REDCap LTS Update to Version 10.0.x User Experience Changes and Improvements

Version 10.0.4 (released on 2020-06-23) CHANGES IN THIS VERSION:

- Improvement: In REDCap 10.0.2, a new feature was added to the Online Designer's "Add/Edit Branching Logic" dialog to help users modify branching logic for many fields at once if they had the exact same branching logic. Now this has been improved further so that if users do not want to keep seeing this prompt when editing branching logic, a new checkbox in the dialog that says "Do not show this message again" can be checked, which will prevent the prompt from being displayed in that project for that user during the remainder of their REDCap session.

Version 10.0.3 (released on 2020-06-19) CHANGES IN THIS VERSION:

- Change: To be more inclusive in our community, all references to the terms "blacklist" and "whitelist" have been replaced with "blocklist" and "allowlist", respectively, in the REDCap user interface, the REDCap code, and in all database table names and columns.
- Change: When exporting data to a stats package (R, Stata, SPSS, SAS), if a field contains a long field label, it now truncates the field label in the center of the text (i.e., putting an ellipsis in the middle) to make it more compatible with and easier to read in certain stats packages.
- Change: When copying a project via the Copy Project page, Alerts & Notifications will now be automatically set to "Deactivated" status in the newly created project, similar to Automated Survey Invitations when copying a project. This is to ensure that they do not start getting triggered and start sending if all the project records were copied from the original project.
- Change: In previous versions, date fields that have Y-M-D date format would allow M/D/Y format values (i.e., American format dates with slashes instead of dashes) to be entered, in which it would automatically reformat the value to a Y-M-D format date with dashes. This is a very old behavior from the earliest days of REDCap that was meant to be a convenience for users, who were mostly from the U.S. at that time. However, since that time REDCap has grown internationally, and it is no longer U.S.-centric as it was in the early days. It makes more sense at this time to remove this old behavior so that Y-M-D date formats only accept Y-M-D formatted values. (Ticket #86446)

Version 10.0.2 (released on 2020-06-11) CHANGES IN THIS VERSION:

- Improvement: Integration of Günther Rezniczek's "My Projects Tweaks" External Module - Improvements for the My Projects page
  - Link to Online Designer: Adds links to the Online Designer page of projects in the Fields column.
  - Link to Record Status Dashboard: Adds links to the Record Status Dashboard in the Records column.
  - Collapse All: Adds a Collapse All button next to the Organize button that collapses all project folders.
  - Organize Projects filtering: Adds a filter in the Organize Projects pop-up.
- Improvement: When editing a field's branching logic in the Online Designer's "Add/Edit Branching Logic" dialog, when saving the branching logic for a given field, it will now check if any other fields in the project have identical branching logic and will prompt the user to ask them if

they want to change the branching logic accordingly for all fields having the same branching logic.

- Change: When viewing an Automated Survey Invitation in which the From address belongs to a user that no longer has access to the project, it would display the note "[email no longer belongs to a project user]" next to the email address, but it would not display that note for Administrators. It now displays it to both regular users and Administrators to eliminate any confusion.
- Change: When viewing an alert on the Alerts & Notifications page in which the alert's From address belongs to a user that no longer has access to the project, it now displays the note "[email no longer belongs to a project user]" next to that email address in the drop-down list.

Version 10.0.1 (released on 2020-06-05) CHANGES IN THIS VERSION:

- **Improvement: Survey pages are now considered ADA Section 508 compliant.** The REDCap Development Team at Vanderbilt has been collaborating with the CDC to improve the accessibility of REDCap overall. While the user-facing side of REDCap (i.e., non-survey pages where users must authenticate) is not 508 compliant, it continues to be improved with regard to accessibility over time. But according to the CDC's recommendations and testing of REDCap, survey pages in REDCap do meet the minimum requirement for ADA Section 508 compliance.
- Change: The @READONLY action tags now display the field labels as slightly less faded out (using 60% opacity instead of 50% as in previous versions), and the text of drop-downs, text boxes, and textarea boxes that have a @READONLY action tag now have a darker text to make them more readable despite being disabled on the page. (Ticket #85396)

Version 10.0.0 (released on 2020-05-29) CHANGES IN THIS VERSION:

- **New feature: Field Embedding**
  - Field Embedding is the ultimate way to customize surveys and data collection instruments to make them look exactly how you want. Field Embedding is a Shazam-like feature that allows you to reposition field elements on a survey page or data entry form so that they get embedded in a new location on that same page. Embedding fields gives users greater control over the look and feel of your instrument. Users may place fields in a grid/table for a more compact user-friendly page, or they can position fields close together in a group if they are related.
  - To use Field Embedding, users simply need to place the REDCap variable name of a field inside braces/curly brackets - e.g., {date_of_birth} - and place it in the Field Label, Field Note, Section Header, or Choice Label of any other field on that same instrument. Field embedding will not work across instruments but only on the current instrument/survey being viewed. If on a multi-page survey, then the embedded field must be on the same survey page as its host field.
  - No action tags or custom HTML is required to use Field Embedding. Users can simply use the rich text editor in the Online Designer to design their layout and then place the field variables inside that layout. The layout does not have to be a table/grid (although tables are common for this), and fields can be embedded inside *any* field type (not just Descriptive fields).
  - We wish to thank Andy Martin (Stanford) because his popular Shazam external module served as the conceptual inspiration of the Field Embedding feature.

- Note: When installing or upgrading to v10.0.0, a new project “Field Embedding Example Project” will be automatically added as a project template to allow users and admins to easily see some examples of Field Embedding in action.

- Change: Removed the thick black border seen on input fields that have focus for Chrome 83 and higher, which was by default adding the black border to all input fields on all webpages.
- Change/improvement: Added better error detection to make the data import process more accurate and informational by ensuring that any datetime_seconds values that are missing a “seconds” component will be reformatted to append “:00” and if any datetime values are missing a “minutes” component it will be reformatted to append “:00”, in which it will display a warning to the user on the Data Import Tool page to inform the user that these modifications are happening. Also, if the first two digits of the “year” component are missing for a date or datetime value, it now displays a warning to inform the user that the full year value will be estimated and will note the resulting estimated year value.
- Change: On the Survey Settings page, The Save & Return Later option "Allow respondents to return without needing a return code" now has a note immediately below it to encourage users not to use this survey option if they are collecting identifying information (PHI, PII) on their survey.
- Change: If enabling the Survey Login feature in a project containing repeating instruments or repeating events, it now displays the clarifying message in the Survey Login setup dialog to users so that they are aware: "NOTICE: Fields existing on repeating instruments/events will not work as login fields". (Ticket #85208)

Version 9.10.0 (released on 2020-05-21) CHANGES IN THIS VERSION:

- **New feature: Record-level locking feature**
  - This feature allows users to lock an entire record (as opposed to locking individual instruments) so that none of the record’s data can ever be modified unless someone with record-level locking/unlocking privileges goes and unlocks the record again.
  - The old “lock all forms for all events” feature has been changed into this new record-level locking feature, which is distinguishable from the existing instrument-level locking feature. Now the instrument-level locking can only be used while on a data entry form (using the Locking checkbox at the bottom of the form). Whereas the record-level locking feature is available as an option on the Record Home Page and on the project’s left-hand menu after a record has been selected.
  - While records have always been able to be locked (i.e., made read-only) for individual data collection instruments in a project, you may now easily lock an ENTIRE record so that no data in the record can ever be modified while it is locked.
  - WHAT HAS CHANGED? It is important to note that the old user privilege "Lock all forms" has now been converted into the new record-level locking feature, which works completely independently from instrument-level locking (i.e., the checkbox at the bottom of data entry forms). Instead of that particular user privilege allowing you to lock all forms individually (which was the previous behavior), it will now serve in a slightly different capacity as the record-level locking user privilege to lock an entire record fully.

- HOW TO USE IT: You may lock an entire record via the "choose action for record" drop-down on the Record Home Page or by clicking the "Lock Entire Record" link on the project's left-hand menu when viewing a record. Note: Since the record locking and instrument locking are completely separate features, they both may be used together in a project, if you wish. However, please note that since record locking is a higher-level locking than instrument locking, an entire record may be locked or unlocked while one or more instruments are currently locked, but an instrument cannot be locked or unlocked while the entire record is locked.

- Change: The project ID (PID) of a project is now displayed immediately after the project title at the top of every project page. This will make it easier for users to obtain their project's PID when attempting to identify their project to administrators.
- Change: If a project contains a large number of users and/or Data Access Groups, it now automatically disables the DAG Switcher feature. This is done because if the table becomes very large, it can cause a major slowdown in the user's browser and possibly cause it to crash. So any projects where Users X DAGs > 10K, the DAG Switcher will be disabled and will not be usable. Also, if a project has a count of Users X DAGs between 5K and 10K, it will still display the DAG Switcher, but it will auto-disable the floating headers and search features on the DAG Switcher table in order to prevent browser slowness. (Ticket #84610)
- Change: When exporting data to SAS, the line "OPTIONS nofmterr;" is now added to the SAS script to prevent any formatting issues from throwing fatal errors.

Version 9.9.2 (released on 2020-05-15) CHANGES IN THIS VERSION:

- **Improvement:** New PDF customization to hide the Record ID from the PDF header. In the "PDF Customizations" section of the "Additional Customizations" dialog on the Project Setup page, users may set this option to display or hide the record name in the top header of every PDF page when downloading a PDF with data for a record. This is a project-level setting, so setting it applies to all PDFs generated for records in the project.
- **Improvement/change:** The sending of a survey confirmation email now gets logged on the project Logging page when a confirmation email has been set to send to a survey participant after having completed a survey, in which the logged event will note the record name, the To address, the From address, the email subject, and whether or not the email contained attachments (including the PDF of the participant's survey responses).
- **Changes for long-standing quirks with calc fields and branching logic**
  - Change: In previous versions, calculated fields could only utilize either numeric fields or date/datetime fields in the calculation. Now non-numeric fields may be used, most notably inside IF statements. For example, if ([field1] = “A”, 0, 99).
  - Change: In previous versions, using > or < in branching logic would not always work as expected. For example, [a] > [b] would have to be formatted as [a]*1 > [b]*1 to work correctly 100% of the time, which is not intuitive. This is no longer required, in which [a] > [b] will work as one would expect in branching logic. Note: This does not apply to calc fields, which have never had this problem.
  - Change/improvement: The datediff() function used in branching logic and calc fields no longer requires the date format parameter (“ymd”, “mdy”, “dmy”). This was required for datediff() in calc fields and branching logic but was not required elsewhere, such as in report filters, DQ

rule logic, ASI/Alert conditions, etc. The $returnSignedValue parameter (if provided) can now be provided as the fourth parameter - e.g., datediff([dob], “today”, “y”, true). NOTE: Both of the date/datetime fields used in the datediff function must still be in the same date format (“mdy”, “dmy”, or “ymd”), so that is still a requirement.

- Change/improvement: Added "PARTICIPANT OPTED OUT" as a new valid option that will be logged in the Survey Invitation Log when an SMS fails to be sent via Twilio telephony services because a blacklist rule is violated (as noted by the Twilio service). Documentation regarding how a participant may opt out of receiving SMS messages from Twilio can be found here and here.

Version 9.9.1 (released on 2020-05-08) CHANGES IN THIS VERSION:

- **Improvement:** A new send-time option has been added when setting up Automated Survey Invitations and Alerts & Notifications. When defining when the ASI/Alert should be sent, the option “Send after a lapse of time” has a new setting added so that, if desired, the user may set the time lapse relative to the value of a date or datetime field in the project. In previous versions, the time lapse setting could only be set relative to the time in which the ASI/Alert was triggered. That is still an option, but now users may also opt to send the ASI/Alert a certain amount of time either before or after the date/time of a specific field. This new setting will allow users to have greater control with regard to setting when ASIs/Alerts will be sent without getting too complicated in their setup, such as having to use complex logic (with datediff, etc.).

Version 9.9.0 (released on 2020-04-30) CHANGES IN THIS VERSION:

- **New feature: DAG Switcher**

o Users assigned to Data Access Groups (DAGs) can optionally be assigned to multiple *potential* DAGs, in which they may be given the privilege of switching in and out of specific DAGs on their own whenever they wish.

o When assigned to multiple DAGs, the user will see a blue banner at the top of every project page, which will present them with the option to switch to another DAG. NOTE: Users may not move themselves into another DAG unless someone with rights to this page has explicitly granted them privileges to be in multiple DAGs.

o To assign a user to multiple DAGs, navigate to the Data Access Groups page in a project where you will see the DAG Switcher near the bottom of the page. Then follow the directions provided there. The DAG Switcher feature is completely optional and can be used in any project that has Data Access Groups.

o NOTE: The DAG Switcher feature does not override a user's current DAG assignment, as set on the Data Access Groups page or on the User Rights page.

o This feature is the result of integrating the “DAG Switcher” external module that was built by Luke Stevens. We thank him for his contribution and for agreeing to let us integrate this useful module into REDCap. NOTE: Because the “DAG Switcher” external module is not compatible with this integrated functionality in v9.9.0, when upgrading REDCap to 9.9.0 or higher, if the “DAG Switcher” external module is already installed and enabled on your REDCap system, it will be automatically disabled at the system level during the upgrade process to prevent a conflict.

- **Improvement/change:** Users are now able to utilize dots/periods/full stops in the codings of choices for checkbox fields. In previous versions of REDCap, this was not allowed for checkbox fields. (Ticket #83002)
- **Improvement/change:** By popular demand, users may once again utilize dots/periods/full stops in Missing Data Codes. They are no longer forbidden. They were originally allowed for Missing Data Codes, but then removed in REDCap 8.5.0. Now that checkboxes can have dots/periods in their codings as of v9.9.0, it is no longer an issue for Missing Data Codes to use them too. (Ticket #83002)

Version 9.8.1 (released on 2020-04-03) CHANGES IN THIS VERSION:

- Change: The downloadable Python example code provided in the API Playground has been improved.

Version 9.8.0 (released on 2020-03-26) CHANGES IN THIS VERSION:

- **New feature: Surveys to capture custom information during project status transition** (optional)
  - On the User Settings page in the Control Center, four optional fields have been added to allow you to utilize public surveys to capture custom information from users when projects transition to a new status (i.e., project creation, move to Production status, move to Analysis/Cleanup status, mark as Completed). This allows administrators to create custom surveys to capture all the info they desire from users during these project transitions. The survey will be presented inside an iframe on the page, in which the user must complete the survey before completing the process on the page. You may use any or none of these fields.
  - NOTE: Administrators will not be forced to complete any of the public surveys set below but will be exempt from this process.
- **Project life cycle changes**
  - Change: The "Archived" project status has been removed and converted into a built-in Project Folder named "My Hidden Projects", as now seen at the bottom of each user's My Projects page. If users wish to hide any projects from their My Projects list, they may click the Organize button on that page and place the projects into that new Project Folder. NOTE: Any already-archived projects will be automatically placed there and will have their project status set as "Analysis/Cleanup" to match the projects' general behavior prior to the upgrade.
  - Change: The "Inactive" project status has been renamed to "Analysis/Cleanup" status to help reinforce that cleaning and analyzing the data is the next logical step after data collection in Production status.
  - New feature: Projects that are in "Analysis/Cleanup" status can now optionally have their project data set as "Locked/Read-only" or "Editable" (see the top of the Project Setup or Project Home page). This will give users more control to prevent data collection from happening while in this project status.
  - Change: New records can no longer be created while in "Analysis/Cleanup" status. If users wish to create records, the project must be moved back to Production status.
  - New feature: Mark a project as "Completed": If users are finished with a project and wish to make it completely inaccessible, they may mark the project as Completed. Doing so will take it offline and remove it from everyone's project list, after which it can only be seen again by

clicking the Show Completed Projects link at the bottom of the My Projects page. Once marked as Completed, no one in the project (except for REDCap administrators) can access the project, and only administrators may undo the Completion and return it back to an accessible state for all project users. Marking a project as Completed is typically only done when users are sure that no one needs to access the project anymore, and they want to ensure that the project and its data remain intact for a certain amount of time.

Version 9.7.3 - (released 2/13/2020) IMPROVEMENTS AND OTHER CHANGES:

- **Change:** To wean users off of using Internet Explorer 9 and 10, any users using IE 9 or 10 will see a thin, yellow banner at the top of all project pages, which will inform them that their browser is not fully compatible with REDCap and thus will encourage them to upgrade to IE11 or use another browser. Technically, IE 9 and 10 will be supported till July 2020 in Standard Release, but this warning is mostly preemptive in preparation for that.
- Change: For survey participants using Internet Explorer 6, 7, or 8, rather than failing silently, survey pages now display an error message letting them know that the page is not compatible with IE 6-8 and recommends they upgrade or use another browser.
- Change: When clicking the "View past invitations" or "View past notifications" button on the Survey Invitation Log and Alert Notification Log, respectively, it now defaults to displaying the page with the most recently sent invitations/notifications, whereas previous versions would default to the first page (i.e., the oldest sent). This change should provide a more intuitive experience for users.

Version 9.7.2 - (released 2/6/2020) IMPROVEMENTS AND OTHER CHANGES:

- Change: When viewing reports, it now displays "report execution time" in seconds near the top of the report. This denotes the total server execution time that it took to create the report. Note: This does not account for the rendering time of the report (i.e., via JavaScript), which can sometimes take several seconds or more (if the report is large) for a user's web browser to actually render the report's HTML on the page.

Version 9.7.1 - (released 2/4/2020) IMPROVEMENTS AND OTHER CHANGES:

- Change: In the Online Designer's Edit Field dialog, the textarea boxes (field label, field choices, and action tags) are now slightly bigger and are all resizable.

Version 9.7.0 - (released 1/31/2020) IMPROVEMENTS AND OTHER CHANGES:

- **New feature: REDCap-branded URL Shortener** (https://redcap.link)
  - The “Get short survey link” and “Create custom survey link” buttons on a project’s Public Survey Link page now utilize the REDCap-branded URL Shortener (https://redcap.link) instead of BIT.LY and IS.GD, which are third-party websites utilized by previous versions.
- **Change/improvement:** By popular demand, the "Send test email" link/feature has been re-added to all the following places where emails are composed: Email Users page in the Control Center, Automated Survey Invitations setup dialog, Compose Survey Invitations dialog for Participant List, Compose Survey Invitation dialog at the top right of data entry form, and the Confirmation Email setting on the Survey Settings page.
- Change: In a production project where repeating instruments/events are enabled, if a user opens the Repeating Instrument/Event setup dialog on the Project Setup page, in which one or more checkboxes are checked already in the setup, a warning dialog with red text will be

displayed to inform the user that unchecking any of the checkboxes might cause data to be orphaned and thus will cause any data already collected from repeating instances to disappear indefinitely from the user interface, reports, and exports. This warning will help users to be aware of this possibility that might affect their data and thus might have otherwise caused confusion. (Ticket #66801)

Version 9.6.5 - (released 1/28/2020) IMPROVEMENTS AND OTHER CHANGES:

- **Improvement:** Adaptive and Auto-scoring instruments (i.e., PROMIS assessments) that have been downloaded from the REDCap Shared Library may now have their survey responses deleted via the Delete button at the bottom of the data entry form when viewing the survey response. In previous versions, if an Adaptive and Auto-scoring instrument had been partially completed or the wrong one had been taking accidentally, there was no way to remove the existing response since the whole response was locked afterward. Now the "Delete data for THIS FORM only" button appears at the bottom to allow users to remove the response if they wish to add another to replace it. (Ticket #77086)

Version 9.6.2 - (released 1/20/2020) IMPROVEMENTS AND OTHER CHANGES:

- **Improvement: New options for Alerts & Notifications**
  - A “Trigger Limit” setting was added to Step 1 in the Add/Edit Alert popup that allows users to define where and to what extent within a record that the alert will be triggered. Its options include “only once per record”, “only once per event”, “only once per instrument regardless of the event”, and others that are displayed if the project contains repeating instruments/events. The trigger limit will help users to limit alerts to only be triggered on certain parts of a record and/or so many times within a record to achieve the behavior they desire for their notifications. Note: For non-longitudinal projects that do not have repeating instruments, this option (Step 1C) will not be displayed at all since it would contain only one choice: “only once per record”. (Ticket #70860)
  - The “every time” option of the “Send it how many times?” setting in Step 2 has been expanded to have sub-options to provide more possible scenarios in which an alert will be triggered. In previous versions, the only option was to set an alert to be triggered “every time the form/survey in Step 1B is saved”, but now it contains two new variations: “every time the form/survey in Step 1B is saved with new or modified data” and “every time the form/survey in Step 1B is saved with new or modified data (ignoring calc fields)”.
  - Recurrence maximum - When setting an alert to send multiple times in a recurring fashion in Step 2, a new option has been added to limit the maximum number of recurrences (i.e., the total times the alert will be sent on its repeated schedule). In previous versions, the alert would continue sending indefinitely at its defined interval (typically until conditional logic became no longer true), but now the alert can be set to repeat up to 9999 times at the interval that has been defined.
- **Improvement:** If the Custom Record Label and/or Secondary Unique Field are being used in a project, their values will now be displayed on the Calendar page when viewing the Day or Agenda tab for any calendar event connected to a record in the project.

- **Improvement/change:** On the Alerts & Notifications page, users may now edit a deactivated alert. This is especially useful if a user is setting up part of an alert and wishes to make incremental edits to the alert prior to re-enabling it.
- **Improvement:** A new setting "Utilize the Display Name in all outgoing emails?" was added to the "Configuration for Outgoing Emails" section on the Control Center's "General Configuration" page. This setting allows administrators to disable the email Display Name feature in all outgoing emails from REDCap. This feature might need to be disabled if your institution is having a disproportionate amount of emails not being received due to email servers blocking them, sometimes due to the usage of the display name. This setting is enabled by default when upgrading or installing REDCap. (Ticket #75941)
- Change: In the Add/Edit Alert popup on the Alerts & Notifications page, the Alert Expiration option has been moved upward in the popup so that it is now part of Step 2.

Version 9.6.0 - (released 1/9/2020) NEW FEATURES, BUG FIXES, AND OTHER CHANGES:

- **New feature: SMS and Voice Calls for Alerts & Notifications**
  - If Twilio services have not been disabled at the system level for the REDCap installation, then users may now send a notification as an SMS text message and/or as a one-way voice call for any given alert in a project by setting them up on the Alerts & Notifications page.
  - The Twilio telephony services must first be enabled on the project on the Project Setup page (the same way it has in the past when utilizing Twilio for surveys and survey invitations), and once enabled, using the Twilio configuration dialog users may choose to utilize Twilio in the project for surveys (default), alerts, or both surveys and alerts.
  - Once enabled for alerts, inside the Add/Edit Alert dialog on the Alerts & Notifications page users will see the options to send a notification as an email, SMS message, or voice call. If SMS or voice call is chosen, it will hide all email-specific settings and will reveal the “Phone Number” fields for entering the phone numbers of one or more recipients of the notification, which may include the following: the phone numbers of all project users (from their My Profile account settings), any fields having integer validation or phone validation, and the survey participant’s phone number (if also using Twilio services for surveys).
  - Note: Just as when SMS messages are sent and when voice calls are made via Twilio for surveys, REDCap has a cron job that runs every 2 minutes that will automatically delete all logs on the Twilio website for any SMS messages sent or voice calls made via Alerts & Notifications. This is for privacy reasons to remove any potentially sensitive information (e.g., recipient phone numbers) that might be stored in Twilio’s logs.