

## Frequently Asked Question (FAQ) Library

### *What is piping and how do I use it?*

Piping is a feature that allows you to display data collected elsewhere in your REDCap project. Piping is only possible within the same project.

Piping can be used to support a wide variety of research activities. With piping, people can view information without having to open additional forms and search data fields. For example, you can pipe information, such as sub-study participation, that is captured at consent onto a subsequent visit form, so a research coordinator will know to perform additional study procedures. Piping can also be used to personalize text in survey invitations.

#### **Piping can be used to insert data in the following locations:**

1. Field Labels
2. Field Notes
3. Section Headers
4. Matrix field column headers
5. Option labels for multiple choice fields (radio, drop-down, checkbox)
6. Slider field labels (i.e. text displayed above slider bar)
7. Survey invitations - subject line and body of message
8. Survey instructions and acknowledgements
9. Custom text displayed at top of survey queue
10. Inside the URL for a survey's '*redirect to a URL*' setting
11. Inside the @DEFAULT action tag
12. Custom record locking text (if defined, displayed at bottom of form)

#### **How to Utilize Piping**

To pipe data, simply insert the variable name of the field you wish to display inside square brackets [x] in the target location.

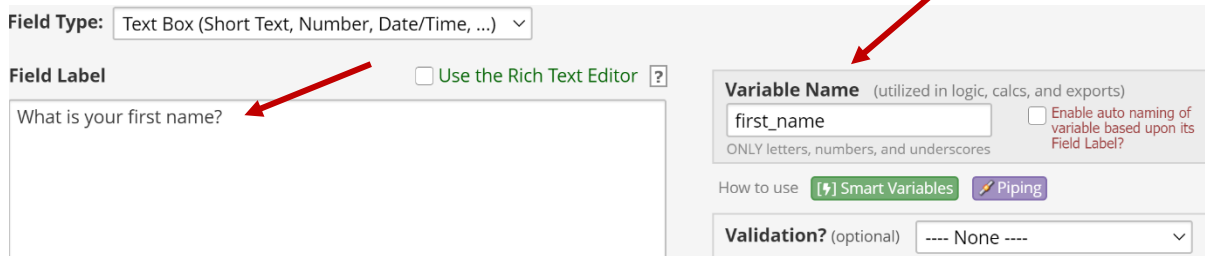
**Pro Tip:** When piping from multiple fields, open the Codebook on one tab and the design page on another. This will allow you to view the variable names and prevent errors. The Ctrl+F function can be used to search the Codebook.

For an online demonstration visit: <https://is.gd/PipingTutorial>. See examples below for piping scenarios.

## Frequently Asked Question (FAQ) Library

### Example #1: Piping from a Text Field

If you have a survey question 'What is your first name?' with the variable name 'first\_name', you can display the respondent's name to a follow-up question with piping.



Field Type: Text Box (Short Text, Number, Date/Time, ...)  Use the Rich Text Editor ?

Field Label: What is your first name?

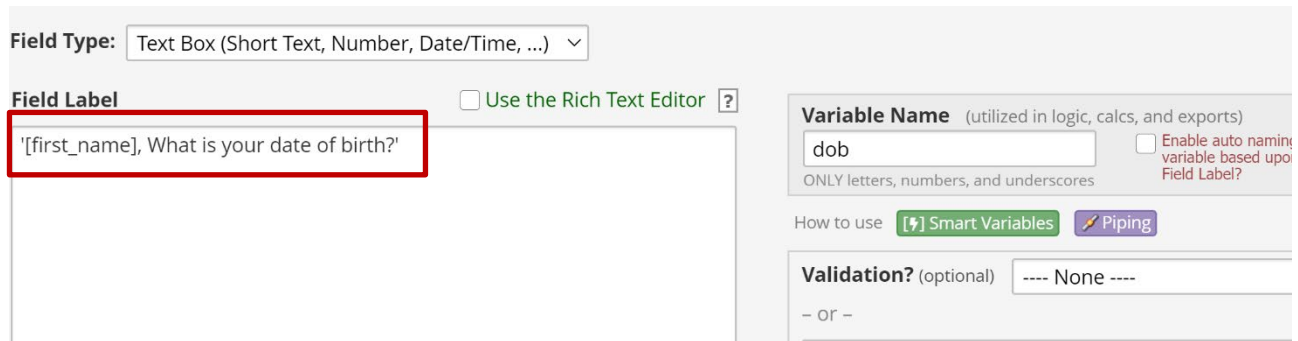
Variable Name (utilized in logic, calcs, and exports): first\_name  Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use

Validation? (optional) ---- None ----

To pipe, insert *first\_name* inside a set of brackets in the field label of the follow-up question. In this example, 'What is your date of birth?':



Field Type: Text Box (Short Text, Number, Date/Time, ...)  Use the Rich Text Editor ?

Field Label: '[first\_name], What is your date of birth?'

Variable Name (utilized in logic, calcs, and exports): dob  Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

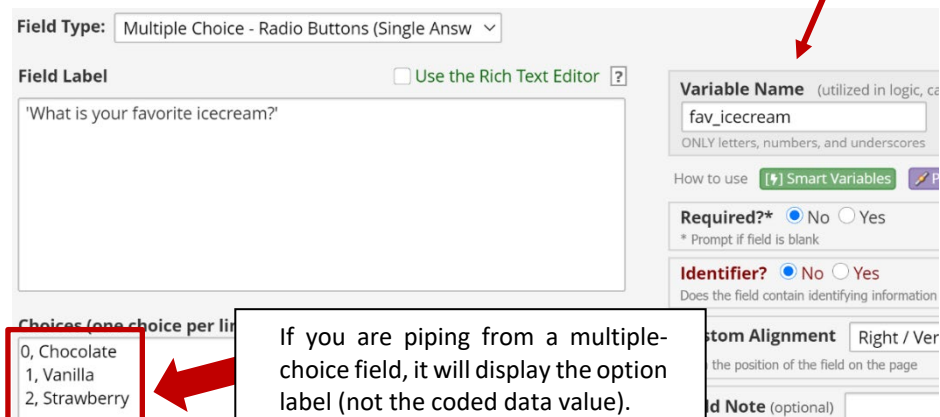
How to use

Validation? (optional) ---- None ----

In Example #1 if the respondent entered 'John' as their first name, the follow-up question would read 'John, what is your date of birth?'

### Example #2: Piping from a Multiple-Choice Field (radio, drop down)

If you have a multiple-choice question 'What is your favorite ice cream?' with the response options 'Chocolate', 'Vanilla', and 'Strawberry' (coded as 0, 1, 2) under the variable name 'fav\_icecream', you can use piping with a follow-up question.



Field Type: Multiple Choice - Radio Buttons (Single Answ)  Use the Rich Text Editor ?

Field Label: 'What is your favorite icecream?'

Variable Name (utilized in logic, calcs, and exports): fav\_icecream  Enable auto naming of variable based upon its Field Label?

ONLY letters, numbers, and underscores

How to use

Required?\*  No  Yes  
\* Prompt if field is blank

Identifier?  No  Yes  
Does the field contain identifying information?

Custom Alignment Right / Ver  
the position of the field on the page

Field Note (optional)

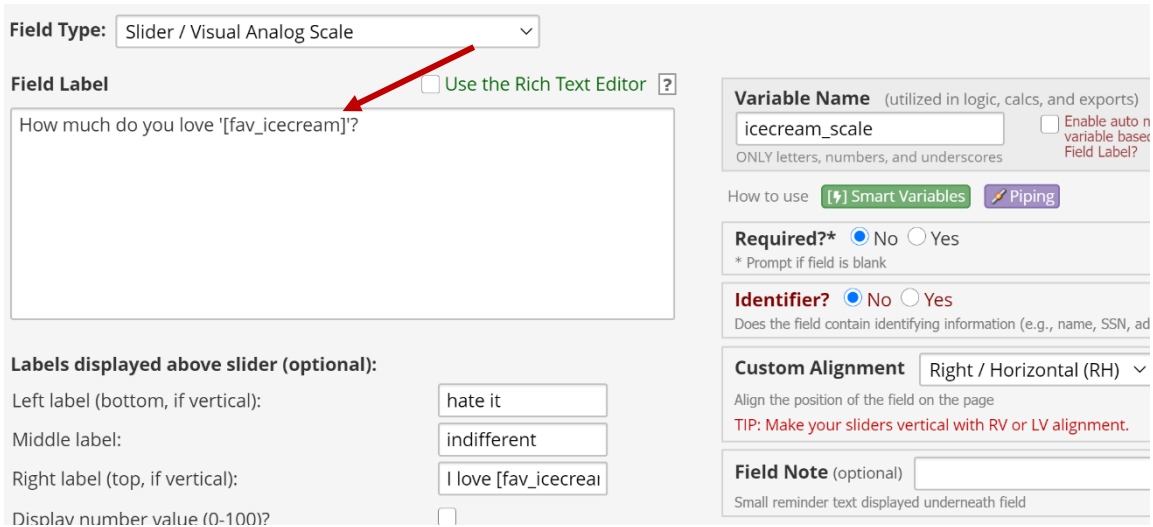
Choices (one choice per line): 0, Chocolate; 1, Vanilla; 2, Strawberry

If you are piping from a multiple-choice field, it will display the option label (not the coded data value).

## Frequently Asked Question (FAQ) Library

To pipe, insert the variable name *fav\_icecream* inside a set of brackets within the field label of the follow-up question.

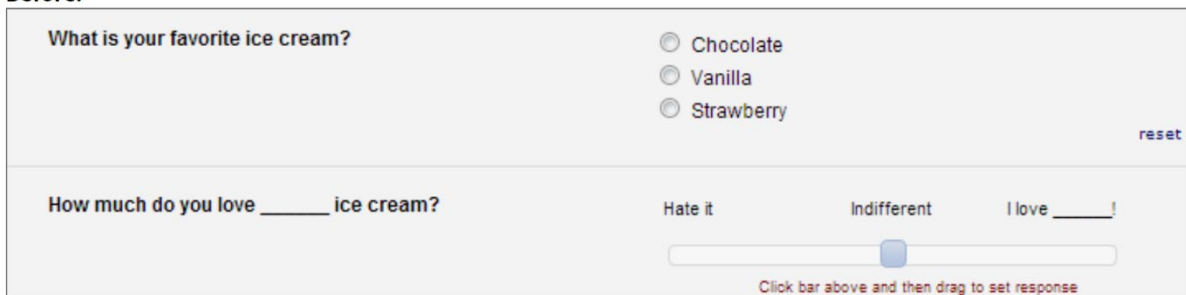
In this example, “How much do you love [x]?”



The screenshot shows the REDCap form builder interface for a slider field. The 'Field Type' is set to 'Slider / Visual Analog Scale'. The 'Field Label' is 'How much do you love '[fav\_icecream]'?' with a red arrow pointing to the variable name. The 'Variable Name' is 'icecream\_scale'. The 'Required?' field is set to 'No'. The 'Identifier?' field is set to 'No'. The 'Custom Alignment' is set to 'Right / Horizontal (RH)'. The 'Field Note' is empty. The 'Labels displayed above slider (optional)' section shows: Left label (bottom, if vertical): 'hate it', Middle label: 'indifferent', Right label (top, if vertical): 'I love [fav\_icecream]', and 'Display number value (0-100)?' is checked.

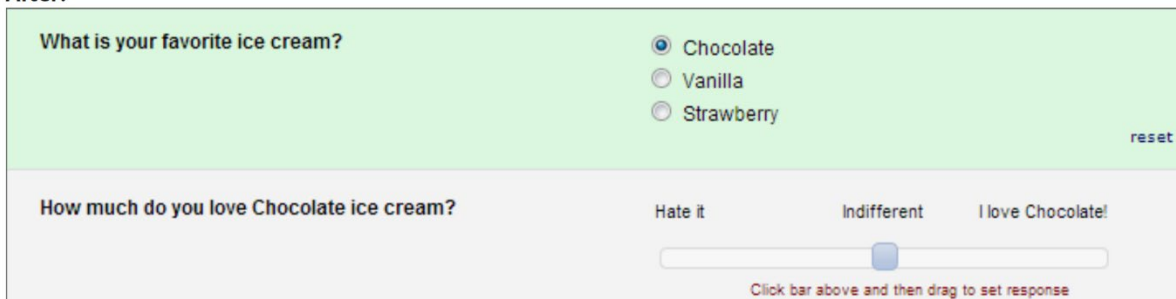
After selecting 'Chocolate', the follow-up question would be displayed as 'How much to you love Chocolate ice cream?'

### Before:



The 'Before' state shows a form with two questions. The first question is 'What is your favorite ice cream?' with radio buttons for 'Chocolate', 'Vanilla', and 'Strawberry'. The second question is 'How much do you love \_\_\_\_\_ ice cream?' with a slider and labels 'Hate it', 'Indifferent', and 'I love \_\_\_\_\_!'. A 'reset' button is visible next to the first question.

### After:

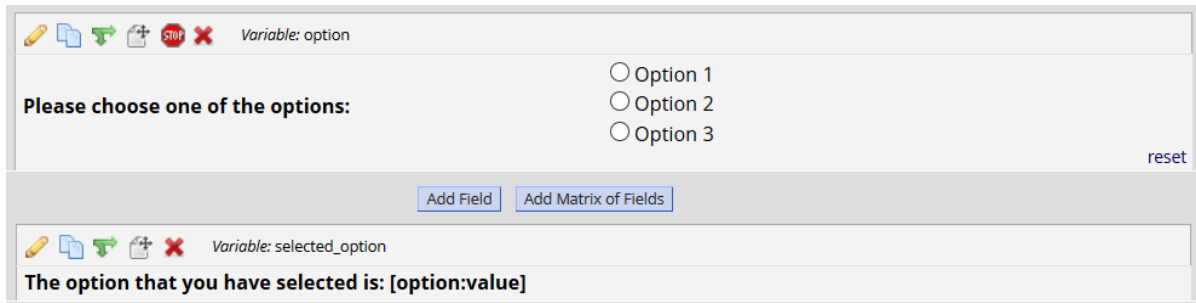


The 'After' state shows the same form, but the first question is highlighted in green and the 'Chocolate' radio button is selected. The second question is now 'How much do you love Chocolate ice cream?' and the slider labels are 'Hate it', 'Indifferent', and 'I love Chocolate!'. The 'reset' button is still visible next to the first question.

## Frequently Asked Question (FAQ) Library

### Example #3: Piping a Coded Value of a Multiple-Choice Field

If you wish to pipe the value (not the label) of a multiple-choice field, append ':value' to the variable name inside brackets, e.g. [option:value].



Variable: option

Please choose one of the options:

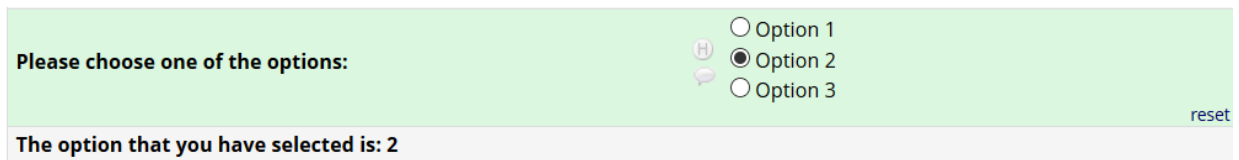
Option 1  
 Option 2  
 Option 3

reset

Add Field Add Matrix of Fields

Variable: selected\_option

The option that you have selected is: [option:value]



Please choose one of the options:

Option 1  
 Option 2  
 Option 3

reset

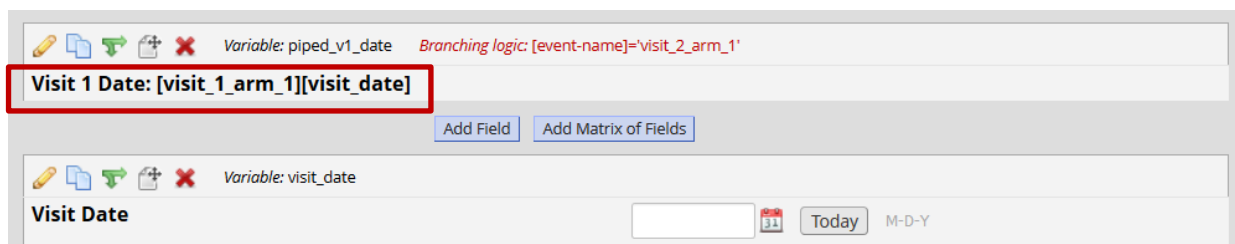
The option that you have selected is: 2

Note: The usage of ':value' must be used if piping inside the @DEFAULT Action Tag if you would like to pipe the value of a multiple-choice field as the default value of a field.

### Example #4: Piping to a Different Event in a Longitudinal Project

To pipe data from another event within a longitudinal project, prepend the variable name with the unique event name inside square brackets (as shown below).

Piped field (*piped\_v1\_date*) is set up as a descriptive field to be displayed in Visit 2 event:



Variable: piped\_v1\_date Branching logic: [event-name]='visit\_2\_arm\_1'







Visit 1 Date: [visit\_1\_arm\_1][visit\_date]

Add Field Add Matrix of Fields

Variable: visit\_date

Visit Date  Today M-D-Y

Note: For longitudinal projects, unique event names can be found in **Project Setup** -> **Define My Events**.

	Event #	Days Offset	Offset Range Min / Max	Event Name	Custom Event Label (optional)	Unique event name (auto-generated)
 	1	1	-0/+0	Visit 1		visit_1_arm_1
 	2	2	-0/+0	Visit 2		visit_2_arm_1
 	3	3	-0/+0	Visit 3		visit_3_arm_1

## Frequently Asked Question (FAQ) Library

For the example above, the Visit 1 Date is entered on the Visit 1 event:

Event Name: <b>Visit 1</b>	
Record ID	1 <small>To rename the record, see the record action drop-down at top of the <a href="#">Record Home Page</a>.</small>
Visit Date	08-01-2020 Today M-D-Y

With piping, the Visit 1 Date is then displayed on the Visit 2 event:

Event Name: <b>Visit 2</b>	
Record ID	1 <small>To rename the record, see the record action drop-down at top of the <a href="#">Record Home Page</a>.</small>
Visit 1 Date: 08-01-2020	
Visit Date	<input type="text"/> Today M-D-Y

Note: If the unique event name is not prepended, it will pipe the data value from the current event.

### Example #5: Piping from Checkbox Fields

Piping from checkbox fields differs from other field-types. Checkboxes allow for multiple saved values.

Options to display a list of checkbox fields include:

- a. Checked choices
  - i. **[my\_checkbox:checked]**
  - ii. Appending ':checked' will display a comma-delimited list of choice labels that have been checked - e.g. 'Sunday, Tuesday, Thursday'.
  - iii. Note: If neither ':checked' nor ':unchecked' is appended to the variable, then it will default to ':checked'.
- b. Unchecked choices
  - i. **[my\_checkbox:unchecked]**
  - ii. Appending ':unchecked' will display a comma-delimited list of choice labels that have NOT been checked - e.g. 'Monday, Wednesday, Friday, Saturday'.
- c. Specific choices
  - i. **[my\_checkbox(code)]**
  - ii. If a coded value of the checkbox is included inside parentheses after the variable name - e.g. [my\_checkbox(2)] - then it will output the word 'Checked' or 'Unchecked'.

## Frequently Asked Question (FAQ) Library

Example of piping from check box fields:

Variable: q3

Monday  
 Tuesday  
 Wednesday  
 Thursday  
 Friday  
 Saturday  
 Sunday

**3. Please select all that apply:**

[Add Field](#)   [Add Matrix of Fields](#)

Variable: piped\_q3\_checked

**Your have checked these choices for q3: [q3:checked]**

[Add Field](#)   [Add Matrix of Fields](#)

Variable: piped\_q3\_unchecked

**The choices that you have not checked for q3 are: [q3:unchecked]**

[Add Field](#)   [Add Matrix of Fields](#)

Variable: piped\_q3\_choiceb

**Your answer to Tuesday of q3 is: [q3(2)]**

[Add Field](#)   [Add Matrix of Fields](#)

Variable: piped\_q3\_choice\_code

**The codes of the selected choices are: [q3:checked:value]**

Example above will display as follows:

Monday  
 Tuesday  
 Wednesday  
 Thursday  
 Friday  
 Saturday  
 Sunday

**3. Please select all that apply:**

**Your have checked these choices for q3: Tuesday, Thursday, Sunday**

**The choices that you have not checked for q3 are: Monday, Wednesday, Friday, Saturday**

**Your answer to Tuesday of q3 is: Checked**

**The codes of the selected choices are: 2, 4, 7**

**Pro Tip:** The checkbox piping options listed above will return the text labels. However, you can append ':value' to the variable to return the raw value.

Example: [my\_checkbox:checked:value] and [my\_checkbox:unchecked:value] could return '1, 3, 5' and '2, 4, 6, 7', respectively, and [my\_checkbox(2):value] will return 1 or 0 if checked or not checked.