





# REDCapTidieR

Makes it easy to read REDCap Projects  
into R

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# Outline

- Why REDCapTidieR? 
- Loading a REDCap project into R 
- Adding labels and summary statistics 
- Exporting to Excel 

# Why REDCapTidieR?

- Make it easy to import REDCap projects into R
  - Even if they are complex: longitudinal, repeated events or instruments, surveys, and/or data access groups (DAGs)
  - Pulls data and metadata into a single object that can be easily explored in RStudio IDE
- Make it robust and performant
  - Built on top of REDCap
  - 97% test coverage
  - Extensive error checking with helpful error messages
  - Profiled to use base R where we found bottlenecks
- Support labels (using {labelled}) and summary stats (using {skimr})
- Make it easy to export a collaborator-friendly Excel file

# Loading a REDCap Project into R

- Use `read_redcap()`
  - Requires REDCap URI and API token
- Returns a **supertibble** (tibble of tibbles)
  - Contains data and metadata
  - Data is transformed in intelligent ways to make it more user-friendly (described in detail in the “Diving Deeper” vignette)
  - Can be piped into other REDCapTidieR functions

# Adding labels and summary statistics

- Use `make_labelled()` to add labels
  - Requires {labelled} package to be installed
  - Uses REDCap field labels
- Use `add_skimr_metadata()` to add summary statistics
  - Requires {skimr} package to be installed
  - Adds summary stats to the **metadata** tibble for each instrument

# Extracting tibbles from the supertibble

- Use `bind_tibbles()` to automagically import all instruments into the Environment
- Use `extract_tibble()` to return an individual instrument's data

# Exporting to Excel

- Use `write_redcap_xlsx()` to export to Excel
  - Requires {openxlsx2} package to be installed
  - One tab per instrument plus TOC and Metadata tab
  - Supports labels

# Demo



# Recap



- Use `read_redcap()` to load a REDCap project into R
  - Returns a **supertibble** which contains data and metadata broken down by instrument
- Use `make_labelled()` to add variable labels
- Use `add_skimr_metadata()` to add summary statistics
- Use `bind_tibbles()` or `extract_tibble()` to extract instruments from a supertibble
- Use `write_redcap_xlsx()` to export a supertibble to Excel

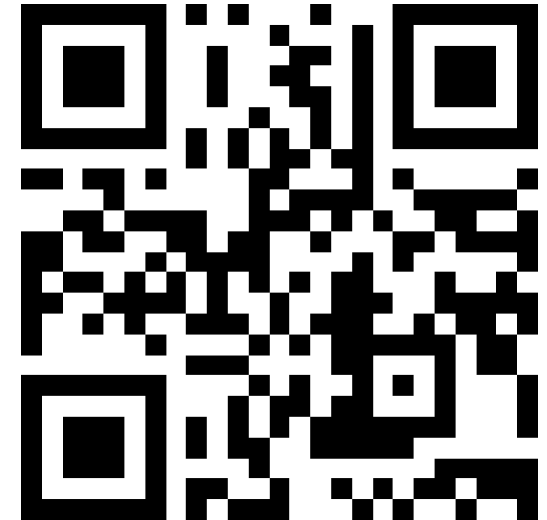
# Try It for Yourself!

REDCapTidieR 0.4.0   [Get Started](#)   [Glossary](#)   [Reference](#)   [Articles](#) ▼

## REDCapTidieR

The REDCapTidieR package provides an elegant way to [import](#) data from a [REDCap project](#) into an R environment. It builds upon the [REDCapR](#) package to query the [REDCap API](#) and then transforms the returned data into a set of [tidy tibbles](#).

REDCapTidieR is especially useful for dealing with complex REDCap projects that are [longitudinal](#) or include [repeating instruments](#) or both.



## Installation

The release version can be installed from [CRAN](#).

```
install.packages("REDCapTidieR")
```

<https://tinyurl.com/redcaptidier>

# Thank You!

- Ray Balise for organizing this session
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