



# RC303

# What's new and exciting in REDCap?

## *Summer 2018 Edition*

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# Agenda

- Introduction
- Action Tags
- Smart Variables
- Custom survey invites
- Auto-archiving surveys to PDF
- Custom record status dashboards
- External Modules

# Introduction

## REDCap has been moving forward

- Vanderbilt has been rapidly adding new features
- During session we will explore some of the features added during the last year (or so)

# How do you learn about new features?

## **Fred Hutch REDCap News (No need to login to access any of these links!)**

- New training seminar: [RC303: What's New and Exciting in REDCap](#). June 20 at 11:30.
- REDCap is now at version 8.4.3. View [REDCap versions and the features added to each release](#).
- CDS provides [extensive \(and free\) REDCap Training](#), both in-person and video-based training.
- If you want to create a new REDCap project, please complete this short [New Project Request survey](#).
- [Additional information](#) on the Fred Hutch REDCap instance, including security and IRB considerations.



# Action Tags

## Action Tags

- Introduced in version 6.7 (around 3 years ago)
- Action Tags allow you to customize the data entry experience of the fields and choices of a data entry instrument



## Edit Field

You may add a new project field to this data collection instrument by completing the [Add Field](#) button at the bottom. When you add a new field, it will be added to the form of the instrument. For more information on the different field types available, you may view the [Field Types video \(4 min\)](#).

**Field Type:** Multiple Choice - Radio Buttons (Single Answer)

### Field Label

Gender

### Variable Name

gender

ONLY letters, numbers

How to use [\[+\] Smart](#)

**Required?\***  No

\* Prompt if field is blank

**Identifier?**  No

Does the field contain id

### Custom Alignment

Align the position of the

### Field Note (optional)

Small reminder text disp

**Choices (one choice per line)** [Copy existing choices](#)

- 1, Female
- 2, Male
- 3, Other
- 9, Refused/unknown

[How do I manually code the choices?](#)

### Action Tags / Field Annotation (optional)

@HIDDEN

Learn about [@ Action Tags](#) or [using Field Annotation](#)

## Recent Action Tag Additions

- **@HIDECHOICE** – Retire a checkbox, radio, drop-down choice
- **@MAXCHECKED** – Allows a checkbox field to have a max no of checkboxes that can be checked
- **@MAXCHOICE** – Causes one or more specified choices to be disabled for a checkbox, radio button, or drop-down field after a specified amount of records have been saved with that value
- **@NONEOFTHEABOVE** – Designates checkbox choice to be mutually exclusive w/ other choices
- **@RANDOMORDER** – Randomizes the displayed order of choices (not their values)
- **@WORDLIMIT / @CHARLIMIT** – Limits the number of words or characters in text/notes field
- **@DEFAULT** - Sets a field's initial value. Can be static or piped in value
- **@HIDEBUTTON** - Hides the 'Now' or 'Today' button

# Action Tag Demo Project

- Action Tags
  - Enrollment form has several fields with *no* action tags
  - Enrollment with Action Tags has fields *enhanced w/ action tags*
    - @DEFAULT='0'
    - @HIDECHOICE='4'
    - @HIDEBUTTON
    - @MAXCHECKED=3
    - @NONEOFTHEABOVE='7,8'
    - @RANDOMORDER @NONEOFTHEABOVE='7,8'
    - @MAXCHOICE(1=2,2=2,3=3,4=2,5=1,6=1,7=2,8=2,9=1,10=0)

# Smart Variables

## Smart Variables

- REDCap supports the evaluation of run-time expressions in a number of places
  - Calculated fields, branching logic, report filters, data quality rules, etc.
- Prior to v 8.4, expressions were limited to **field data** (with a few exceptions: e.g., today)
- Smart variables adds the ability to create expressions based on **metadata**

# What does this mean?

## ● Before Smart Variables

- You couldn't create a calculation or branching logic that was aware of...
  - Current event
  - Current repeating instance
  - Current user
  - Current data access group
  - Whether current form was a survey or a form
  - Form completeness

## ● With Smart Variables

- Expressions that are now **smart** and can be aware of all the above and more...

## Smart Variable Examples

Smart Variable	Purpose	Example
[user-name]	Name of user	[user-name]="jane_doe"
[record-dag-name]	Name of DAG for record	[record-dag-name]="boston"
[is-survey]	1 if viewed as survey	[is-survey]="1"
[event-name]	Name (not label) of event	[event-name]="baseline_arm_1"
[event-label]	Label (pretty name) of event	[event-label]="Baseline"
[previous-event-name]	Name of previous event; use to pull data from prior event	@DEFAULT='[previous-event-name][weight]'
[first-event-name]	Name of first event	@DEFAULT='[first-event-name][height]'
[current-instance]	Number of current instance	[current-instance]
[last-instance]	Last (highest #) instance	[clinic_date][last-instance]

# Smart Variable Demo Projects

## ● Smart Variables (Events)

- Interview form uses several smart variables
  - int-height field label:
    - Height at [event-label] (in inches)

## ● Smart Variables (Instances)

- Measurements form uses smart variables for defaults for height & weight:
  - m\_height action tag:
    - @DEFAULT="[m\_height][previous-instance]"
  - m\_weight action tag:
    - @DEFAULT="[m\_weight][previous-instance]"

# Custom Survey Invites

## Problem

- Until recently, you had no control on the placement of the survey link in the email
  - It was always at the bottom of the invite
- With introduction of Custom Survey Invites in v 8.4, you can now control the survey invitation email
  - Place survey link anywhere
  - Or remove it completely
  - Works with both Compose Survey Invitations and Automated Survey Invitations (ASIs)

# Survey invite emails have never looked so good!

## ✉ Compose message

From:

To: **[All participants selected from Participant List]**

Subject:

**Compose**

**Preview**

[Send test email](#)

Please take this survey.

You may open the survey in your web browser by clicking the link below:

[survey-link]

If the link above does not work, try copying the link below into your web browser:

**NOTE:** You may modify or remove any text you wish in the Compose Message text box above. Make sure you include either [survey-link] or [survey-url] in the text or else the participant will not have a way to take the survey.

## Custom Survey Invite Demo Project

- Survey Demos
  - Select Compose Message to see new compose text with ability to customize

# Auto-archiving surveys to PDF

# 1. Auto-archiving surveys to PDF

- Takes a snapshot of the completed survey & stores it away in the project's file repository
- Customized in survey settings



## PDF Auto-Archiver

*Upon survey completion, a compact PDF copy of the survey response will be automatically stored in the project's File Repository, from which the archived PDFs can be downloaded at any time.*

- Disabled
- Auto-Archiver enabled
- Auto-Archiver + e-Consent Framework [What is the e-Consent Framework?](#)  
(includes end-of-survey certification & archival of PDF consent form)

## 2. Auto-archiving + e-Consent Framework

### PDF Auto-Archiver

*Upon survey completion, a compact PDF copy of the survey response will be automatically stored in the project's File Repository, from which the archived PDFs can be downloaded at any time.*

- Disabled
- Auto-Archiver enabled
- Auto-Archiver + e-Consent Framework [What is the e-Consent Framework?](#)  
(includes end-of-survey certification & archival of PDF consent form)

**e-Consent Framework Options:** For e-Consent it is sometimes required to include the consenting participant's name (and date of birth in some cases) on the final consent form as extra documentation of their identity. Below you may select fields used to capture that info. You may also enter the current e-Consent version and e-Consent type for this form. The values for the fields below will be automatically inserted into the footer of the PDF consent form that the participant will review at the end the survey, after which that PDF 'hard-copy' will be archived in the File Repository. [Read more](#)

e-Consent version:  e.g., 4

First name field:

Last name field:

Note: If you are using a single field to capture whole name, you may select it for either first/last name above while leaving the other name field unselected.

Optional fields (these are not always necessary for e-Consent):

e-Consent type:  e.g., Pediatric

Date of birth field:

# Survey Archive Demo Projects

- Survey Demos

- Demonstrates use of Auto-archiver
  - See Survey settings for **Followup Survey**

- Survey Archiver + E-Consent Framework

- Demonstrates use of E-Consent Framework
  - See Survey settings for **Consent Survey**

# Custom Record Status Dashboards

## Custom Record Status Dashboards

- Ability to customize the record status dashboard
- What can you do?
  - Display a subset of forms/events
  - Display a filtered set of records
  - Display records in descending order

# Custom Record Status Dashboard Demo Project

## ● Custom Dashboard 1

- Main dashboard (newest on top)
  - Subset of forms in descending order of record\_id

## ● Custom Dashboard 2

- Two dashboards which filter by gender
  - Males (most recent on top)
  - Females (most recent on top)

# External Modules

## External Modules

- External modules are ad-ons to REDCap that can be written by consortium programmers and contributed to the external module repository
- Great way to extend REDCap's functionality without having to wait for Vanderbilt to add the feature to REDCap
- Added to REDCap in v 8.0
  - Prior to v 8.0, they existed in a less-standardized way as hooks and plug-ins and were more trouble to install

## External Modules

- Repository of external modules
  - You can browse the repository at <https://redcap.vanderbilt.edu/consortium/modules/>
  - You must request that an external module be installed by administrators
    - Email [redcaphelp@fredhutch.org](mailto:redcaphelp@fredhutch.org)

## External Module Examples

- **Email Alerts - Eva Bascompte Moragas (Vanderbilt)**
  - Flexible way to send email alerts when forms/surveys are completed
  - Configure using Configure Email Alerts link under External Modules
  - Demo project: EM –Email Alerts

## External Module Examples

- **Shazam – Andy Martin (Stanford)**

- Arrange multiple fields across page to save space and improve usability
- Requires some user to be HTML savvy.
- Configure using Shazam Setup link under External Modules
- Demo project: EM - Shazam

## External Module Examples

- **Stealth Queue – Paul Litwin (Fred Hutch)**

- Simple external module that let's you use survey queue feature but without the confusing survey queue user interface
- No configuration.
- Demo project: EM – Stealth Queue

# Summary

## Summary

- There is lots of cool stuff that has been added to REDCap by Vanderbilt
  - New action tags, smart variables, custom survey invites, auto-archiving of surveys, custom dashboards
- Other consortium members have also added to the REDCap Universe with External Modules
  - Three examples were demonstrated:
    - Email alerts, Shazam, Stealth Queue

## Read more...

- What's new in REDCap (by version)

<http://research.fhcrc.org/cds/en/redcap-version-history.html>

- On Action Tags

[https://cdsweb07.fhcrc.org/redcap/redcap\\_v8.5.1/Design/action\\_tag\\_explain.php](https://cdsweb07.fhcrc.org/redcap/redcap_v8.5.1/Design/action_tag_explain.php)

- On Smart Variables

[https://cdsweb07.fhcrc.org/redcap/redcap\\_v8.5.1/Design/smart\\_variable\\_explain.php](https://cdsweb07.fhcrc.org/redcap/redcap_v8.5.1/Design/smart_variable_explain.php)

- External Module Repository

<https://redcap.vanderbilt.edu/consortium/modules/>

- Email Alerts <https://github.com/vanderbilt-redcap/email-alerts-module/blob/master/README.pdf>
- Shazam <https://github.com/susom/redcap-em-shazam/blob/master/README.md>



# Thank you!

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Collaborative Data Services (CDS)