REDCap User Guide

REDCap (Research Electronic Data Capture) System at Washington University in St. Louis, School of Medicine
Hidden Field: To streamline data entry, some fields remain hidden until they are needed. For example, as shown in Figure 10 above, because #2 was answered "abnormal," the next item, #2A, was revealed. Had the answer to #2 been "normal," #2A would have remained hidden.

Form Status Field: It is here that you enter the data entry status for the current form. To answer the question "Complete?", shown in Figure 11 below, you'll be presented with the three options—Incomplete, Unverified, and Complete—shown in the adjacent dropdown list. Choose your answer, either Incomplete (not started), Unverified (entered but values missing), or Complete (all fields have been entered and form is finished). The default answer is Incomplete.

Your answer to the question "Complete?" determines the color of the status buttons for the forms shown in the Event Grid and sidebar.

Ad Hoc Events

The Ad Hoc Events database is used to collect data for non-scheduled events that are not tied to a specific protocol-defined event. Examples of ad hoc events are headaches, adverse events, serious adverse events, transfusion reactions, infection complications, and chelation therapy complications. Some forms, such as the Transcranial Doppler (TCD) Performance Form (S05r1), Neurological Consultant Report (S10r1), and Transfusion Form (S31r40), are found in both the Ad Hoc and Scheduling & Data Entry databases, as these forms are completed for regularly-scheduled events, but are sometimes needed for unscheduled events.

Before you can begin entering data into the Ad Hoc Events database, you must first enter the Scheduling & Data Entry database and add the event(s) to the Ad Hoc Events Tracking Form, found in the Screening arm event grid.
Ad Hoc Events Tracking Form (Scheduling & Data Entry Database)

The Ad Hoc Event Tracking Form, found in the Scheduling & Data Entry database, is used for two purposes: 1) to keep a cumulative record of all ad hoc events for each participant; and 2) to generate a new record for each event in the Ad Hoc Events database. Every ad hoc event must be added to the participant’s Ad Hoc Event Tracking Form before form(s) can be entered in the Ad Hoc Events database.

To add a new ad hoc event to the cumulative tracking form, open the Scheduling & Data Entry database, click Data Entry in the sidebar, choose Arm 4: Screening, and then choose the Patient ID to open the Screening event grid. Once the grid opens, locate the dot for the Ad Hoc Event Tracking form in the Screening column (third from the top), as shown in Figure 12 below, and click on it to open the form.

![Figure 12: The Ad Hoc Tracking Form in the Arm 4: Screening Event Grid (Scheduling & Data Entry DB)]

Ad hoc events are tracked by Patient ID, Event Date, and Event No, but all you need to enter are the date and event number, as in the example below in Figure 13.
• **Event Date** – The event date is the date on which the event actually occurred. Click the calendar icon to select the year, month, and day of event.

• **Event No** – Click the dropdown to select the event number. If a single ad hoc event occurred on a particular date, select "1" from the Event No dropdown, as shown in Figure 13 for the dates 2010-06-01 and 2010-06-08. If there are multiple ad hoc events for a participant on the same date, 3 different AE's, for example, you'll need to enter each separately, as in the example in Figure 13 showing 3 events, numbered 1, 2, and 3, on 2010-06-16. Note that a single event may require multiple forms. For example, if the AE for the first event on 2010-06-16 involved a hospitalization, then both the Adverse Event Reporting (S25r1) and Hospitalization (S34r0) forms will need to be entered for Event No. 1.

After entering the event(s), scroll to the bottom of the Ad Hoc Events Tracking Form and save it. REDCap runs a check on the Ad Hoc Events Tracking Form every 5 minutes, and creates an Ad Hoc Event ID in the Ad Hoc Events database for each newly-saved event it finds (see Ad Hoc Event ID Numbers below). Thus, it will be approximately 5-7 minutes before you can choose your new Event ID from the Ad Hoc Events database. In the meantime, however, you can continue to enter other forms.

**Ad Hoc Events Database**

From the REDCap Home page, click on SIT Trial: Ad Hoc Events to open that database. As in the Scheduling & Data Entry database, you'll see a sidebar on the left, with links to My Databases and Database Information located at the top, and a link to the File Repository located under Applications. However, rather than providing links to Scheduling and Data Entry, the Ad Hoc Events sidebar provides a direct link to each ad hoc form in the database, as shown at left in Figure 14.

**Ad Hoc Event ID Numbers**

When you enter and save an event in a participant’s Ad Hoc Events Tracking Form in the Scheduling & Data Entry database, a record is generated in the Ad Hoc Events database. The ID number for each record (event) consists of the Patient's Identification Number, Event Date, and Event Number. An example is shown below:

4900102_20071008_3

The number 4900102 is the Patient ID; the number 20071008 is the date 8 October 2007, and the number 3 is the event number. Because the event number is 3, there will also be records for at least 2 other events for this participant—4900102_20071008_1 and 4900102_20071008_2—for 8 October 2007 (as described above under Event No).

**Accessing Ad Hoc Events Forms**

Forms in the Ad Hoc Events database can be accessed in two different ways:

1. The first is to click the link for Ad Hoc Participant Events, select the Event ID from the Incomplete Records dropdown, and then select the form you need. This method is most useful when you want to find out which forms were entered for an event.

2. The second is to select a specific form from the sidebar and then select the Event ID from one of the three dropdowns—Incomplete, Unverified, or Complete. This method is most useful when you need to enter a new form or edit an existing form for an event.
Selecting an Ad Hoc Event

To review the forms you entered for an event, find the link to Ad Hoc Participant Events in the sidebar and click it to open the Ad Hoc Participant Events index page. An example is shown below in Figure 15.

On the Ad Hoc Participant Events index page, you’ll find all Event ID’s for your site in the Incomplete Records dropdown box, regardless of the status of the forms for the events, whether Incomplete, Unverified, or Complete. Scroll down to find the event you need and select it to open the Ad Hoc Participant Events form for the event you chose. You do not need to do anything on this form. Its purpose is to bring up the sidebar to show you the forms that were entered for the event, denoted by yellow or green buttons, according to the status—Unverified or Complete—you selected at the time you entered them. If you wish to view or edit one of the forms you entered, click the link for the form you wish to open. That form’s index page will load, and you’ll need to select the Event ID from the applicable dropdown box, as described in the following section.

Selecting an Ad Hoc Form

To open the index page for a specific ad hoc form, click on its name in the sidebar. The index page for the Headache Event Form is shown below in Figure 16.

Select the Event ID you need from one of the three dropdown boxes—Incomplete Records, Unverified Records, or Complete Records—described below. Note that only participants from your site will appear in the dropdowns.

- **Incomplete Records** – If the specific ad hoc form, the Headache Form ($14r0) in our example, has not been entered for an event, you will find the Event ID in the Incomplete Records dropdown box.
- **Unverified Records** – If you started a Headache Event Form for this event, but have not finished it—and you changed the status field to Unverified—select the Event ID from Unverified Records. By default, the Unverified Records dropdown box is hidden. If you want it to be visible, click on Show Unverified Records. The Unverified Records dropdown box will be added to the list, and the link will now read Hide Unverified Records dropdown, as shown in Figure 16.
• **Complete Records** – If you finished entering a Headache Event Form for this event – and you changed the status field to Complete – select the Event ID from Complete Records. Figure 16 shows a partial list of Event ID’s from the Complete Records dropdown box.

If you wish to download a blank copy of the form to your computer, click **Download page as PDF**, as shown at top right in Figure 16.

**Data-Entering an Ad Hoc Form**

Once you select the Event ID from the appropriate dropdown on the form’s index page, the data-entry form will open. Additionally, the sidebar will show a yellow or green dot next to any other forms that were entered under this Event ID, as long as the status field was updated at the time the form(s) were completed. As in the Scheduling & Data Entry database, the questions on ad hoc forms are listed in rows, one after another, on a single page. Each row contains two columns: questions are shown in the first column and data is entered in the second. You'll enter data in the same types of fields used in the Scheduling & Data Entry database. Be sure you complete the Form Status section, found at the bottom of every form, to indicate whether the form is Incomplete, Unverified, or Complete, and save the form frequently, using one of the options described in the next section.

**Saving a Form**

[Save Record]
[Save and Continue]
[Save and go to Next Form]

[--- Cancel ---]

*Figure 17: You have 4 options for saving your forms.*

To keep from losing any data you've entered, it is extremely important that you save often, at least every 20 minutes, particularly if the form you’re working on is a long one. In addition, it is always good idea to first save your work whenever you go away from your desk.

The Save buttons, shown in Figure 17 at left, are found at the bottom of every form.

Press **Ctrl + End** from anywhere in a form to quickly advance to the bottom and save your data.

You have four options for saving data: Save Record, Save and Continue, Save and go to Next Form, and –Cancel–. Each option is described below.

1. **Save Record** – Click Save Record to save the form you are currently working on. In the Scheduling & Data Entry database, REDCap will save the data and then display a confirmation page. The confirmation page for a saved record looks like that shown below in Figure 18.