

# Alerts & Notifications

## CCTS Biostatistics Core

May 2024

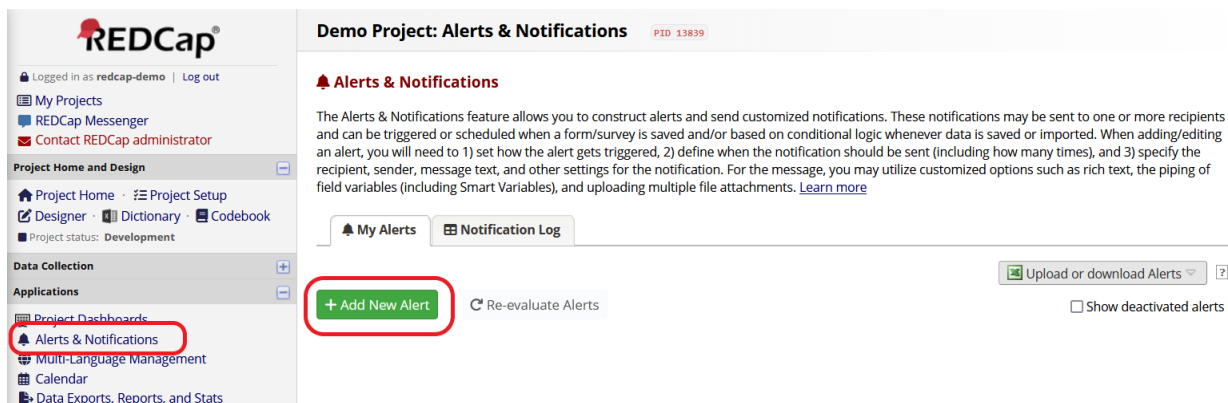
### Introduction

The Alerts & Notifications application allows you to schedule and send customized email messages. The application is similar to [Automated Survey Invitations](#), but it offers more flexibility in scheduling, content, and recipients.

- Alerts can be defined outside the context of inviting someone to take a survey.
- Alerts can be triggered by data entry forms, survey responses, or data imports.
- Messages can be sent to one or more email addresses besides the project- or survey-specific designated email address.
- Alerts can be re-evaluated any time, so you can define alerts based on data that may have already been collected.

### Create a New Alert

Access Alerts & Notifications by clicking the link in the left menu under Applications. Click the green + Add New Alert button.



A popup window will appear. Give your alert a descriptive name. Then complete each step below.

### Create new alert



You may define the settings for your alert in Steps 1-3 below. After clicking the Save button at the bottom, your alert will immediately become active and may be triggered at any time thereafter. If you would like to remove or stop using an alert, it may be deactivated at any time. You may modify an existing alert at any time, even after some notifications have already been sent or scheduled.

Title of this alert:

## Step 1: Triggering the Alert

**A) How will this alert be triggered?** Define what type of condition will trigger the alert.

1. **When a record is saved on a specific form/survey** - This option may apply if you want to send an email when a survey or form response is created or changed. For example, you might want to notify a project coordinator each time an enrollment form is submitted.
2. **If conditional logic is TRUE when a record is saved on a specific form/survey** - This option may apply if you want to send an email when a survey or form response is created or changed, provided some additional condition is met. For example, you might want to notify a clinician about new survey responses, but only for patients associated with her clinic.
3. **When conditional logic is TRUE during a data import, data entry, or as the result of time-based logic** - Use this option to define fully custom logic. For example, you may wish to trigger an email at a particular date and time using a `datediff()` function with the `today` and `now` variables. Note that, unlike the previous two options, this type of condition will apply to data imports as well as to survey and form responses.

### STEP 1: Triggering the Alert

- A) How will this alert be triggered?
- When a record is saved on a specific form/survey\*
  - If conditional logic is *TRUE* when a record is saved on a specific form/survey\*
  - When conditional logic is *TRUE* during a data import, data entry, or as the result of time-based logic ⓘ

**B) Trigger the alert when...** Indicate which instruments and actions will trigger the alert. Options are specific to the type of condition selected in Part A.

1. If you selected **When a record is saved on a specific form/survey**, choose the instrument and indicate whether it must be saved with “Complete” status to trigger the alert.

### STEP 1: Triggering the Alert

- A) How will this alert be triggered?
- When a record is saved on a specific form/survey\*
  - If conditional logic is *TRUE* when a record is saved on a specific form/survey\*
  - When conditional logic is *TRUE* during a data import, data entry, or as the result of time-based logic ⓘ

B) Trigger the alert...

when  is saved with any form status  (excludes data imports)

2. If you selected **If conditional logic is TRUE when a record is saved on a specific form/survey**, choose the instrument and indicate whether it must be saved with “Complete” status to trigger the alert. Then define additional logic in the “while the following logic is true” box. Design the logic statement so it will evaluate to true or false based on values in each record. [See here for some of the special functions you might use as part of your conditional logic.](#)

In some cases, you may wish to cancel the notification if a record changes after the email is scheduled but before it's sent. To stop a scheduled invitation from going out when the record no longer meets the condition, check “Ensure logic is still true before sending notification?”

## B) Trigger the alert...

when "Basic Demography Form" is saved with any form status (excludes data imports)

while the following logic is true:

[active]=1

(e.g., [age] > 30 and [sex] = "1")

[How to use 'stop logic' to disable a scheduled alert](#)

Ensure logic is still true before sending notification? [?](#)

3. If you selected **When conditional logic is TRUE during a data import, data entry, or as the result of time-based logic**, define your custom conditional logic in the “when the following logic becomes true” box.

To stop a scheduled invitation from going out when the record no longer meets the condition, check “Ensure logic is still true before sending notification?”

## STEP 1: Triggering the Alert

- A) How will this alert be triggered?  When a record is saved on a specific form/survey\*  If conditional logic is *TRUE* when a record is saved on a specific form/survey\*  When conditional logic is *TRUE* during a data import, data entry, or as the result of time-based logic [i](#)

## B) Trigger the alert...

when the following logic becomes true:

(e.g., [age] > 30 and [sex] = "1")

[How to use 'stop logic' to disable a scheduled alert](#)

Ensure logic is still true before sending notification? [?](#)

**C) Trigger Limit** If your trigger instrument is repeating, decide whether you want to send the alert once per record or once per instance.

- Select “only once per record (i.e., never re-trigger)” to send the message a maximum of one time, regardless of how many times the trigger instrument is repeated.
- Select “only once per record and also on every instance of a repeating instrument” to send the message every time a repeating instance of the trigger instrument meets your criteria.

C) Trigger Limit: Trigger the alert... only once per record (i.e., never re-trigger)

(The trigger limit determines where and

only once per record (i.e., never re-trigger)

\* The alert will not be re-triggered if the f

only once per record and also on every instance of a repeating instrument

## Step 2: Set the Alert Schedule

Alerts are **scheduled** immediately when a record meets the conditions defined in Step 1. However, you can decide whether they are **sent** immediately or at a later time in Step 2.

**When to send the alert?** Choose whether to send alerts:

- Immediately
- On a specific day of the upcoming week
- After a specific time lag
- At an exact day and time

### 🕒 STEP 2: Set the Alert Schedule

When to send the alert?

- Send immediately
- Send on next  at time
- Send the alert  days  hours  minutes  
 the exact time that the alert was triggered
- Send at exact date/time:

**Send it how many times?** You can elect to send the message once or multiple times at a set interval.

Tip: To keep sending an invitation repeatedly until a survey is completed, include the survey's completion status as part of your conditional logic in Step 1. Be sure to check "Ensure logic is still true before sending notification?" Then set the frequency of the recurrence in Step 2.

Send it how many times?

- Just once
- Multiple times on a recurring basis:
- Send every  days after initially being sent.  
*Tip: A monthly recurrence can be approximated as 30.44 days.*
- Send up to  times total (including the first time sent).  
*Leave blank to continue sending forever.*

**Alert expiration** (Optional) Enter a date after which notifications should be discontinued for all records.

Alert expiration:  
(optional)

This alert will be auto-deactivated at the specified date/time above. Note: This will cause any already-scheduled notifications not to be sent after the expiration time.

### Step 3: Message Settings

Complete each section to define your message contents and settings. The instructions below demonstrate options for email alerts.

**Alert Type** Define the alert type.

#### ✉️ STEP 3: Message Settings

Alert Type:  Email  SMS Text Message  Voice Call  SendGrid Template

**Email From** Choose a "From" email address. This could be a primary or secondary email address associated with any of your project's users. Optionally set a "From" display name.

**Email From:**  
\* must provide value

REDCap Administrator    redcapihrp@uic.edu

**Email To** Choose or manually enter email addresses for message recipients. These might include:

- One or more project users.
- One or more email fields from your project. Text fields with “Email” validation will appear in this list.
- One or more manually typed email addresses.

**Email To:**  
\* must provide value

+ [Show more options](#)

Or manually enter emails: jane@example.com; john@mysite.org

Click “+ Show more options” to add CC, BCC, and email-failure recipients.

**Email To:**  
\* must provide value

Or manually enter emails: jane@example.com; john@mysite.org

**Email CC:**

Or manually enter emails: jane@example.com; john@mysite.org

**Email BCC:**

Select recipients

Or manually enter emails: jane@example.com; john@mysite.org

**Email to send email-failure errors:**

**Subject** Include an email subject.

**Subject**  
\* must provide value

Action Required: Complete Your Follow-up Survey

**Message** Compose your message.

- Use the **rich text** controls to format your message and insert links and images.
- Use **piping** to personalize the text for each record. For example, you might start your email with the greeting, “Dear [first\_name].” [See here for more information about piping.](#)
- **Smart variables** will allow you to include each recipient’s unique survey link in the email. For example, you might include “[survey-link:followup\_survey:Click here to complete your survey.]” to inject a link to an instrument called “Followup Survey.” [See here for more information about smart variables.](#)

**Message:**

\* must provide value

 Prevent piping of data for Identifier fields [?](#)

Open Sans,-a... ▾
Paragraph ▾
10pt ▾
**B** *I* U A ▾

▾
 ▾
 ▾
 ▾
 ▾

Dear [first\_name],

Please complete this survey: [survey-link:followup\_survey]

**Identifiers** If any fields in your project are designated as identifiers, you can exclude them from email messages by checking “Prevent piping of data for identifier fields.” Instead, piped identifiers will be replaced with “[\*DATA REMOVED\*]”.

This step can help prevent PHI or PII from being shared through email, which is not a secure form of communication.

▾
 ▾
 ▾
 ▾
 ▾

Prevent piping of data for Identifier fields [?](#)

**Prevent piping of data for Identifier fields** ✕

If this checkbox is checked, any field variables (e.g., [date\_of\_birth]) that exist in the alert's subject or message will not have their value piped if the field has been tagged as an 'Identifier' field. In this case, it will simply replace the field variable with “[\*DATA REMOVED\*]” rather than piping the actual data into the message.

Close

**Attachments** Click **Add attachments** to attach one or more files to your message.

 Add attachments

Attachments might be files you upload from your computer or files from File Upload fields within the project.

 Message Attachments (Max file size: 20MB)
**File Upload fields:**

You may utilize files attached to records that have been uploaded into File Upload or Signature fields.

 ▾

-- and/or --

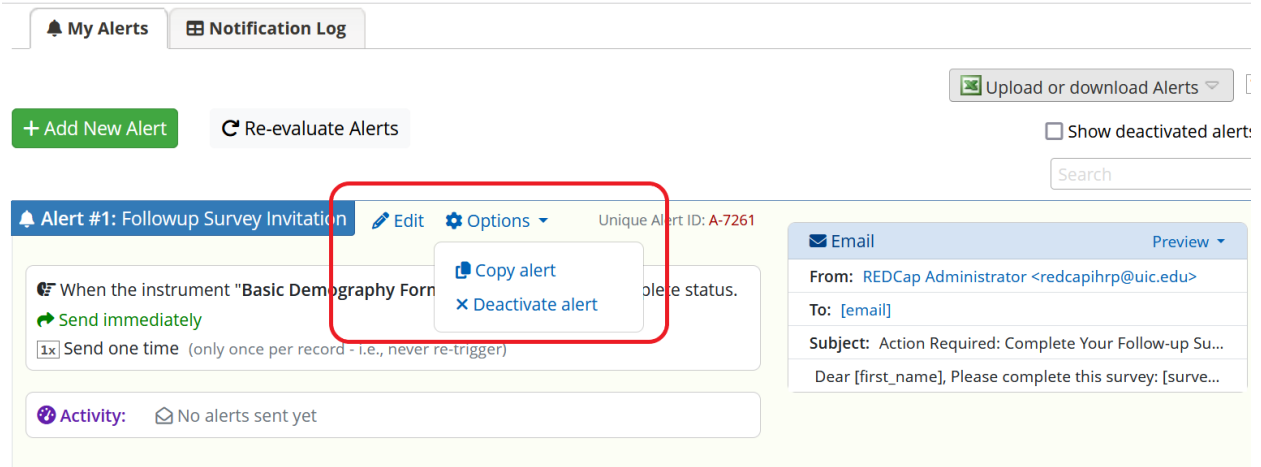
**Attachment #1:**
 No file selected.

+ Add another attachment

## Save and Preview

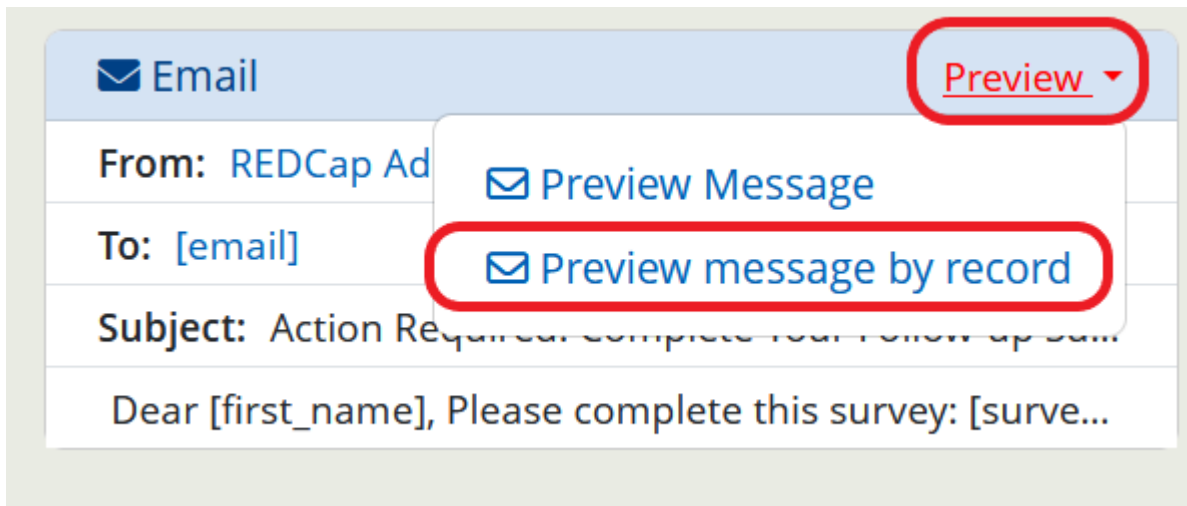
Once you have edited your alert's settings, click **Save**. You will return to the main Alerts & Notifications page. The alert will be set to active automatically.

On the main Alerts & Notifications page, each active alert will appear with links to edit, copy, or deactivate it.



The screenshot shows the 'Alerts & Notifications' interface. At the top, there are tabs for 'My Alerts' and 'Notification Log'. Below these are buttons for '+ Add New Alert' and 'Re-evaluate Alerts'. A search bar is present on the right. The main content area displays an alert configuration for 'Alert #1: Followup Survey Invitation' with a Unique Alert ID of A-7261. The alert is set to 'Send one time' and 'Send immediately'. A red box highlights the 'Edit', 'Options', 'Copy alert', and 'Deactivate alert' buttons. A preview of the email message is shown on the right, with fields for 'From', 'To', 'Subject', and 'Dear [first\_name], Please complete this survey: [surve...]'.

To see what the message will look like for a particular record, click **Preview** and select "Preview message by record."



The screenshot shows the email preview interface. The 'Preview' button is circled in red. A dropdown menu is open, showing 'Preview Message' and 'Preview message by record', with the latter option also circled in red. The email content is visible below the dropdown, including the 'From', 'To', 'Subject', and 'Dear [first\_name], Please complete this survey: [surve...]' fields.

Select an existing record ID to see what the message will look like with that record's piped values.

## Preview Message by Record - Alert #1 (Unique Alert ID: A-7261)



Choose a record in order to preview how the message for this alert would appear for that record.

▼
2

<b>From:</b>	redcapihrp@uic.edu
<b>To:</b>	participant@uic.edu
<b>Subject</b>	Action Required: Complete Your Follow-up Survey
<b>Message:</b>	Dear Darren,  Please complete this survey: <a href="#">Followup Survey</a>

Close

## Manage Sent and Scheduled Alerts

### Notification Log

Visit the Notification Log tab to see a record of past and future (scheduled) alerts. Columns include date and time of the alert, the unique alert ID, and the recipient's email address and record number. Click on the envelope icon to view the contents of a specific alert.

My Alerts
 Notification Log

Export (CSV):  Entire log  All pages using current filters

**Notification Log**  
(in ascending order by time sent)

View past notifications View future notifications

Displaying 1 - 2 of 2

Begin time:  End time:  (M/D/Y H:M)

Display: All alerts ▼

Display: All records ▼

Apply filters Reset

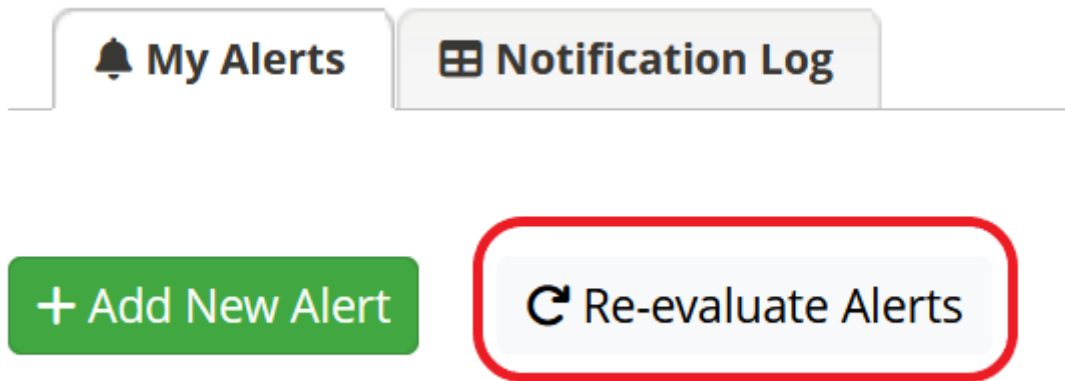
Notification send time	Alert	View Notification	Record	Recipient	Subject
05/03/2024 12:24pm	#1 (A-7261)		2	participant@uic.edu	Action Required: Complete Your Follow-up Surv
05/03/2024 12:29pm	#1 (A-7261)		1	████████@uic.edu	Action Required: Complete Your Follow-up Surv

### Re-Evaluate Alerts

If an alert is defined after data have already been collected in your project, you may wish to re-evaluate the alert for all records. This will allow REDCap to identify existing records that meet the conditions defined in Step 1.

Click Re-evaluate Alerts.





Review the information in the pop-up window and select which alerts you want to evaluate. If desired, toggle Enable Test Run? to preview the results of the re-evaluation before the messages are sent. Then click Re-evaluate selected alerts.

**Re-evaluate conditions for Alerts & Notifications** ✕

It may sometimes be necessary to re-evaluate some or all Alerts & Notifications for all records in the project. **This is especially useful if an alert's conditions (in Step 1 of the alert setup process) has been modified after data has already been entered for some records.** Thus, re-evaluating an alert for all records can bring them all up to speed to where they should be based on the current conditions of the alert. Thus, re-evaluating them might cause some notifications to be sent and/or scheduled.

**NOTE: Re-evaluating alerts will \*NOT\* modify anything for already-scheduled notifications, such as email text, recipient or sender addresses, and the date/time that the notification is scheduled to be sent. Re-evaluating an alert only schedules notifications that haven't been scheduled that should be scheduled, and conversely, it will remove any notifications that are currently scheduled that should not be scheduled (because the alert condition no longer evaluates as TRUE).**Please keep in mind that notifications will be sent shortly after clicking the button below if set to send 'Immediately', and if any are set to send after a certain delay, the delay will be based on when you re-evaluated the alert.

If you select the alerts below and click the 'Re-evaluate' button, it will begin the process of re-evaluating each alert for *every* record in the project. NOTE: If your project contains thousands of records or more, the process may take a few minutes, so please let it finish, and do not leave the page until it completes. Additionally, if an alert has conditional logic and has the option 'Ensure logic is still true before sending notification?' checked, please be aware that any scheduled (i.e. unsent) notifications *may* get unscheduled/removed during the process of re-evaluation if the conditional logic no longer evaluates as TRUE for a given record.

**Select alerts below to re-evaluate their conditions:** [Check All](#) [Uncheck All](#) **Enable Test Run?**

Alert #1: Followup Survey Invitation (A-7261)

## Longitudinal Projects and Repeating Instruments

If your project contains multiple events or arms, prepend the unique event name to any piped values or smart variables. For example, your message might include the following link to a baseline questionnaire: `[baseline_arm_1][survey-link:patient_questionnaire]`

If your alert includes a link to a repeating instrument, refer to a specific instance by appending the instance number to any piped values or smart variables. To include a link to a new instance of a repeating instrument, append `[new-instance]`. For example, your message might include the following link to start a new weekly check-in survey: `[survey-link:check_in_survey][new-instance]`

[See here for more information about using smart variables to refer to events and instances.](#)