

## Data Quality- REDCap – How-To Guide

### Data Quality

This application will allow you to execute data quality rules upon your project data to check for discrepancies in your data. Pre- defined data rules that are already developed for you in the application are for such things as missing values, field validation errors and outliers for numerical fields.


A “data quality rule” is a calculation expression that must evaluate to True or False. When a rule is executed on your project data any records for which the expression evaluates False can be viewed and potentially corrected.

The **Data Quality** page includes detailed instructions.

### Execute Rules

Execute rules one at a time using **Execute**, or all together using **All**.

The **Clear** button refreshes the view to the state before any rules have been executed.

Data Quality Rules						
<div>  Upload or download Data Quality Rules         </div>						
<div>           Execute rules: <b>All</b> <b>All except A&amp;B</b> Clear         </div>						
<div>           Apply to: -- All records --         </div>						
Rule #	Rule Name	Rule Logic (Show discrepancy only if...)	Real-time execution ?	Total Discrepancies	Delete rule?	
A	Blank values*	-		Execute		
B	Blank values* (required fields only)	-		Execute		

## Discrepancies

Rules that identify discrepancies (i.e. where your project contains data for which the calculation expression returns False) are highlighted in red.

d	Field validation errors (out of range)	-	2 <a href="#">view</a>
e	Outliers for numerical fields (numbers, integers, sliders, calc fields)	-	0 <a href="#">view</a>

- Click [view](#) to see the records that fail the test.

Rule: <b>Field validation errors (out of range)</b>			
Discrepancies found: 2			
Record (Sorted by DAG)	Discrepant fields with their values	Status	Exclude <a href="#">?</a>
5	integer_with_range = <a href="#">66</a> (min: 18, max: 65)	Out of range	<a href="#">exclude</a>
1 (Group 2)	integer_with_range = <a href="#">17</a> (min: 18, max: 65)	Out of range	<a href="#">exclude</a>
Close			

- Navigate to the record / form that contains the discrepant value by clicking on the value
- Clicking [exclude](#) will mark a discrepant value as not to be included as a discrepancy in future executions of this rule

## Add a New Rule

Add a new rule by entering a description of the rule and the calculation expression. Then click [Add](#).

<a href="#">Add</a>	Num1 should be >= Num2	[num1] < [num2]	<input type="checkbox"/>
	<b>Enter descriptive name for new rule</b> (e.g., Participants below age 18)	<b>Enter logic for new rule</b> (e.g., [age] < 18) <a href="#">How do I use special functions?</a>	Execute in real time on data entry forms <a href="#">?</a>

For more information on calculation expressions see [Calculated Fields](#). Remember that data quality rule expressions must evaluate to True or False.

**Important Tip!** If your expression includes a “less than” sign (<), ensure that you include a space after it (as shown above). This stops the page thinking that you’re entering a potential harmful HTML tag and stripping out the remainder of your expression! Using “Less than or equal to” (<=) is fine – this problem does not occur.

### *Real Time Execution*

Ticking the **Execute in real time** option is a useful mechanism for performing cross-field validation checks during data entry. Rules where this option is ticked will be executed each time you save a data entry form that contains a field that is part of the expression.

Note that the rules are executed on **data entry forms only**: NOT when importing data via [Data Import](#) or [API](#), and NOT during survey data entry.