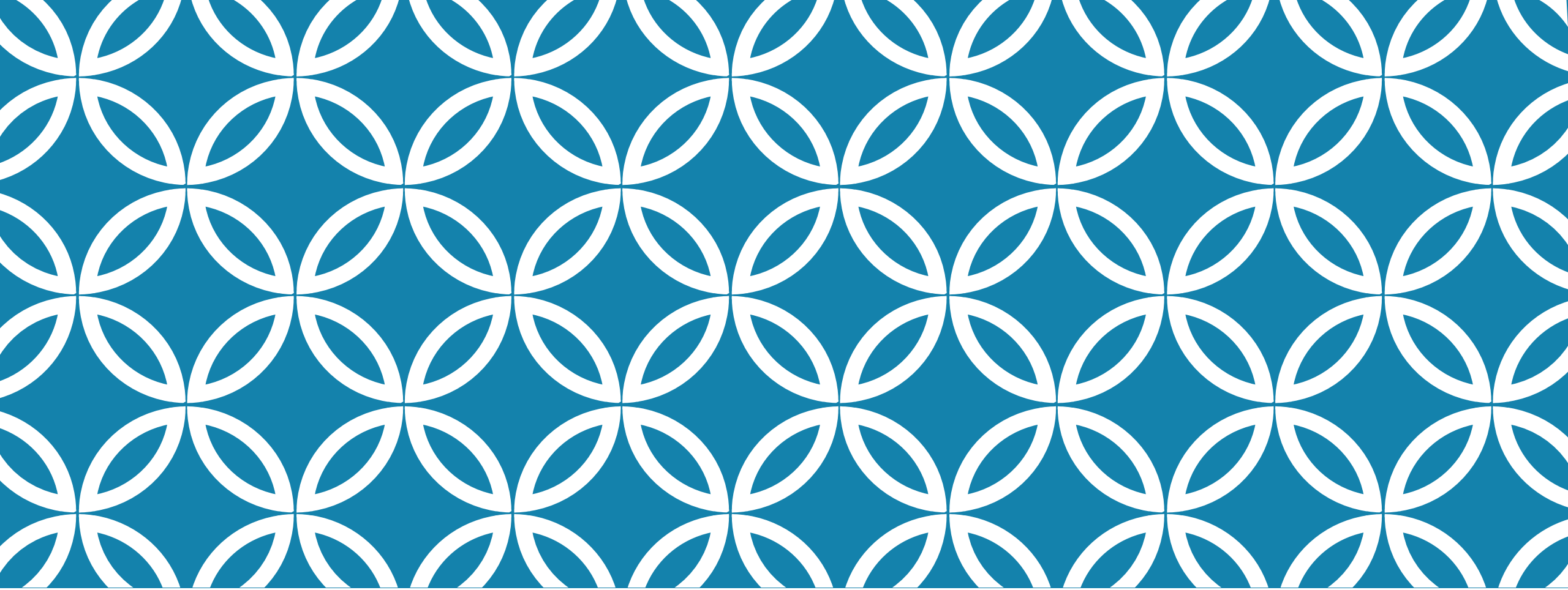


Introduction to R Workshop

Patrick Mathias

September 26, 2021

Course Introduction

Goals and Objectives

- Advocate for the use of R as a means of improving reproducibility in clinical data analysis
- Demonstrate how R is used to perform analyses of laboratory operational data
- Establish a basis of understanding in the 'tidy' approach to data analysis within the framework of R

September 26, 2021	**Session**	**Instructor**
8:30 am - 8:45 am	Course Introduction	Patrick Mathias
8:45 am – 9:30 am	Intro to R and Reproducible Reporting	Joseph Rudolf
9:45 am - 10:30 am	Coding Basics and Importing Data	Joseph Rudolf
10:45 am – 11:30 am	Data Visualization	Patrick Mathias
LUNCH		
12:30 pm - 1:30 pm	Data Transformation	Patrick Mathias
1:45 pm – 2:45 pm	Grouping and Summarizing Data	Joseph Rudolf
3:00 pm - 3:30 pm	Dashboard Demo and Course Wrap Up	Patrick Mathias

Who are we?

Patrick Mathias

Assistant Professor, Department of Laboratory Medicine and Pathology, University of Washington School of Medicine

Vice Chair of Clinical Operations

Associate Medical Director, Laboratory Medicine and Pathology Informatics

Joseph Rudolf

Assistant Professor, Department of Pathology, University of Utah Medical School

Medical Director, Automated Core Laboratory, ARUP Laboratories

Workshop Workflow

Sessions

Loading Data to Create a Dataframe

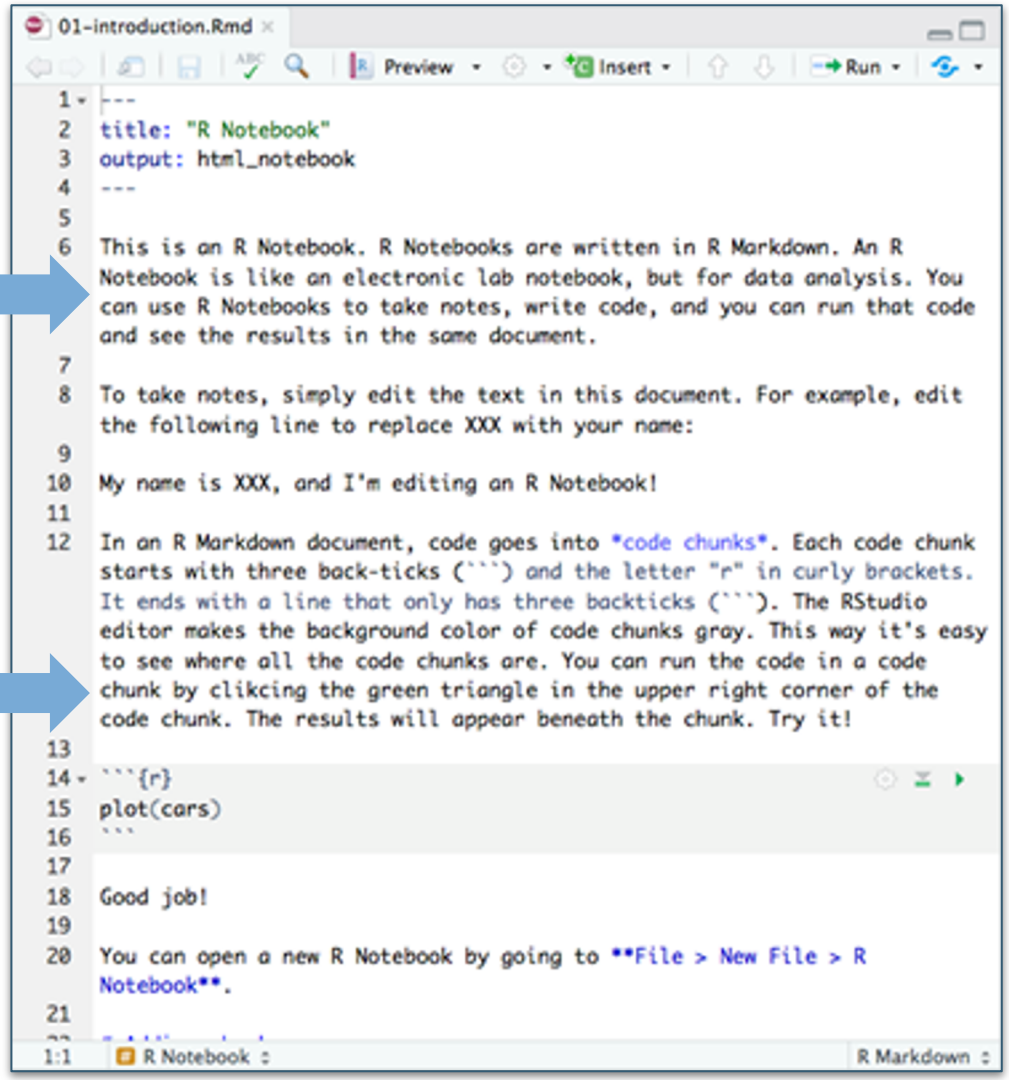
```
data_frame <- read_csv("file_name")
```

Your Turn

Introduce yourself to your neighbors

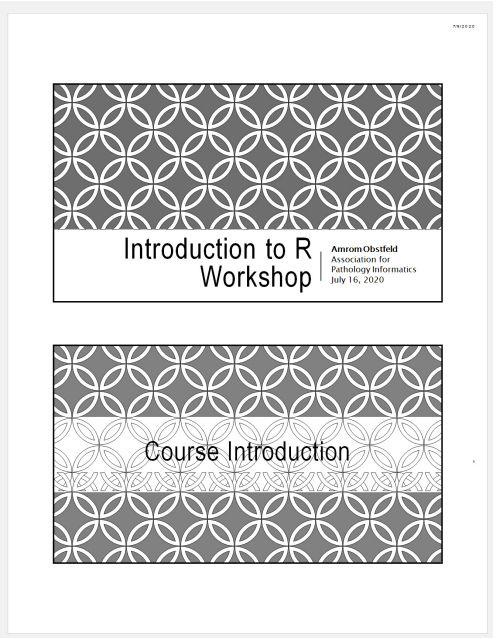
- Who are you?
- Where are you from?
- What do you do with data?
- Have you ever used R?

3:00



Workshop Coursebook

- Coursepack folder on website contains:
- PDFs for slides
- Cheatsheets



Getting Help – In person lesson

- See email for Slack invite
- Simple question – Ask in # general Slack channel
- More complicated – Direct message remote instructor
- Really complicated – Seek out in person help during exercise or break

Getting Help – Remote lesson

- Raise hand (literally)
- In person and Slack support during exercises

Who are you?

Your Turn

Introduce yourself to the room

Who are you?
Where are you from?
Why are you here?
Have you ever used R?

Tips for learning

- Cheatsheets show how to do common things – orient yourself with them early
- The best way to learn to code is by doing
- Practice is key!
- Programming is hard, even for those with a lot of experience. Find resources and ask for help!