

Introduction to data science in health and social care

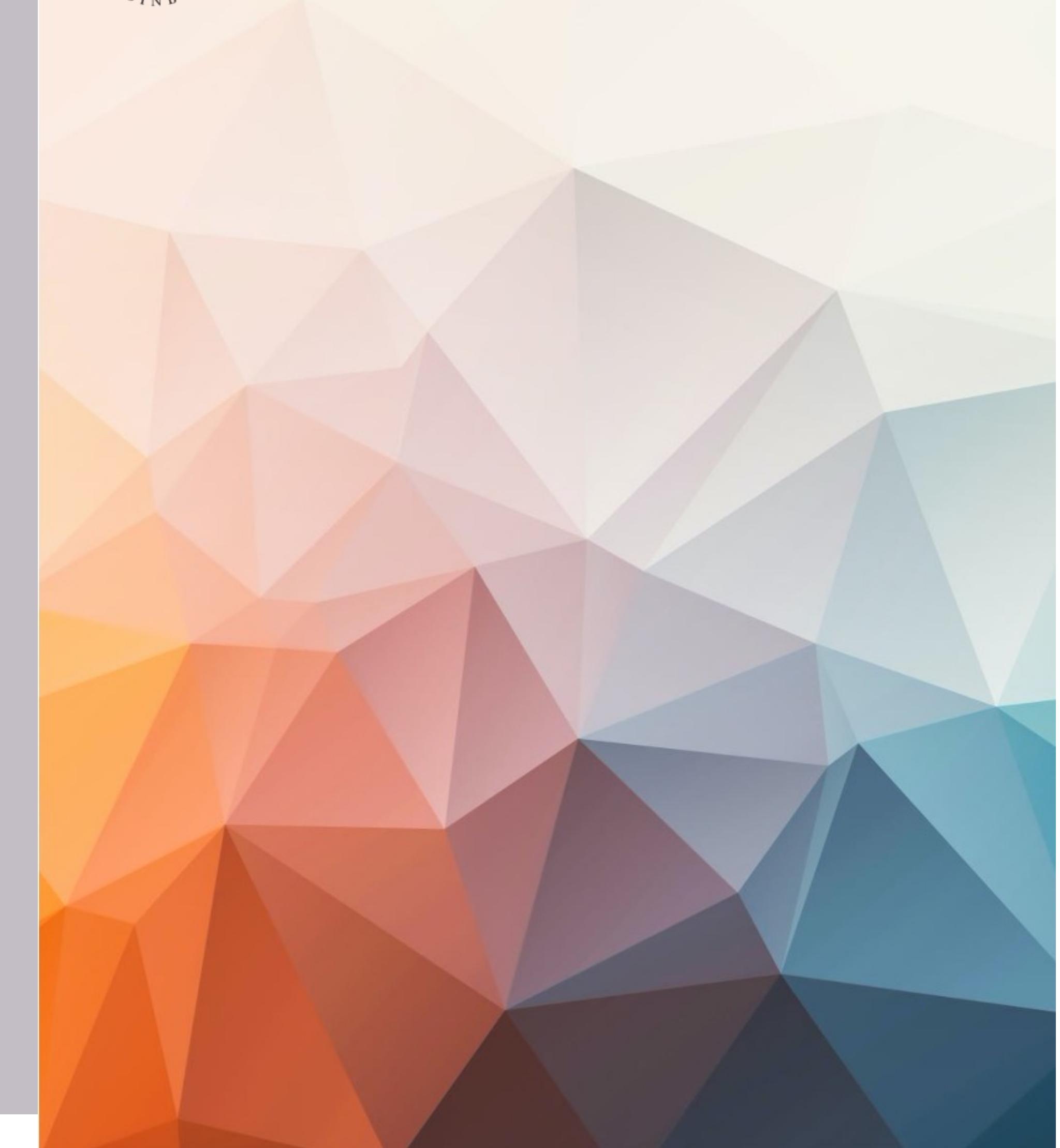
Week 4

Brittany Blankinship | 12 October 2022



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Audio check

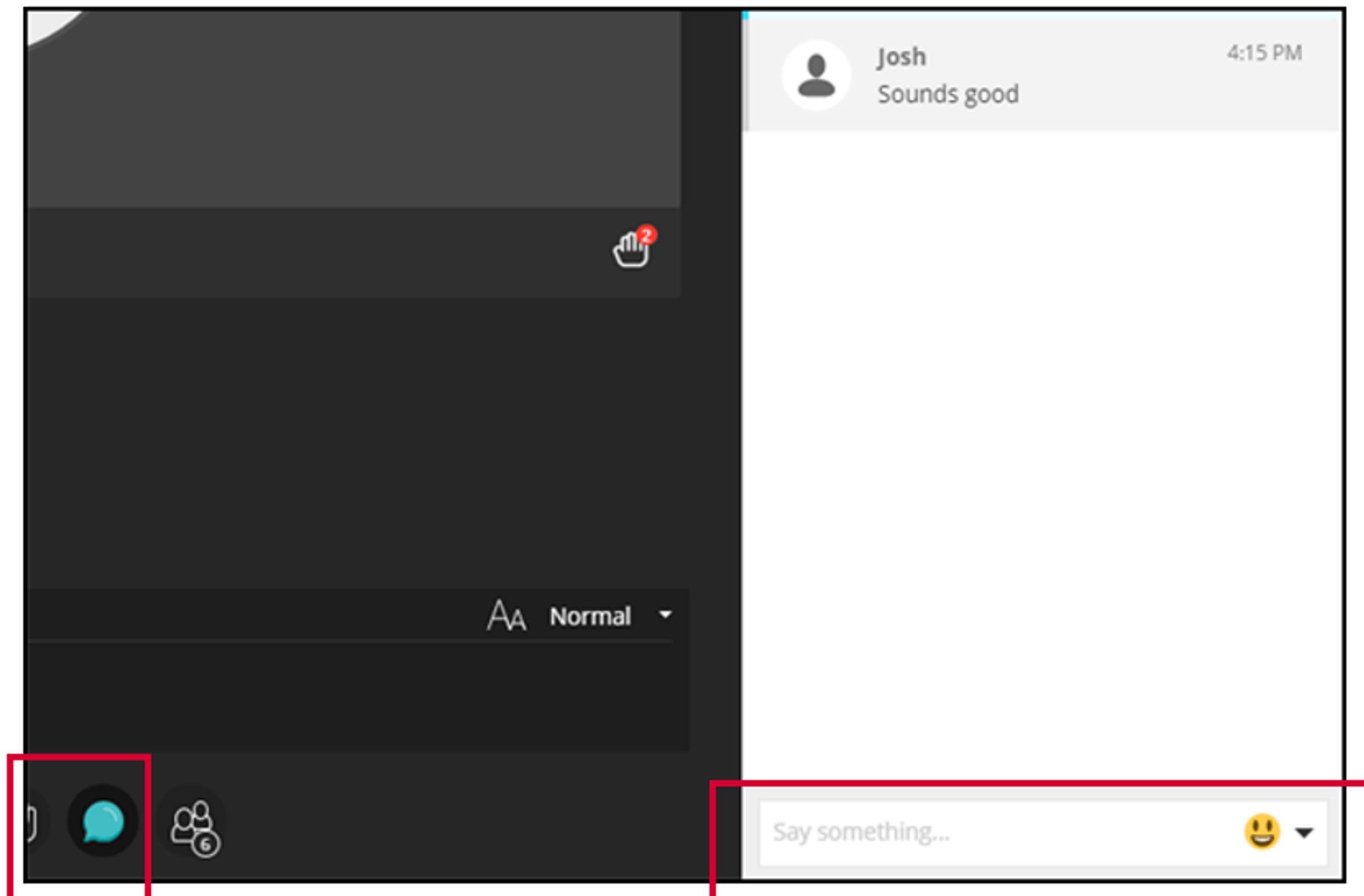
Open to
the world

Can you hear the presenter talking?

Please type **yes** or **no** in the “Text chat area”

If you can't hear:

- Check your Audio/Visual settings in the Collaborate Panel
- Try signing out and signing back into the session
- Type into the chat box and a moderator will try to assist you





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Data-Driven
Innovation

Introduction to data science in health and social care

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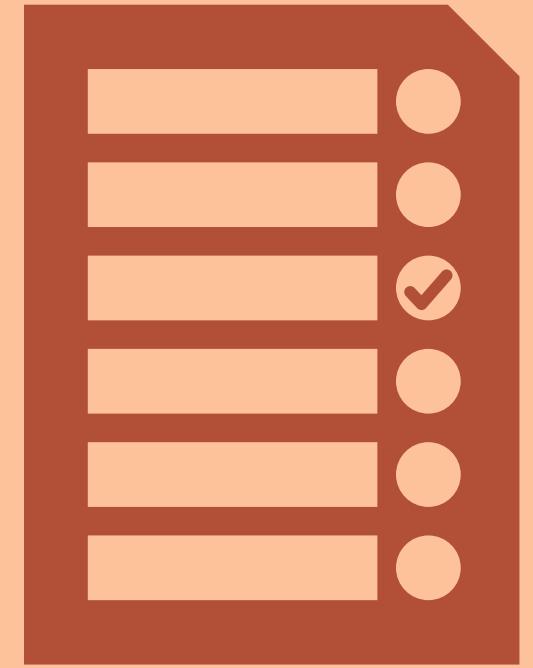
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Agenda

- Course/assessment updates
- Datathon project
- Data storytelling
- More on R and R Markdown



Graded Discussion Post

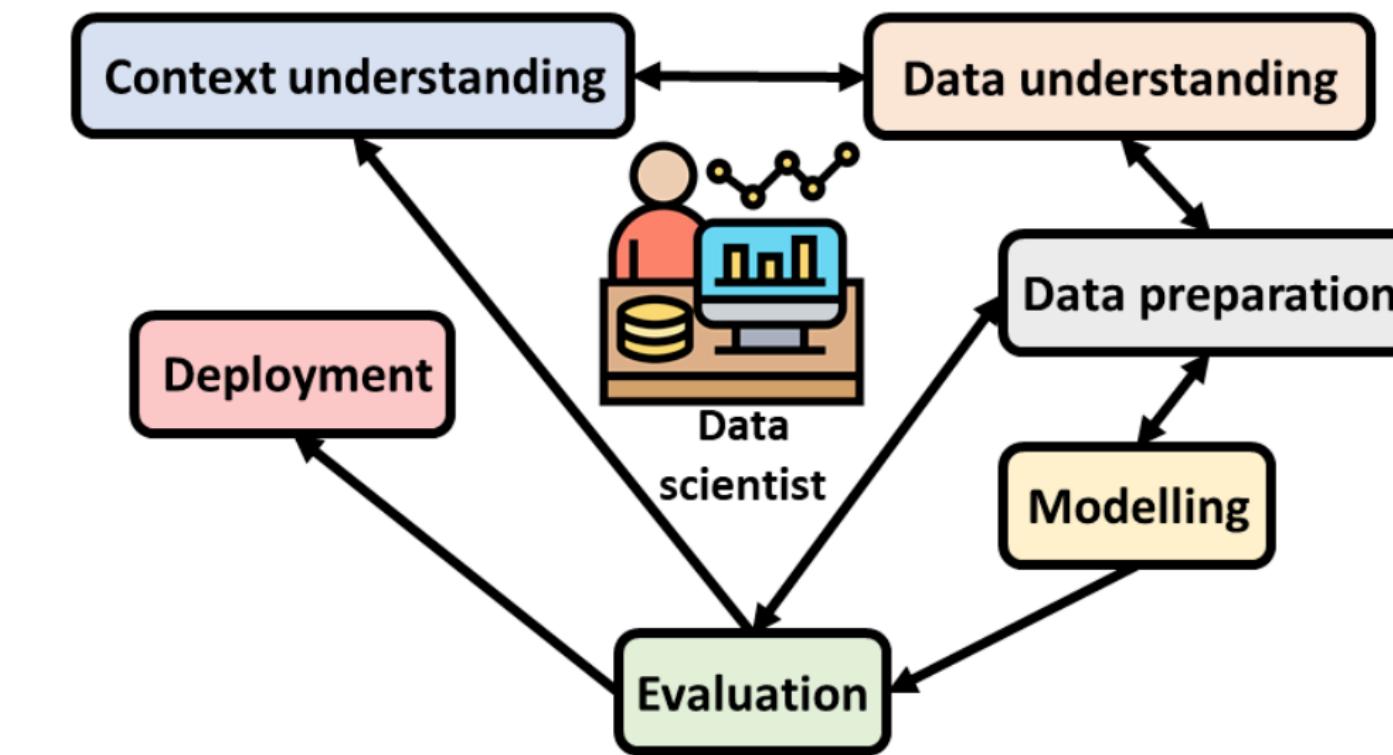
- Due: 21 October 12:00 UK time
- Reply to a peer's response to receive full marks
- Can view other posts after submitting yours
 - Submit your response by creating a thread

Instructions

Please craft a response to the following discussion board prompt:

Select a topic within health and social care that interests you, how might you use data science or data driven innovation to improve or impact the systems for the better? Link your response to the Data Science Process discussed in Week 2.

The data science process



Datathon info available on Learn

- Groups have been announced
- Check team discussion board space to connect with your team if you have not done so already!

SOCIAL CARE (2022-2023)
[FLEX]

Welcome
Course Information
Announcements
Discussions
Live Collaborate Sessions
Noteable
Assessment
Library and Resources

Course Materials
Week 1: Health and Social Care Delivery and Organisation
Week 2 - Data Science
Week 3 - Data Ownership and Management
Week 4 - Data Quality and Standards

Course Contacts
Have Your Say
Help and Support

Assessment

Assessment summary:

- Graded Discussion Boards - (20%)
- Group Presentation - (30%)
- Project Report (1,800 words) - (50%)

Assessment:

Outwith the datathon project, you will also be assessed 20% of the overall course grade (10% each).

The datathon project will include a group presentation course grade. At the end of the course you will write a final 70% of your grade. You will report on why your members.

 **Graded Discussion Post 1**

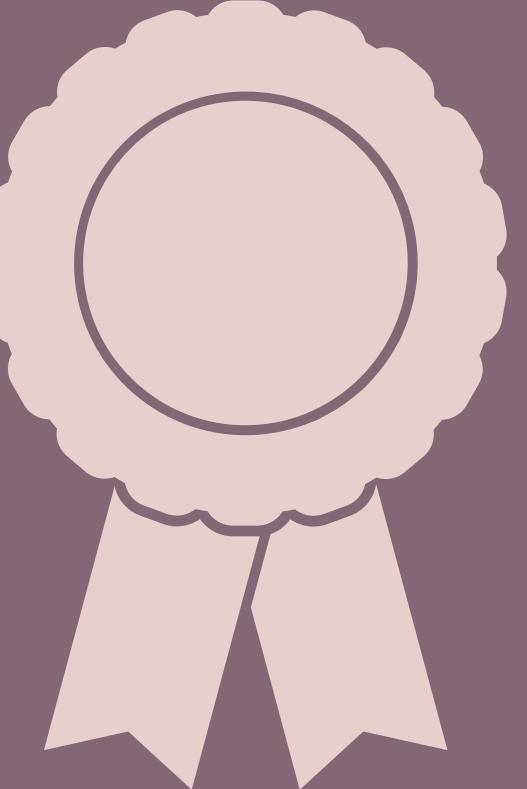
 **Datathon-data storytelling**



Source: [Brent Dykes \(2016\)](#)

Datathon info available on Learn

- 1st task = meet with your team and complete the Group Learning Agreement
- Roles:
 - Project manager
 - Collaborate director
 - Minute minder
 - File supervisor
 - Chief storyteller
 - Context Captain
 - Presentation conductor
- If you come up with a team name, let me know and I can rename your team!



Have you reached out to your
group?

Datathon Project

Create a data story using the **OECD Health Statistics Repository**

- entirely up to your team to decide on your data story
 - specific variables & covariates (dates, countries, demographics, etc) entirely up to your team!
- you are invited to use other datasets, but must use some data from the **health care utilisation data set**

2 assessed aspects

- group presentation
- individually written R Markdown report

Group presentation

Slides due: 30 November 2022

Presentation: 2 December 2022

- 10 minute presentation with 10 slides (not including title slide)
 - with 3-5 minutes of questions
- 2 key data visualisations
- present key findings & clear recommendation of action as a result

Peer evaluation (10% of presentation mark) & assessors from the course team (90% of presentation mark)

Evaluated based on 5 aspects

1. narrative & effective storytelling
2. data visualisation
3. time management
4. professionalism & slides
5. teamwork & participation

Individual report

Due: 6 December 2022 12 noon UK time

- 1,800 word R Markdown report
- demonstrate a clear understanding of your group's data story at the end of the course
- evaluated based on 5 aspects:
 1. narrative/data storytelling
 2. critical thinking/analysis
 3. data visualisation
 4. data wrangling and coding
 5. reflective practice

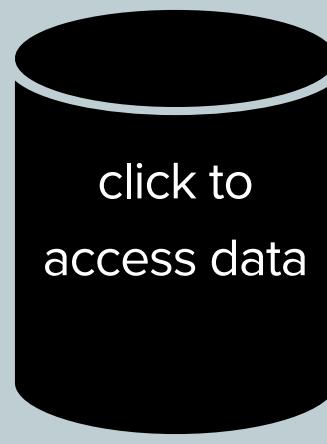


Individual report

Due: 6 December 2022 12 noon UK time

- Code will be the same as your group
 - be sure to show code chunks with global chunk option echo = TRUE
 - code does not count towards 1,800 word limit
- Report itself *must* be written independently
- PDF or Word Document file types





OECD Health Statistics Repository

OECD iLibrary

Search all content by title or author



EN

Browse by Theme

Browse by Country

Browse by Theme and Country

Catalogue

Home > Statistics > OECD Health Statistics

OECD Health Statistics

OECD Health Statistics offers the most comprehensive source of comparable statistics on health and health systems across OECD countries, and includes data found in the publication *Health at a Glance*. It provides data on the health status of the population including obesity (overweight, obese), suicide and life expectancy, health care financing, health care resources, social protection, health care utilization, the pharmaceutical market, long-term care resources and utilization, non-medical determinants of health, expenditure on health, and demographic and economic references, with coverage being provided for OECD and selected non-OECD countries as far back as 1960.

Less

English | Also available in: French

Related Indicators: | Related Databases:

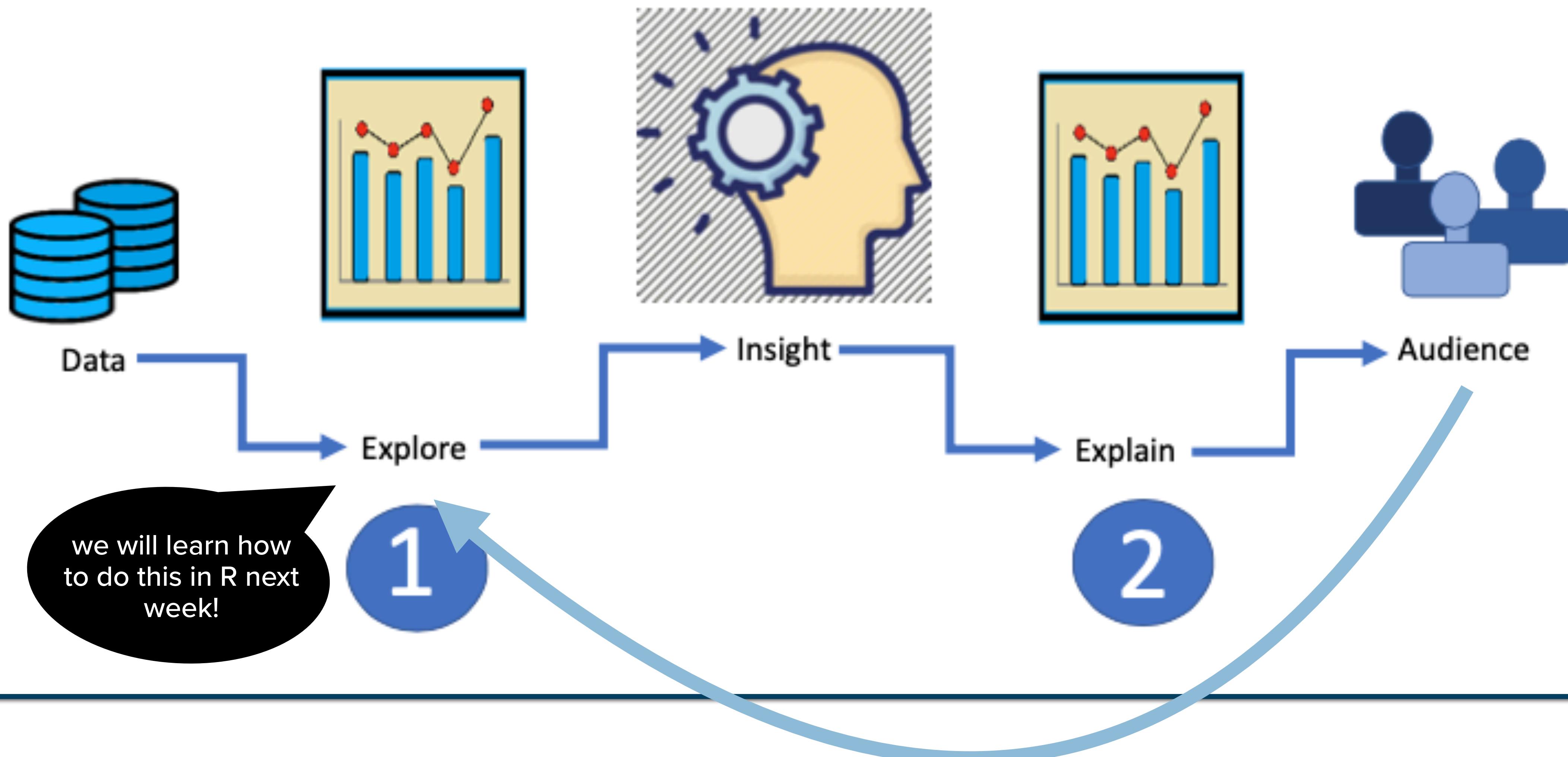
Keywords: obesity, statistics, obese, overweight, health

ISSN: 20743963 (online) | <https://doi.org/10.1787/health-data-en>

en-települések1787.01.pdf (számlálás nélkül)

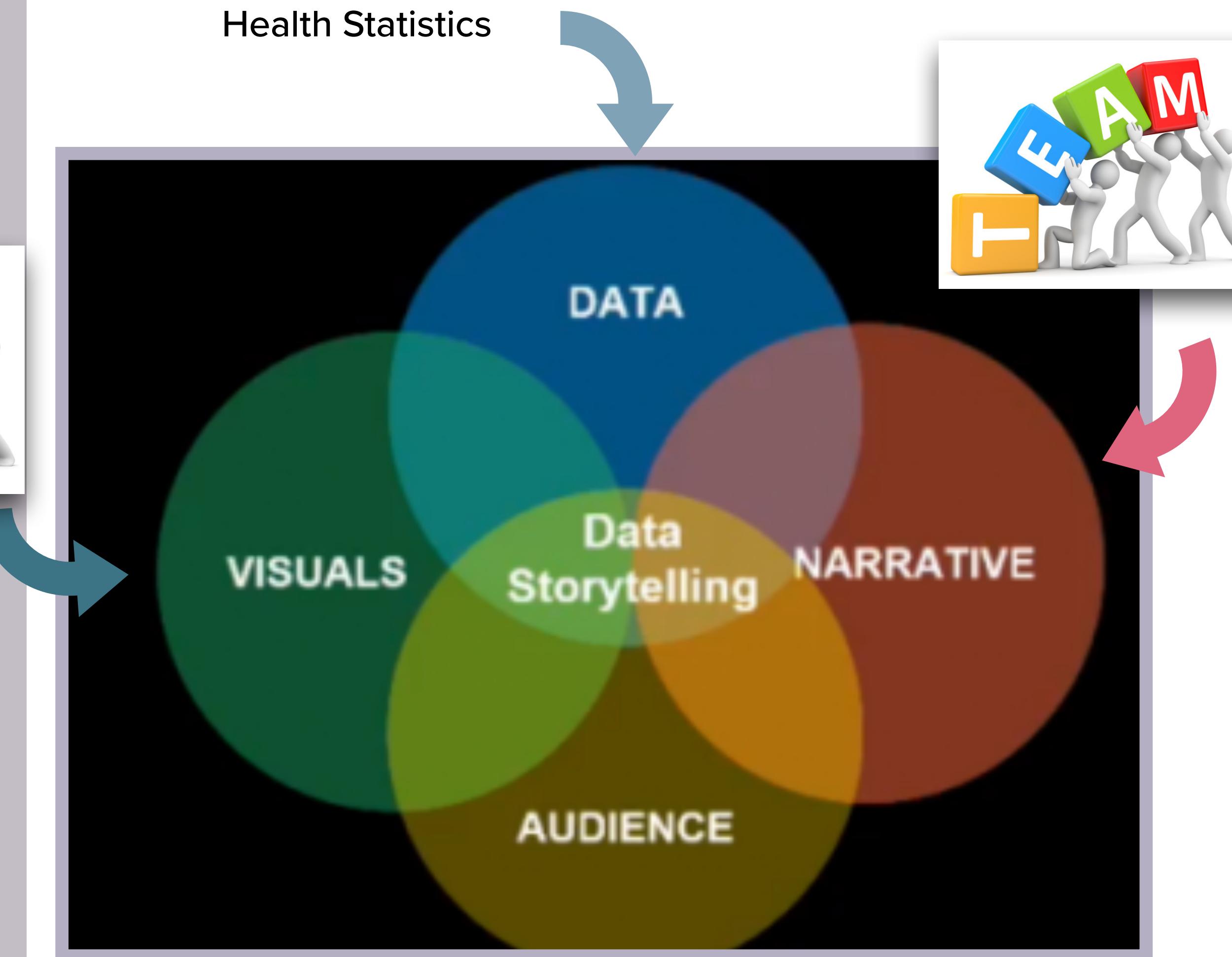
2023.03.20. 10:00:00 - 2023.03.20. 10:00:00

The two step process for developing a data story

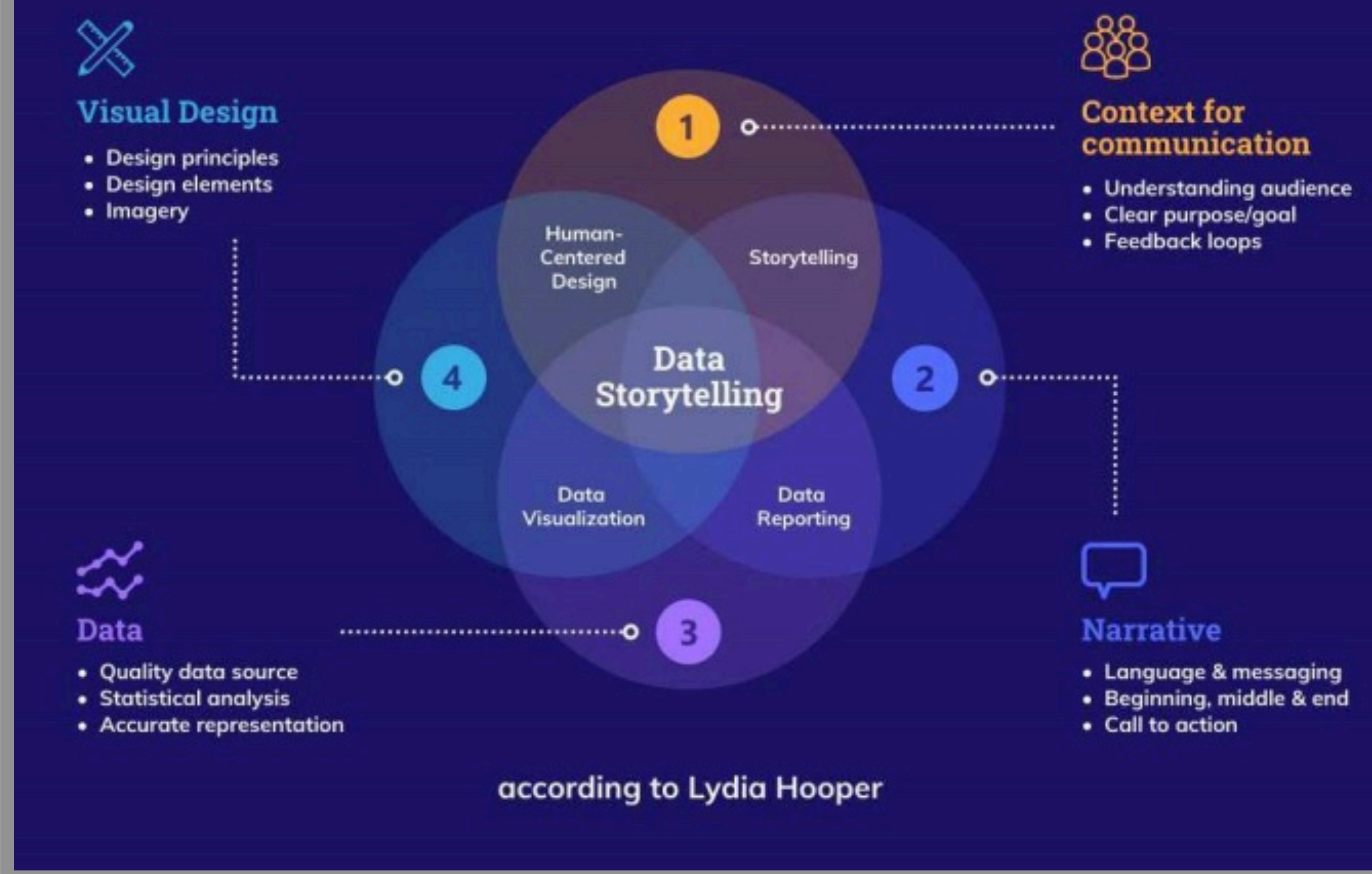


Data storytelling

OECD Health Care Utilisation &
Health Statistics



What is data storytelling?



You can read [Lydia Hooper's blog here](#)

Things to consider before narrative & visualisations

- Who is your audience?
- What do you need your audience to know or do?
- How will you communicate to your audience?
- Data drives the story. You are not looking for data to support a narrative you have already decided on



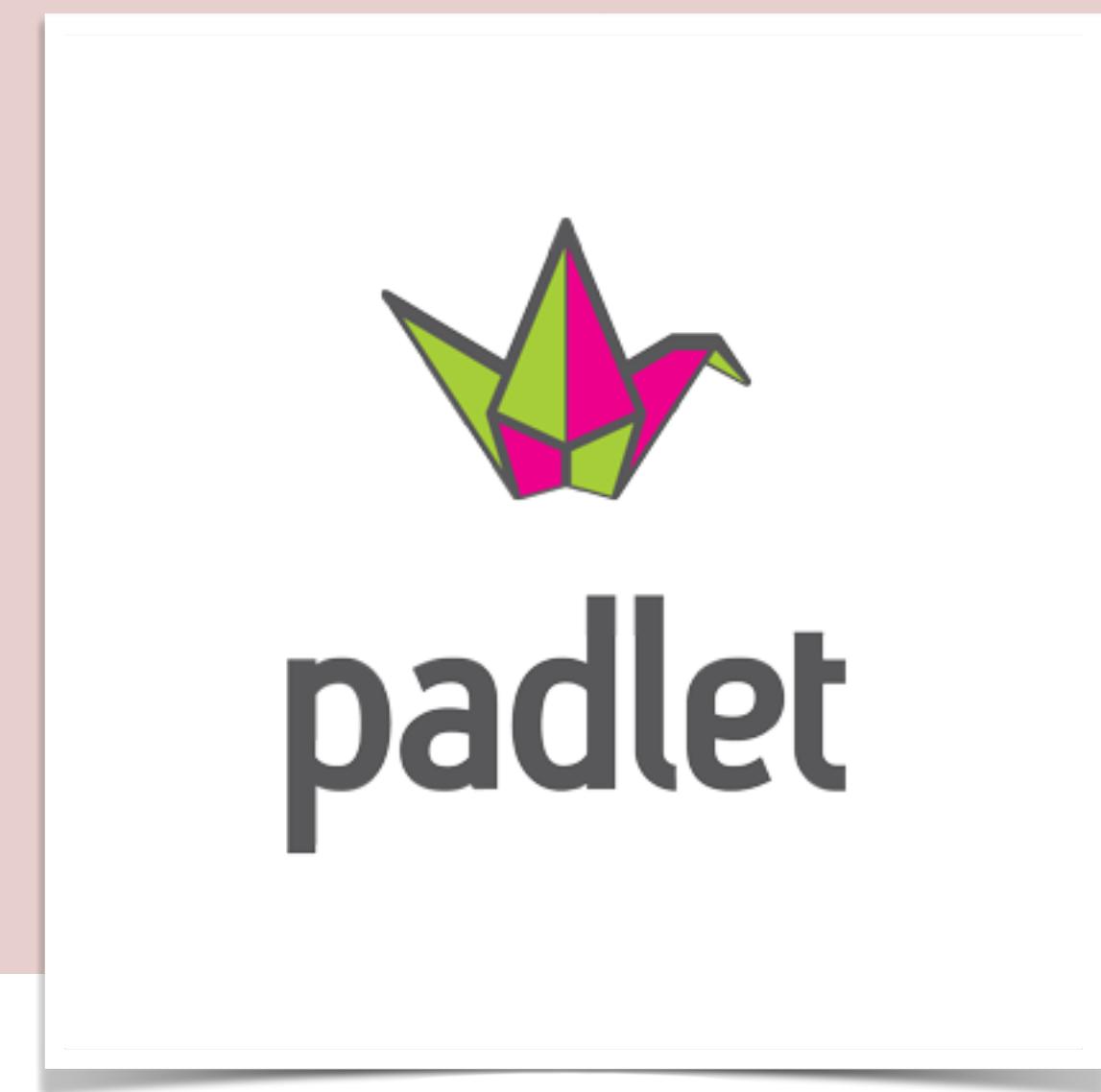
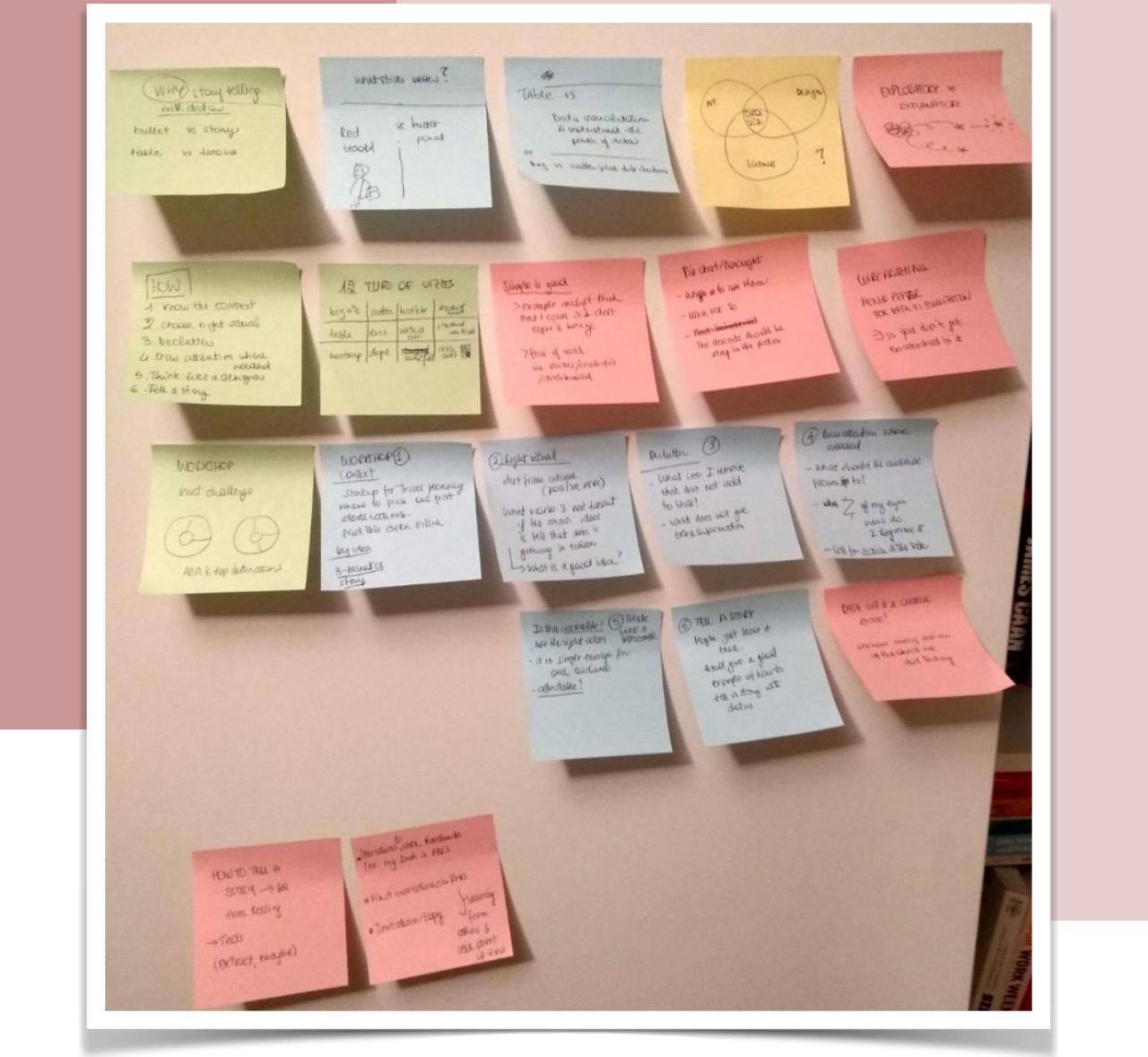
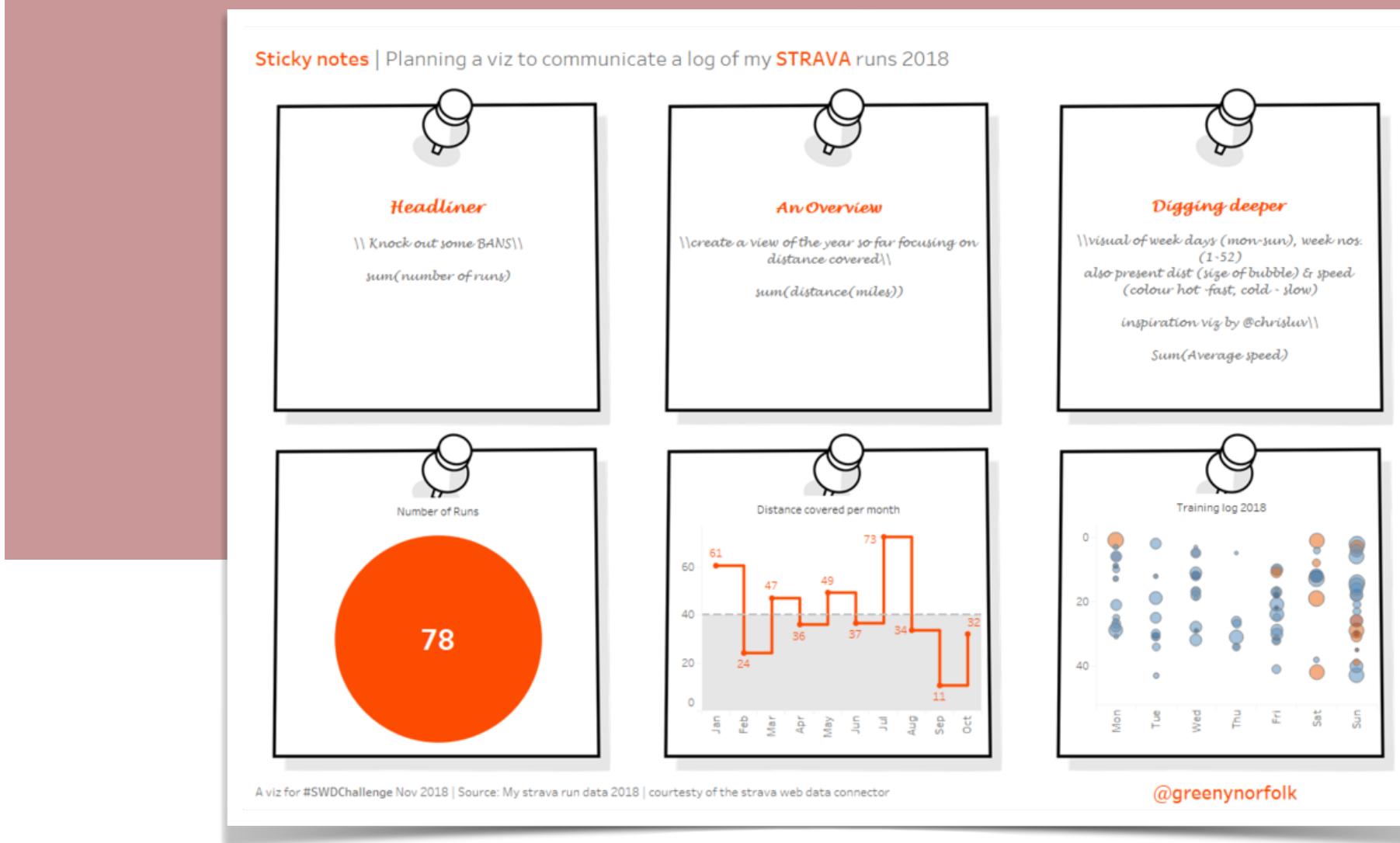
**Storyboarding
can help!**

Storyboarding

- Do not start with presentation software when creating a data story
 - your presentation is a final product - not a work in progress
- Storyboard can be used to establish a structure & flow for your narrative
 - a visual outline of the content you plan to develop
 - particularly useful when working online & in teams
- If you create a storyboard, you can ask your tutor or other peers for feedback

Storyboarding

- Whiteboard
- Post-it notes
- Group Journal or Wiki on learn
- software such as Padlet or Trello





Go to padlet.com to create an account

An example padlet I have made

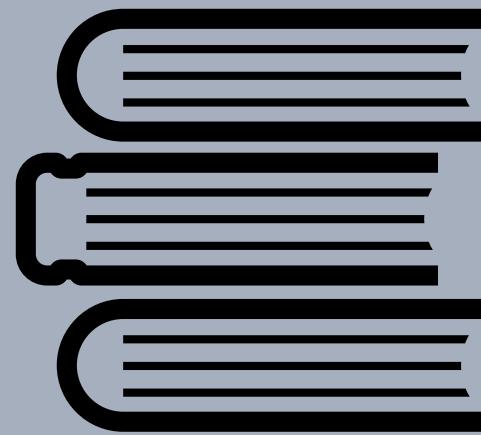
Here is an example of what a storyboard might look like:

Storyboard-Example ('Flattening the curve')

Collaborative storyboard for 'Data science in health and social care' course. To create new items select the plus icon under each week. These can be edited/deleted and moved around the page.

Issue	Demonstrate issue	Ideas for overcoming issue	Describe course of action (goals)	Demonstrate success	Recommendation
<p>Death rates in Victoria, Australia, are increasing</p> <p>Add comment</p>	<p>Visual 1</p> <p>Source: Victoria State Government</p> <p>https://www.bbc.co.uk/news/world-australia-53589817</p> <p>Add comment</p>	<p>Flatten the curve</p> <p>Ask the public to wash hands properly, wear a mask indoors in public spaces, maintain social distancing, and stay home</p> <p>Add comment</p>	<p>Flattening the curve refers to slowing the number of new cases so that hospitals aren't overwhelmed at any one time.</p> <p>IMAGE CREDIT: SIOUXSIE WILES AND TOBY MORRIS / WIKIMEDIA COMMONS (https://hub.jhu.edu/2020/03/13/what-is-social-distancing/)</p> <p>Add comment</p>	<p>Visual 2</p> <p>FIGURE 1 Daily New COVID-19 Deaths in Canada, the UK, and the United States</p> <p>SOURCE: Our World In Data</p> <p>John Hopkins University CSSE COVID-19 Data (https://ourworldindata.org/)</p> <p>Add comment</p>	<p>We recommend that if we are to follow the success of the US, Canada and the UK, to "flatten the curve" of COVID-19 cases in Victoria you need to wash your hands properly, wear masks indoors in public spaces, maintain social distancing, and stay home.</p> <p>Add comment</p>

Storytelling techniques



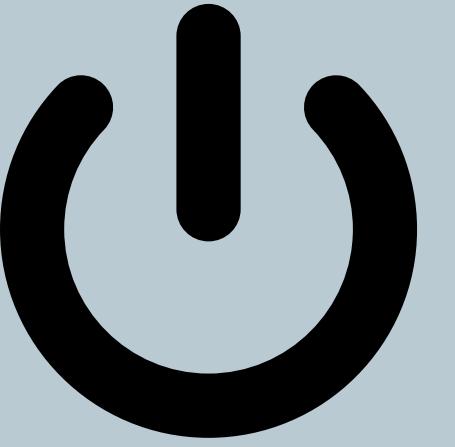
1. Lead statement

- complete sentence
- conveys the problem and articulates key insight

2. Elevator pitch

- short statements encapsulating your data story which captures your audience's attention and sparks interest
- 5 steps
 - A. understand your objective
 - B. understand your audience
 - C. outline the problem
 - D. outline the solution
 - E. call to action

Some helper code to get your groups started



The data is in *super* long format (we will learn more about what this means next week!)

- cannot effectively analyse it as it downloads
- use the helper code for the Health Care Utilisation dataset on Learn to extract the variables of interest to your team data story

To RStudio!



Questions?