valid account for each EHR from which they are attempting to pull data.

- Improvement: Performance improvement when using iMagick (i.e., rendering PDF attachments for Descriptive fields as images embedded inside REDCap-generated PDFs) by using a new internal image cache. Whenever a PDF attachment for a Descriptive field is rendered as an image via iMagick, the image of each PDF page will be cached and stored

separately so that the next time the PDF attachment is being rendered inside a PDF, it will use the cached image(s) rather than perform a real-time conversion of the PDF to images every time, which can be time consuming. Note: The image cache of the PDF attachment will be stored and used for up to 30 days, after which it will be automatically deleted from the system.

- Improvement: New Read Only user privilege for the User Rights page- Users and roles can now be given Read Only access to the User Rights page, which will allow users to view the page but not be able to take any actions on the page. Note: If a user is in a Data Access Group while viewing the page, it is still the case that they can only view users from their own DAG on the page.

- Change/improvement: A notice was added on the Database Query Tool page so that when exactly 500 rows are returned from a query that does not contain a "limit" clause, it notes that more rows might exist that are not being displayed on the page. This is because "limit 0,500" is always appended to any query that lacks a "limit" clause. This will reduce confusion for admins who might assume that they are viewing the full results of a query when they might not be.

- Bug fix: If using file-based storage for Rapid Retrieval, in which an alternative storage directory has been defined, in certain cases many of the cached files in the alternative directory would mistakenly not get deleted after the 5-day expiration time.

- Bug fix: The REDCap::evaluateLogic() developer method's documentation mistakenly did not include information about the current_context_instrument parameter, which is required for the correct evaluation of logic that contains certain Smart Variables. This parameter should be provided to the method if the logic is being evaluated within the context of a specific instrument (e.g., while on a survey page or data entry form). This parameter has been added to the method's documentation. (Ticket #220861)

- Bug fix: When enabling Twilio in a project, it is possible in certain cases to enter the same Twilio phone number (if it is a U.S. number) for more than one project. This could be done by entering the phone number in one project with the U.S. country code, and then entering it in another project without the U.S. country code. (Ticket #221468)

- Bug fix: When importing alerts via a CSV file, if the file contains some mangled characters due to incorrect encoding, the file might fail to upload and would mistakenly not produce any error message.

- Bug fix: When using CDIS in certain contexts where data is being pulled for specific research studies, the FHIR ID of a research study might not be found.

- Bug fix: When using CDIS, issues might occur when fetching "conditions" data having a status other than "active". Additionally, new FHIR resources were inadvertently excluded from mapping in CDP projects. This includes the following mappable resources: encounter, coverage, procedure, device, and all conditions (including their status).

- Bug fix: When using the functions day(), month(), or year(), more than once inside a calculation, it might not parse the calc correctly, thus possibly returning incorrect results. (Ticket #221544)it might not parse the calc correctly, thus possibly returning incorrect results. (Ticket #221544)