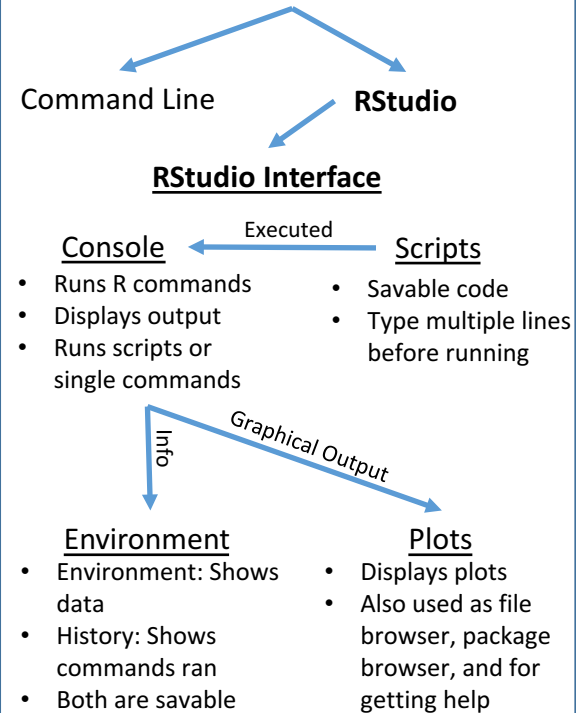


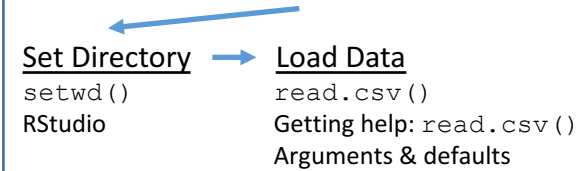
Intro to R/RStudio

How can we interact with R?



Analyzing Patient Data

How can we load our data into R?



How do we work with loaded data?

Assigning Variables

- What is a variable?
- Defining a simple variable (`<-`)
- Printing variables
- Arithmetic w/ variables - operators
- Loading datasets into variables
- SIDENOTES: how-to commenting

Working with Data/Variables

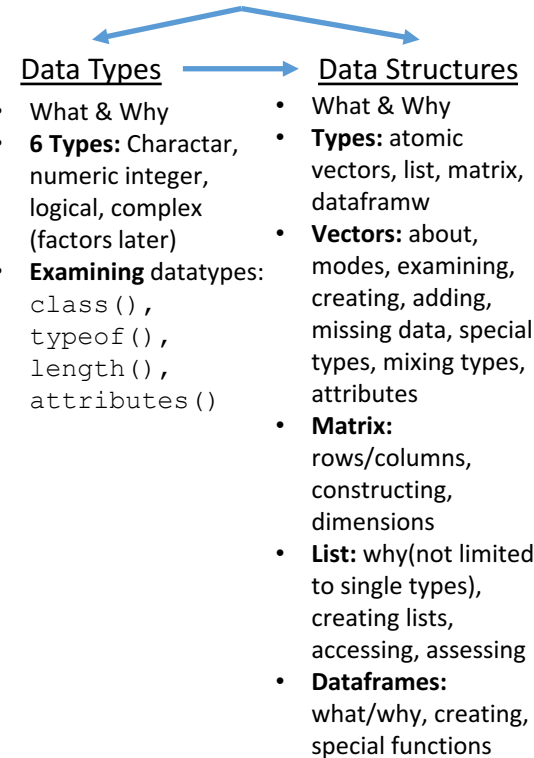
- Type of data (`class()`)
- Checking dimensions (`dim()`)
- Accessing data: single values, slicing, combinations, by column name
- Applying calculations (max, min, mean, median, sd)
- Applying with MARGIN (column vs row)
- Column & row specific calculations

Plotting Data

- Creating a basic plot
- EXAMPLE: Finding errors in data w/ plotting

Data Types & Structures

How is data stored in R?



Factors

How do I deal with categorical data in R?

Factors

What is a factor?

- Categorical representation
- Stored as integers with associated labels
- Levels
- Ordered vs unordered

Creating & Modifying Factors

- `factor()`, `level()`, `nlevel()`
- Ordering factors
- Converting factors

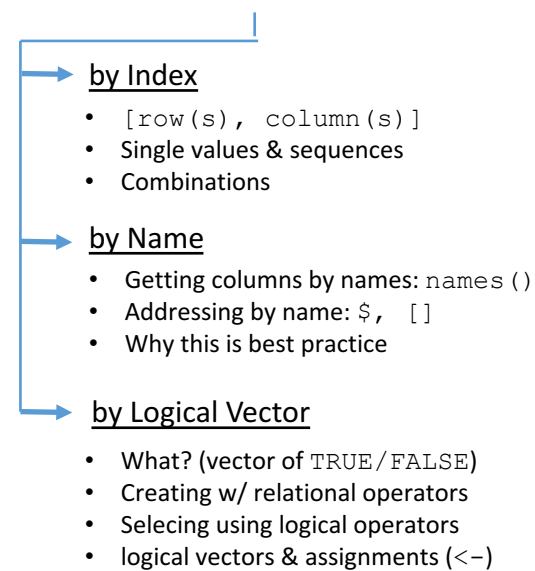
Using Factors

- Loading datasets w/ strings as factors
- Observing with `str()`
- Using `summary()`
- Removing factor levels: reassigning, dropping levels, shortcut

Accessing Data

How do I access my stored data?

3 ways!



Looping

How do I do repeated operations?

3 ways!

