

Course Announcements

Due this Friday (11:59 PM):

- Lecture quiz
- A3p1

Due Sunday (11:59pm)

- Checkpoint 2
- D6
- Next lecture quiz

Notes:

- Please complete your CAPEs (+1% to everyone's grade if $\geq 85\%$ complete)
- During finals week:
 - I will announce office hours after taking a survey to determine when will be useful for you, but it will be over zoom and multiple days
 - Final video* + report* + survey: due Fri 3/24 (11:59 PM)

* indicates group submission

Effective Communication

...

Written Communication



Data Science Reports

1. In-depth details of analysis
2. Full Explanation (nothing extra)
3. A handful of figures (w/ interpretation)
4. Tell a Story



What to avoid:

1. Explaining every little thing you did
2. Being too wordy
3. Using the wrong visualization/bad figures
4. Typos & Confusion

What to Include in COGS 108 Final Project Report

- Good Title - short and informative
- Overview - *brief* overview w/ results
- Background (+ references) - intro to topic + prior work
- Hypothesis - informed guess + why
- Datasets - what data you used
- Data Cleaning - what you did to clean/check the data
- Data Analysis - explore the data, explain the process, answer the ?
- Ethics & Privacy - consider the entire process
- Conclusion & Discussion - wrap it up & discuss limitations

Final Project: Video

3% of Final Grade

3-5 minutes

All members must be involved but it's not required that all members speak or that members' faces are on video.

Can be a slideshow presentation w/ voiceover.

Can be something more creative. Has to effectively communicate your project.

Oral Communication

01:

Your Audience



02:

Storytelling



03:

The Grammar
of Graphics



04:

The Glamour of
Graphics





Presentation Goals

1. Inspire
2. Educate
3. Entertain



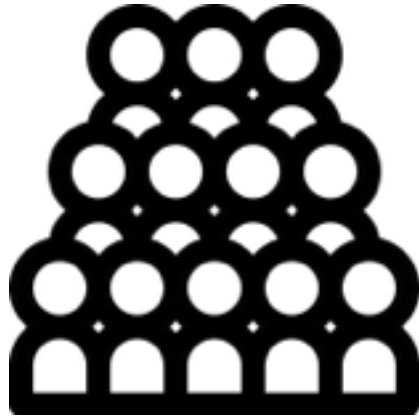
Ground Rules

1. Prepare
2. Practice
3. Don't go over time



01:

Your Audience



Consider your audience.

- General vs. technical?
 - Audience background?
 - Setting?
-

General

✓ background

🚫 limit technical details

🎉 emphasize take-home

Presentation: General Audience

Introduction & Background

- Details on background material
- Full explanation of question and *why* doing analysis



Analysis

- Limited discussion of approach
- Focused presentation of results



Conclusion

Your Audience

General

✓ background

🚫 limit technical details

🎉 emphasize take-home

Technical

↓ limit background

💻 all-the-details

🎉 emphasize take-home

Presentation: Technical Audience

**Introduction
&
Background**



Analysis

- Details on methodology
- Detailed results
- Discussion of tools/approach

Conclusion





02:

Storytelling



Storytelling: Ground Rules

1. Enticing, short title
2. Clear presentation
3. All the necessary info
4. Nothing extra



Outline Your Talk

1. Introduction
2. Topics (1, 2, 3)
3. Conclusion

In other words...
repetition is OK



Outline Your Talk

1. Tell them what you'll tell them.
2. Tell them.
3. Tell them what you told them.

Talk

- ☐ Has a good title
- ☐ Tells a story
- ☐ Only essential info on slides
- ☐ Appropriate level of detail for audience
- ☐ Practiced
- ☐ Orienting audience to all figures
- ☐ Within time limit
- ☐ Take-home message explicitly clear

On your slides...

- Limit number of ideas
- Limit words
- Choose good fonts
- Make text readable
- Include references

Slide Design Matters



This is not very easy to read.

This is much
easier to read.

Use Large (enough) Text



This is not
very easy
to read.

This is much
easier to read.

Choose Good Fonts

Fonts matter



MEGAFLICKS



Fast Taco



Fonts matter

Roboto family

Source family

Fira family

Alegreya

Crete Round

Muli

<https://practicaltypography.com/>



This is not
very easy to
read.

This is much
easier to read.

Choose Good Colors

Color is Hard.

- Figures
 - Slides
 - Highlighting
-

Rule #1: Choose intuitive colors.

NOT IDEAL



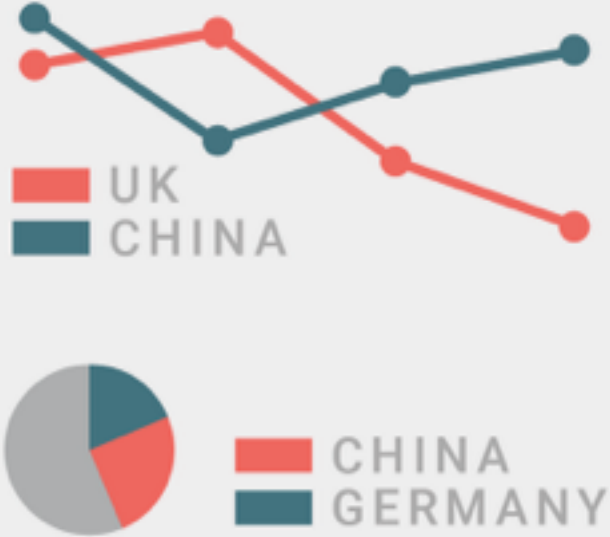
BETTER



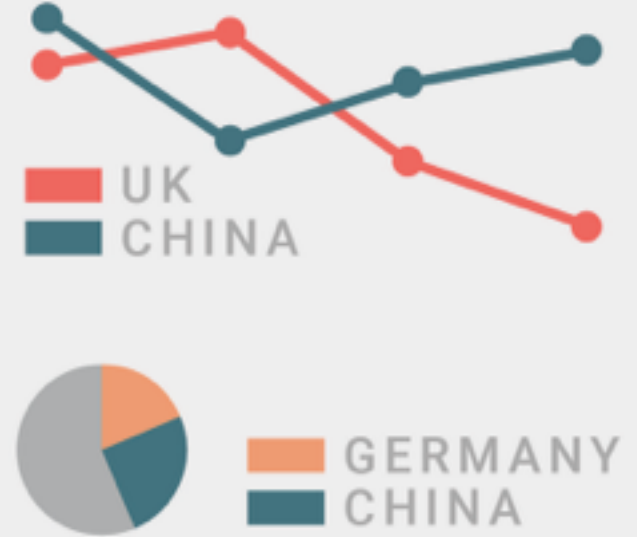
<https://blog.datawrapper.de/colors/>

Rule #2: Consistency is key.

NOT IDEAL

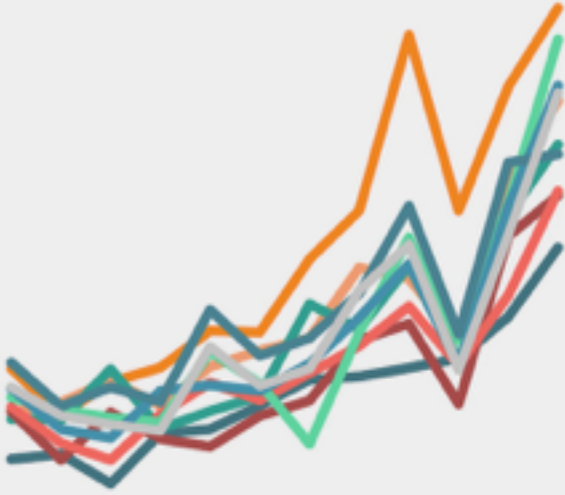


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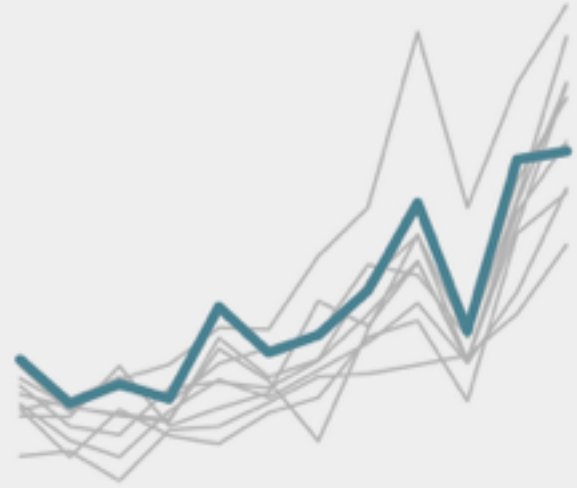


Rule #3: Gray is (definitely) your friend.

NOT IDEAL



BETTER

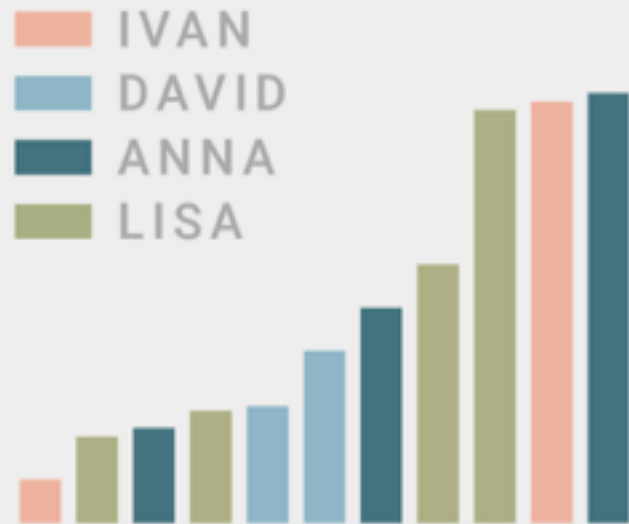


Bonus: Gradients for continuous. Distinct for categories

NOT IDEAL

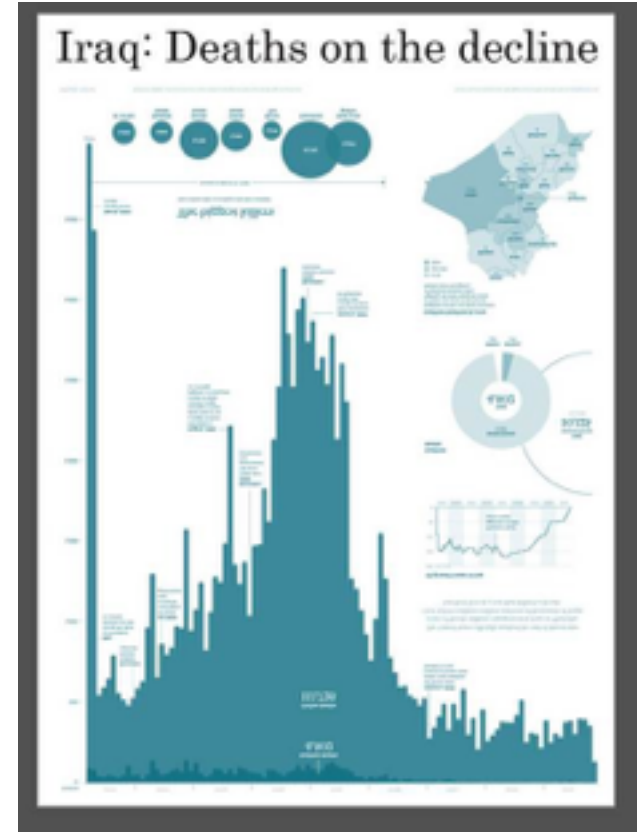


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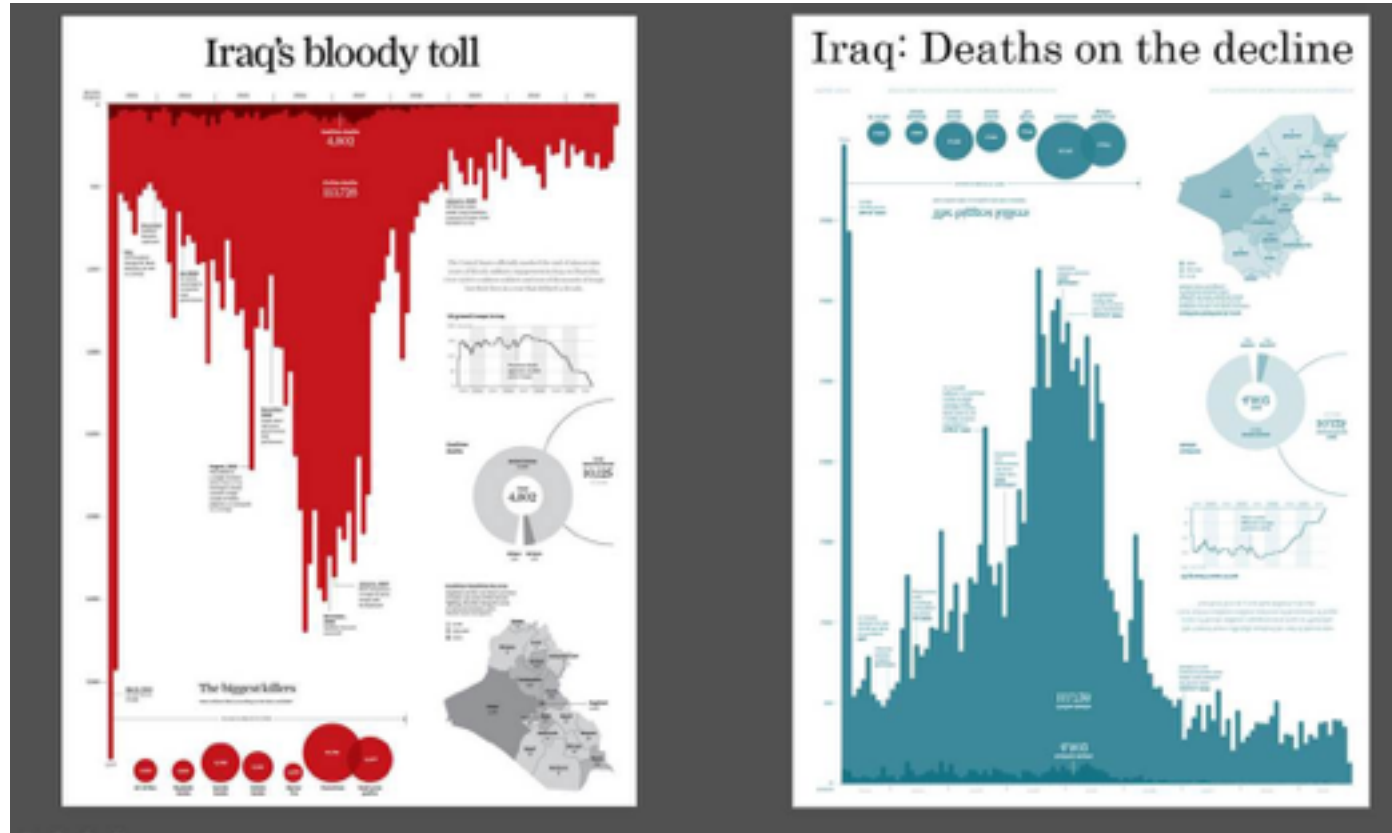
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Design choices alter the tone of your message



https://medium.com/@Elijah_Meeks/what-charts-say-6e31cbba2047

Design choices alter the tone of your message



https://medium.com/@Elijah_Meeks/what-charts-say-6e31cbba2047



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Size

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Weight

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Color

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Spacing

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Typeface

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



Title

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Title

SUBTITLE

This text is not really important, and it's not where I want you to focus your attention, so I'm going to play around with some things that allow you to focus on what I want you to focus on.

Hierarchy for Attention



IF YOU
DON'T
ALIGN
STUFF

- It's distracting
- It's unhelpful to your viewers

ALIGN STUFF

- Worth the time
- Doesn't distract
- Helps viewers

Take the Time to Align

Slides

- ☐ Consistent theme throughout
- ☐ Tone sets appropriate theme
- ☐ Good, consistent fonts
- ☐ Consistent, accessible colors
- ☐ Important stuff highlighted
- ☐ Alignment looks good
- ☐ Appropriate text/font size
- ☐ Appropriate whitespace
- ☐ Colors will project well

Visual Communication



Good Figures: Ground Rules

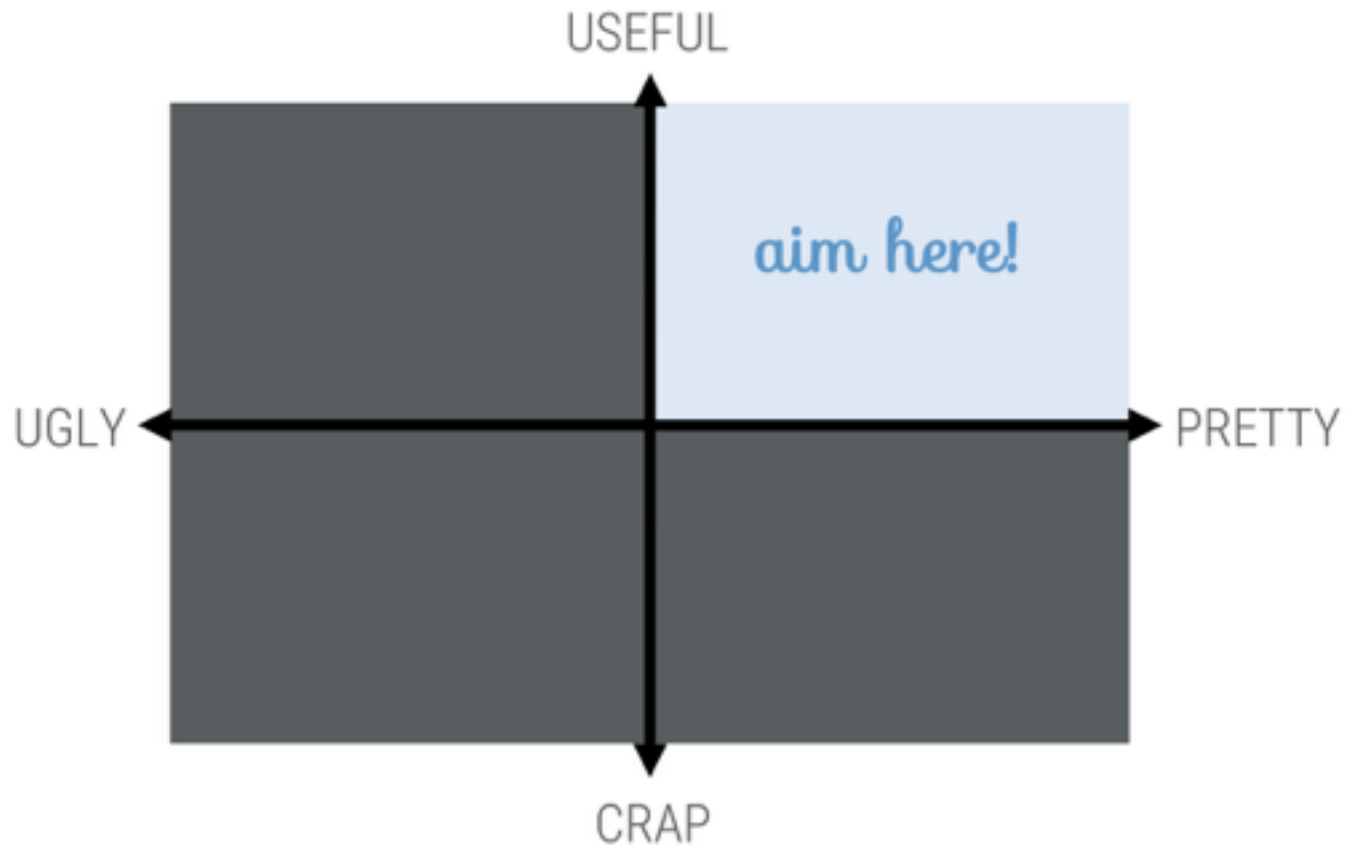
1. Left-align titles at top-left
2. Don't make people tilt their head
3. Alignment should create clean lines & symmetry
4. Borders - don't use them
5. Remove and lighten as much as possible
6. Legends suck
7. White space is like garlic - take the amount you need and triple it

NOTE! These are directly taken from Will Chase's rstudio::conf2020 talk: <https://www.williamrchase.com/slides/assets/player/KeynoteDHTMLPlayer.html>

Take a sad plot & make it better

Inspiration: Allison Hill & <https://policyviz.com/helpmeviz/>

Iteration



Source: Jackie Wirz

Prevalence and access to services

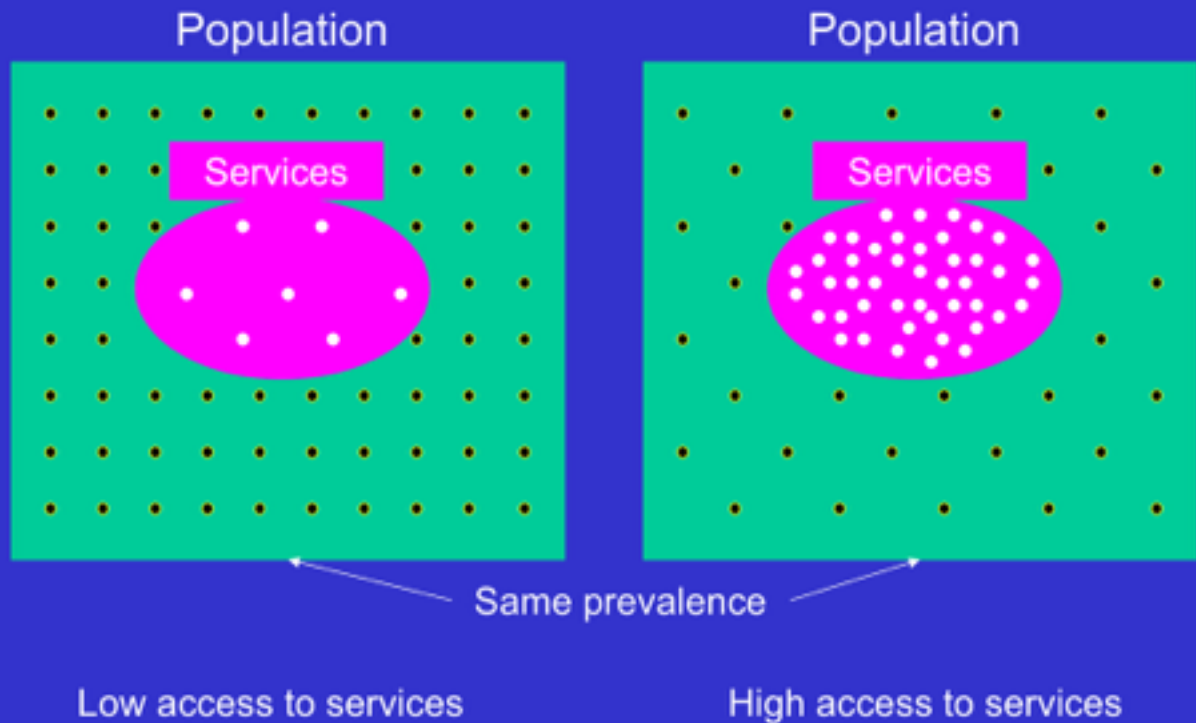
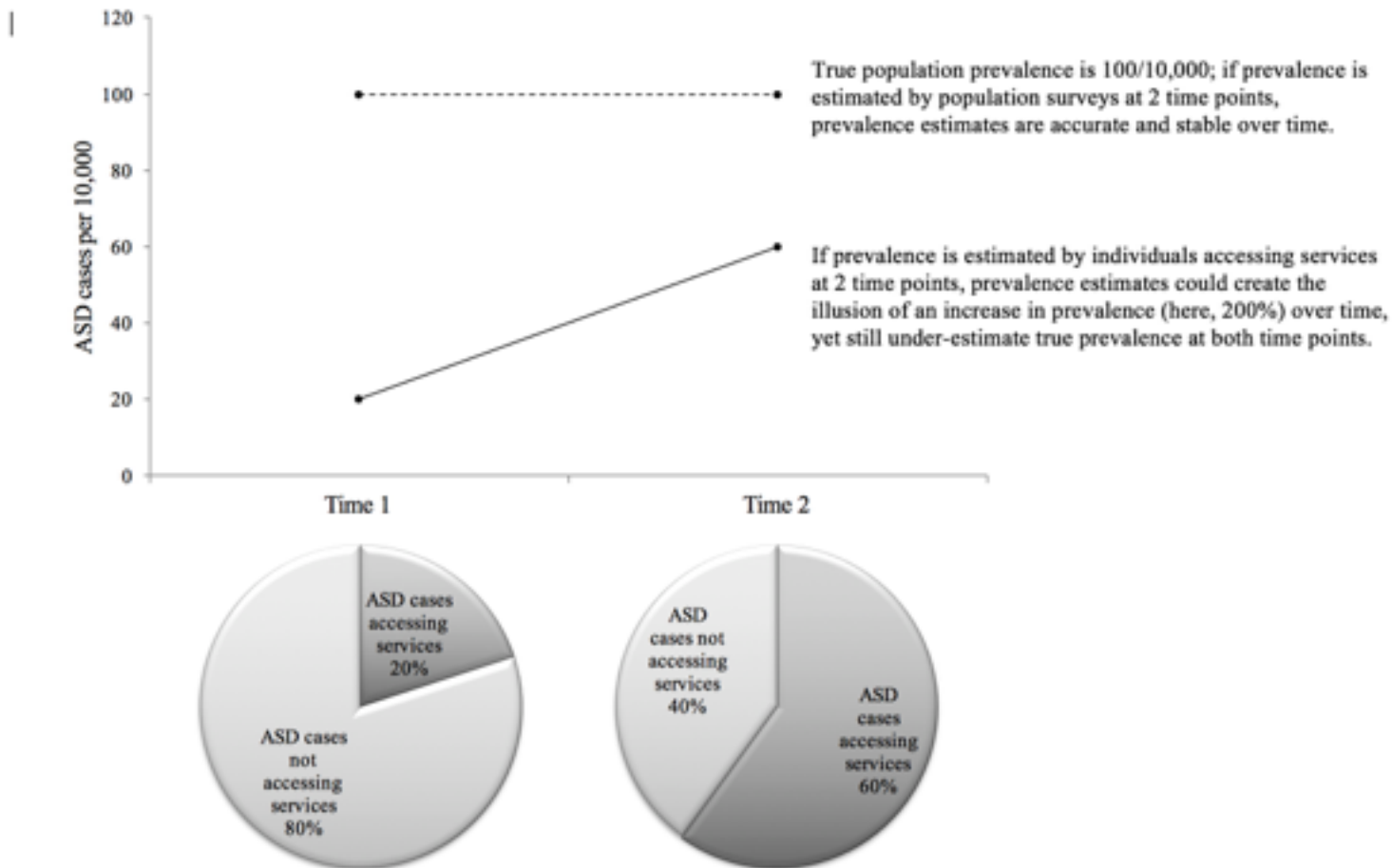
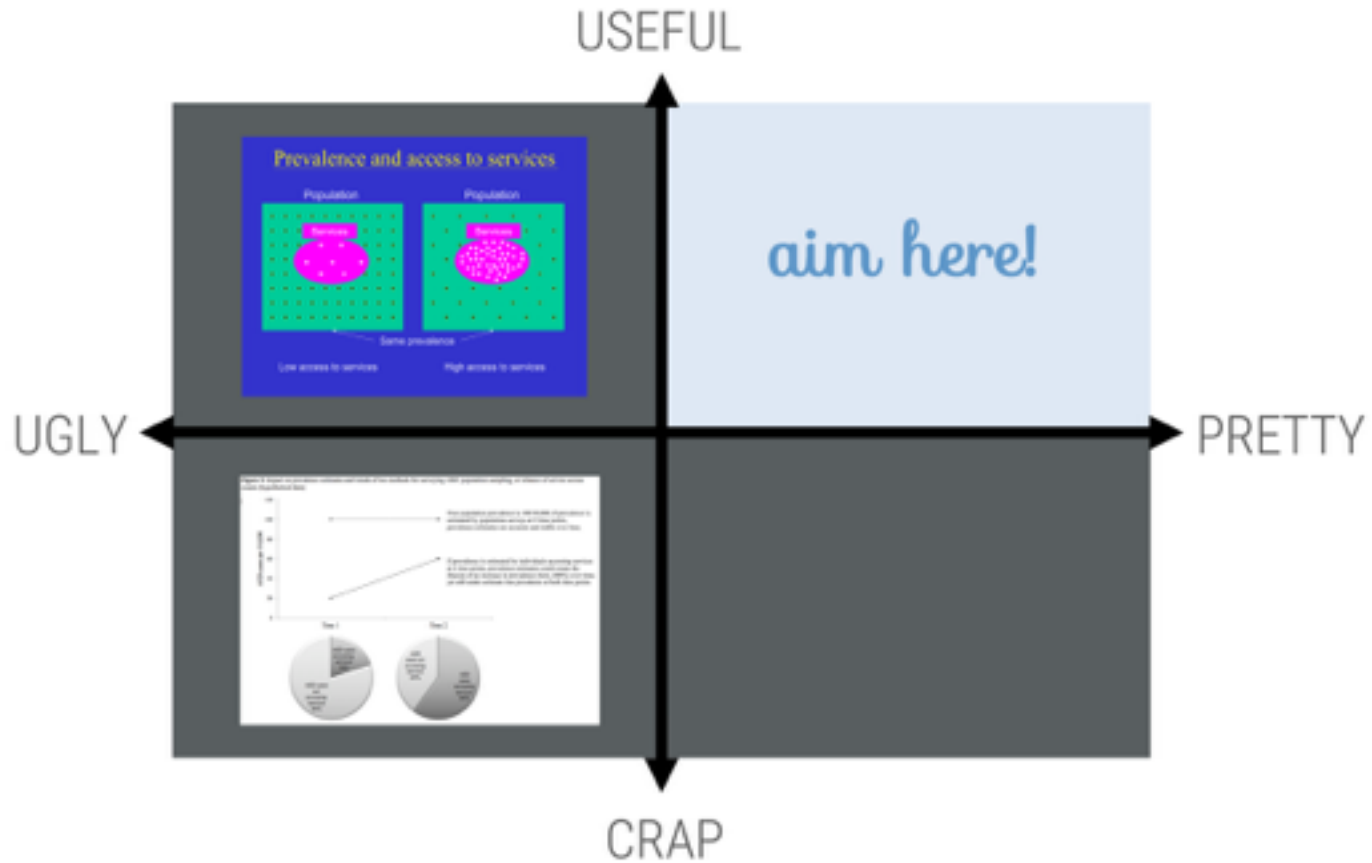


Figure 3. Impact on prevalence estimates and trends of two methods for surveying ASD: population sampling, or reliance of service access counts (hypothetical data).

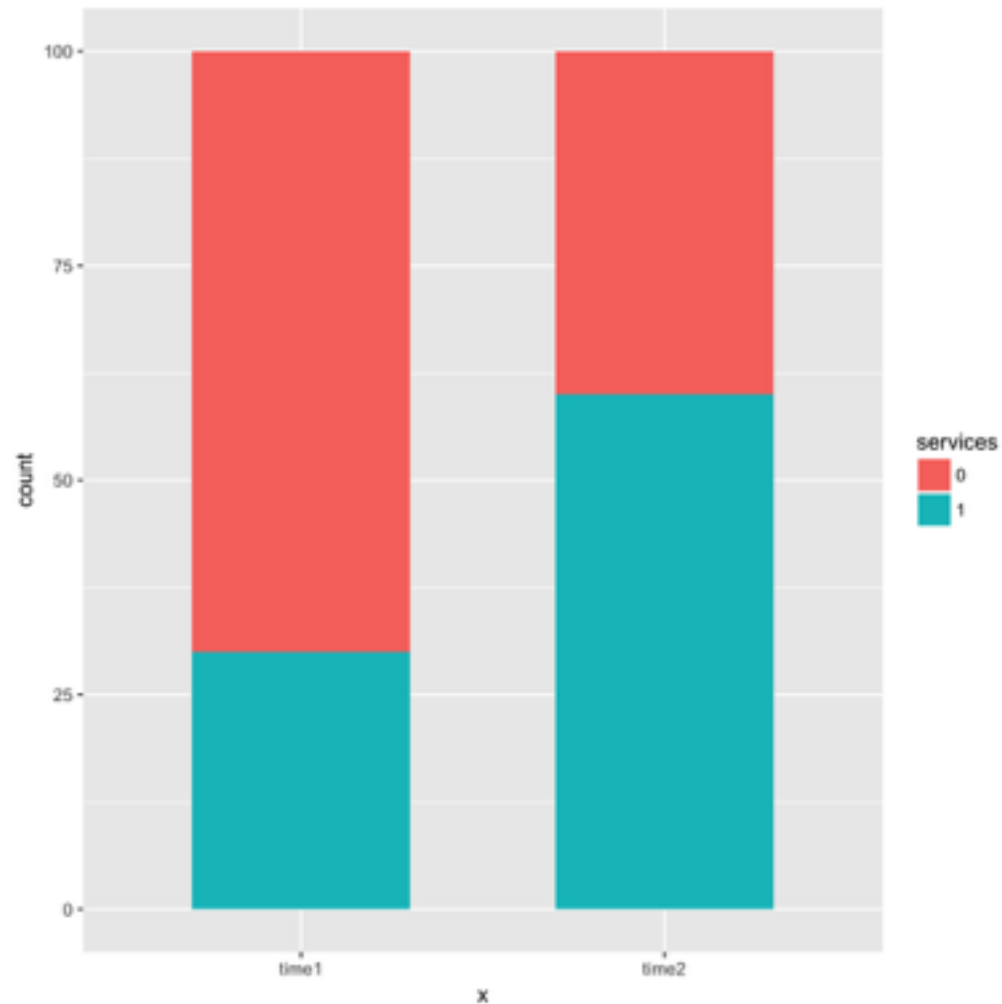


Iteration



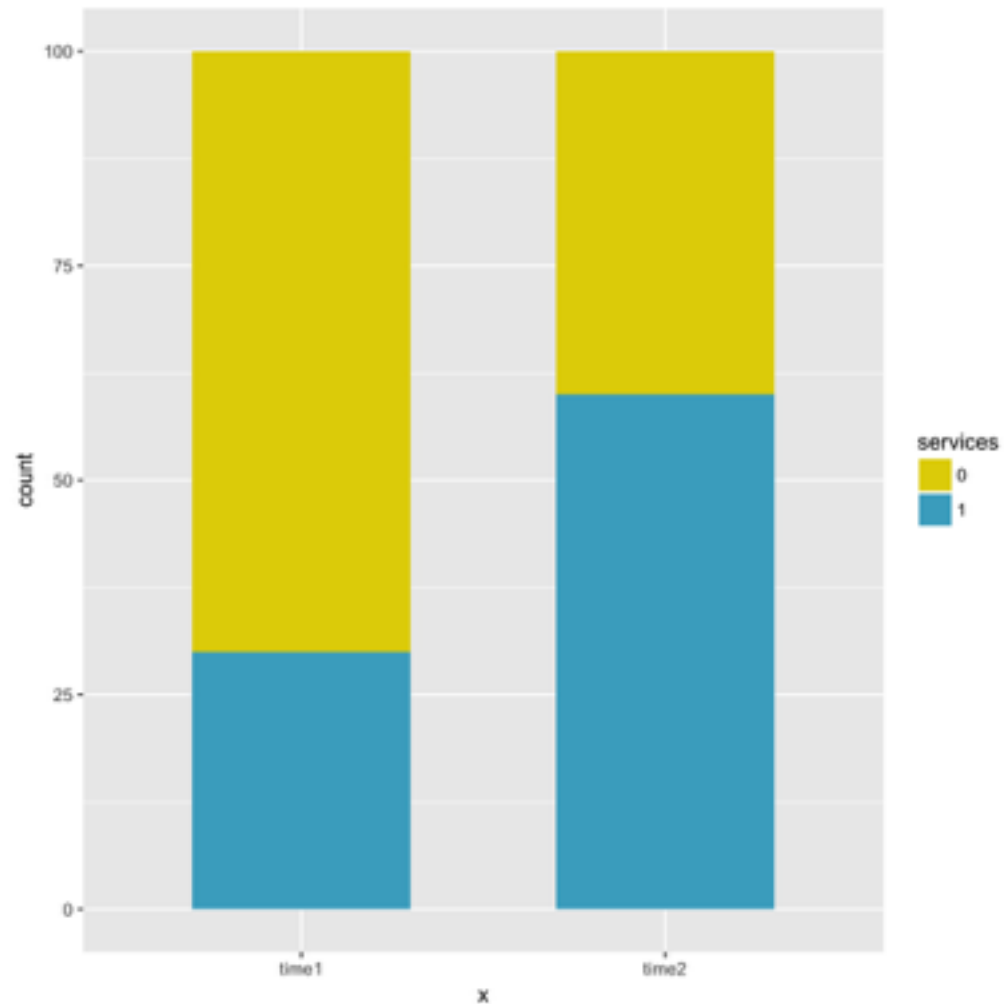
Source: Jackie Wirz

Iteration



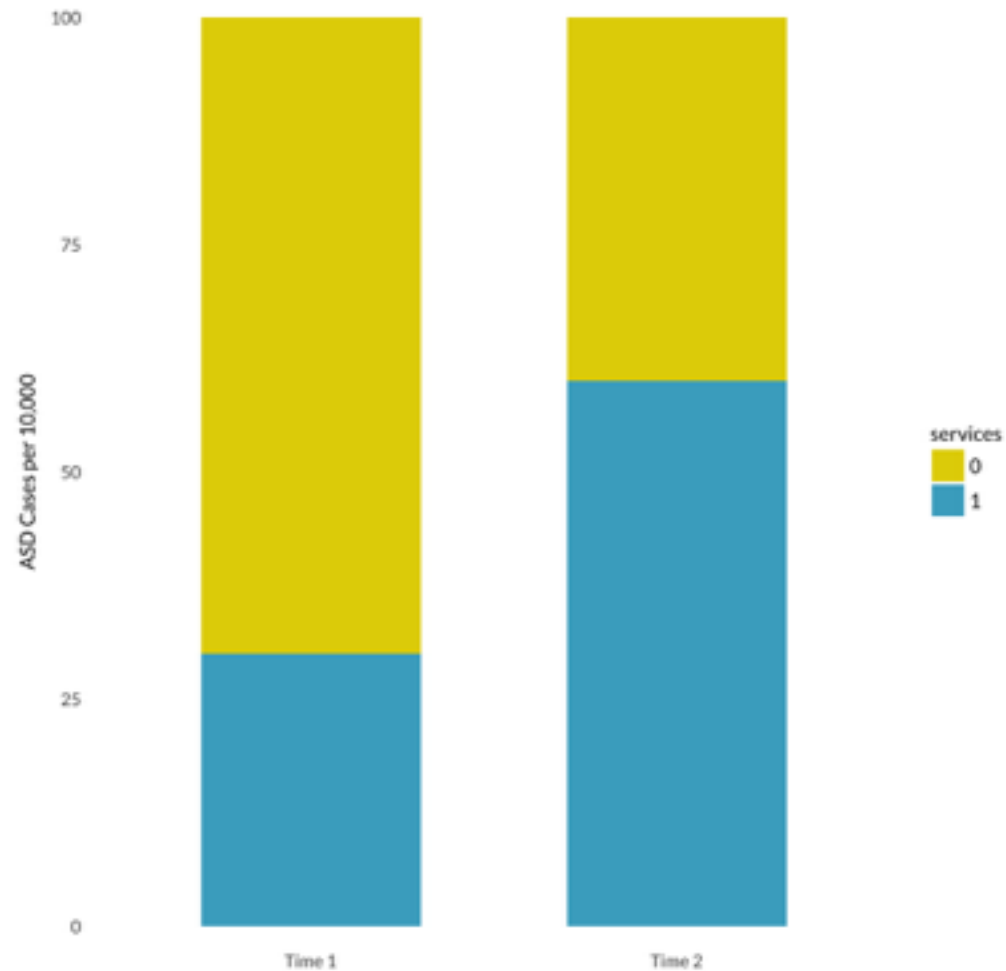
Source: <https://apreshill.github.io/ohsu-biodatavis>

Iteration



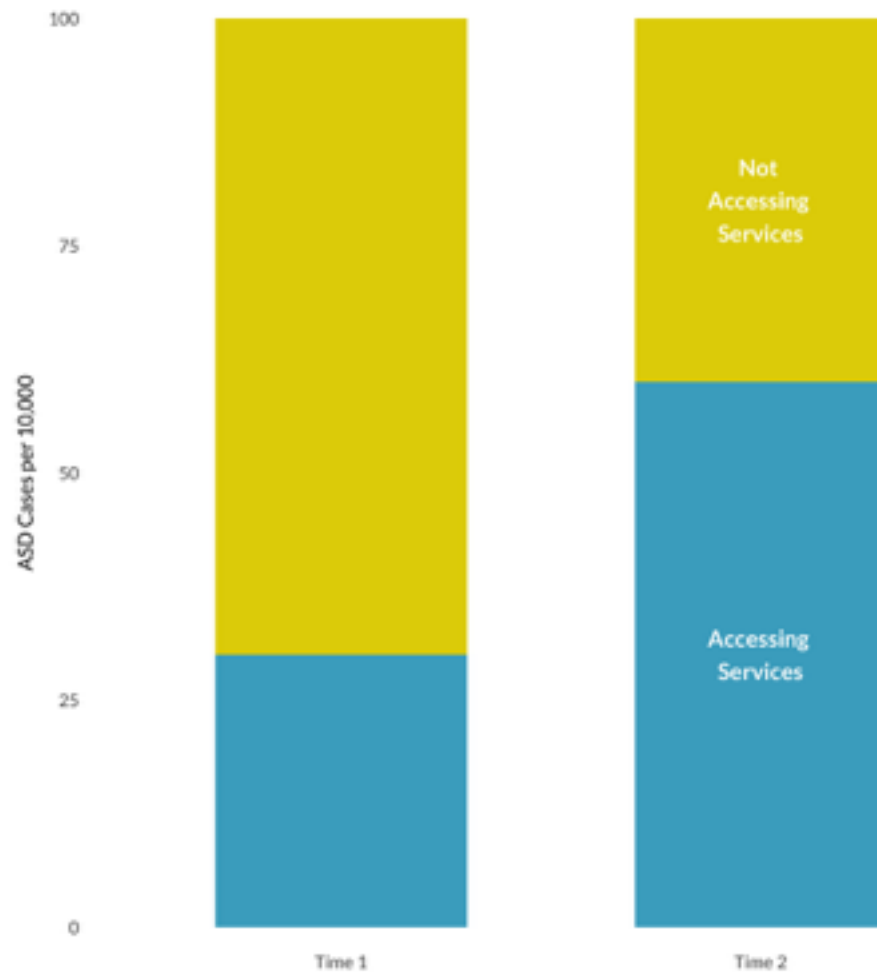
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Iteration



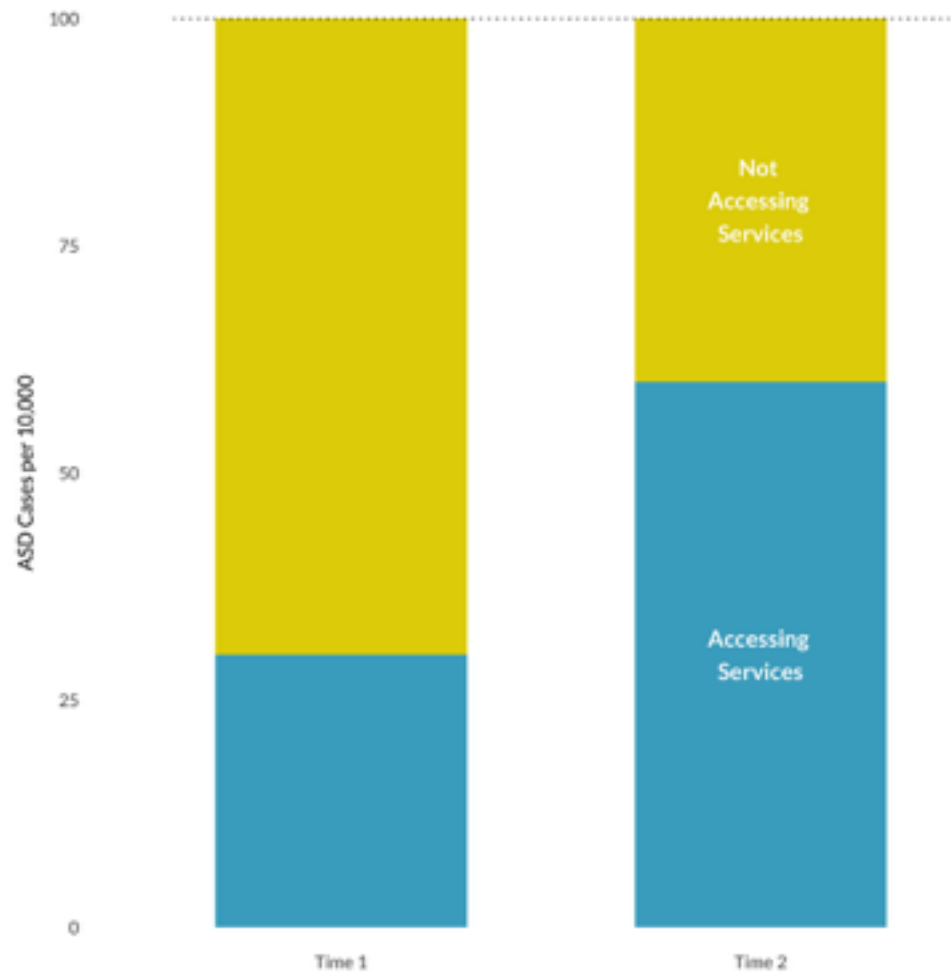
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Iteration



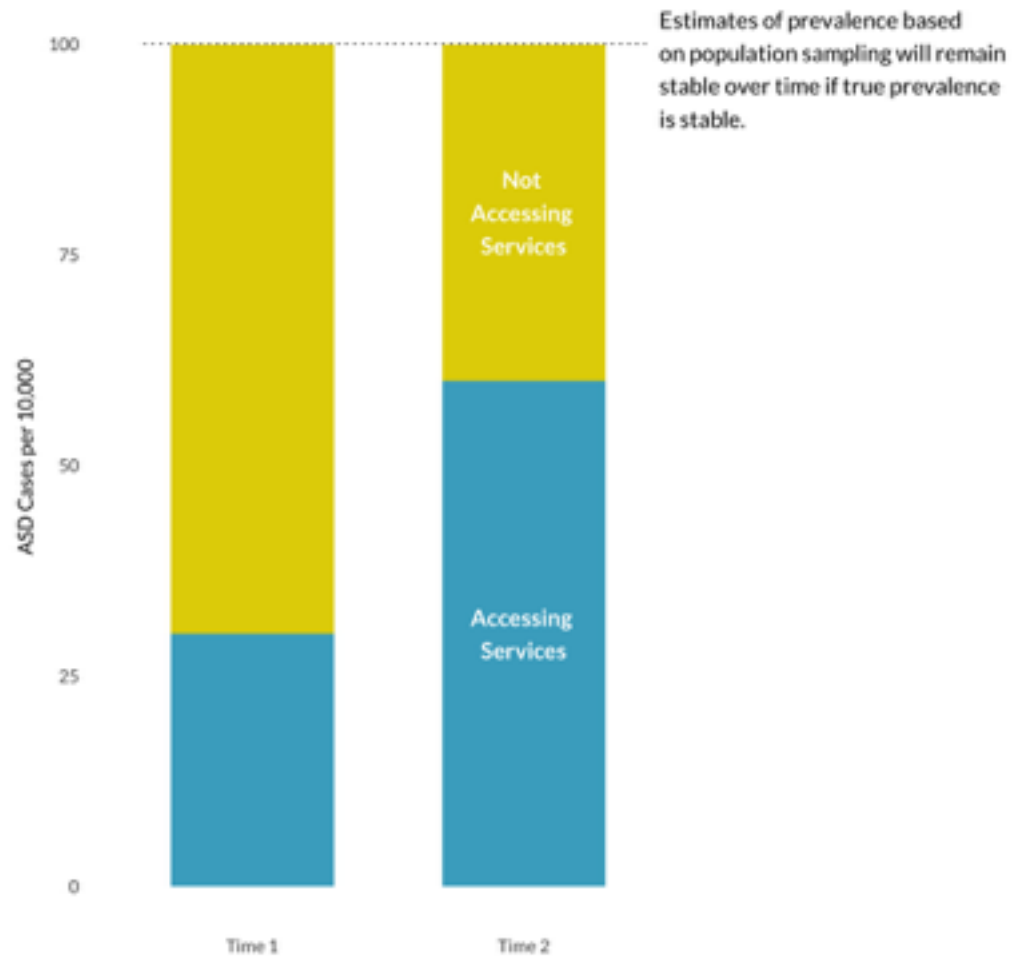
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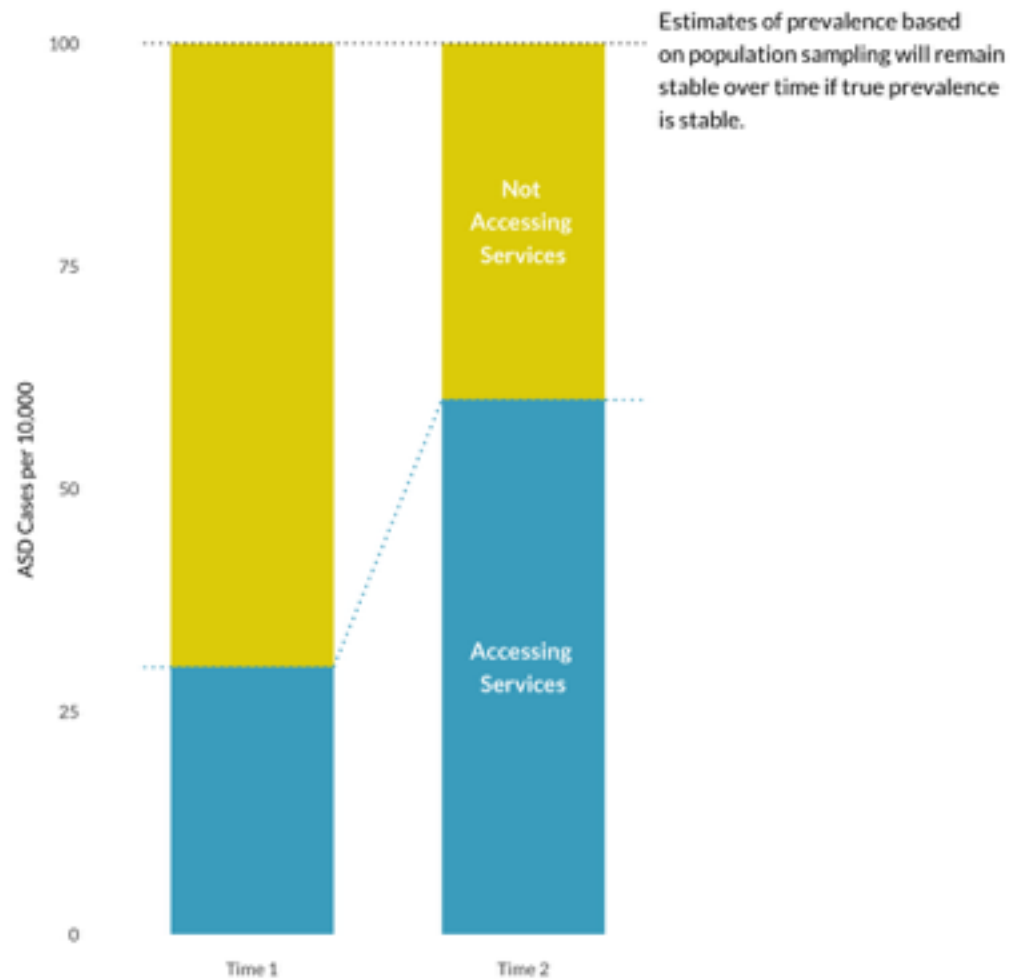


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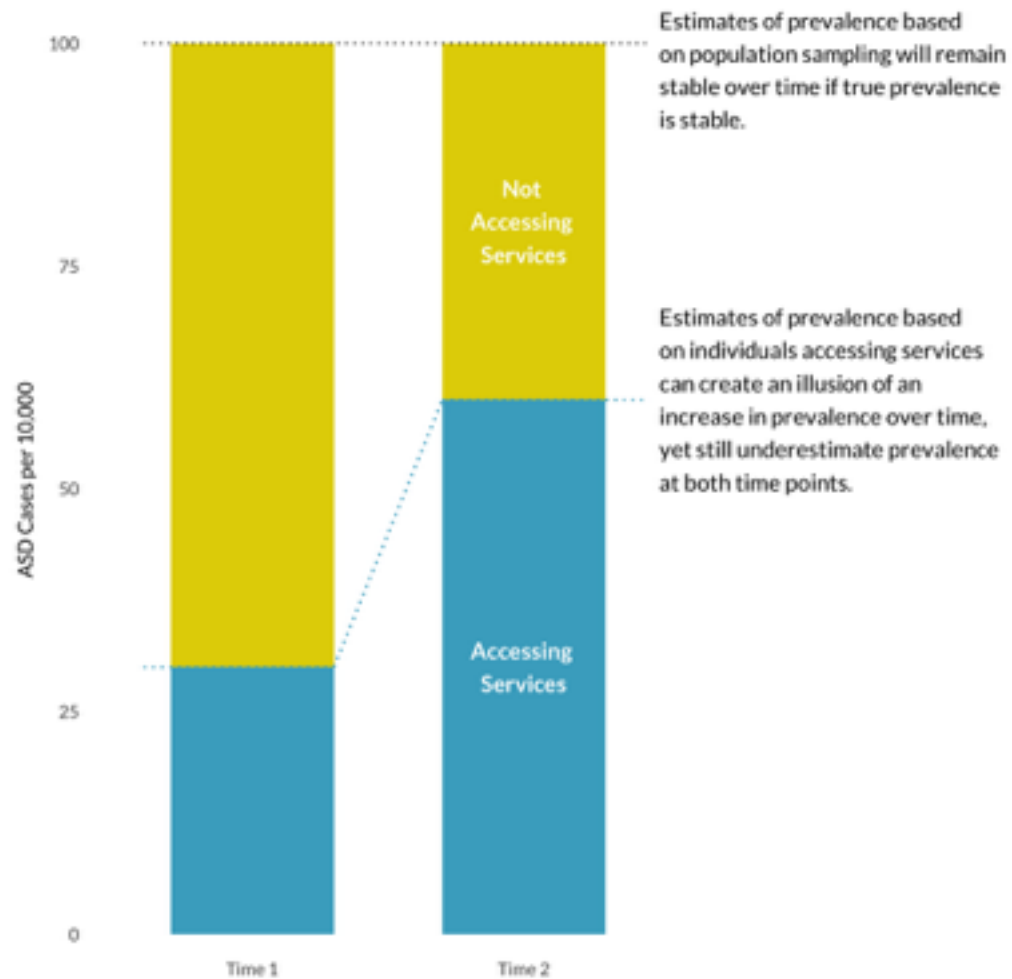
Iteration



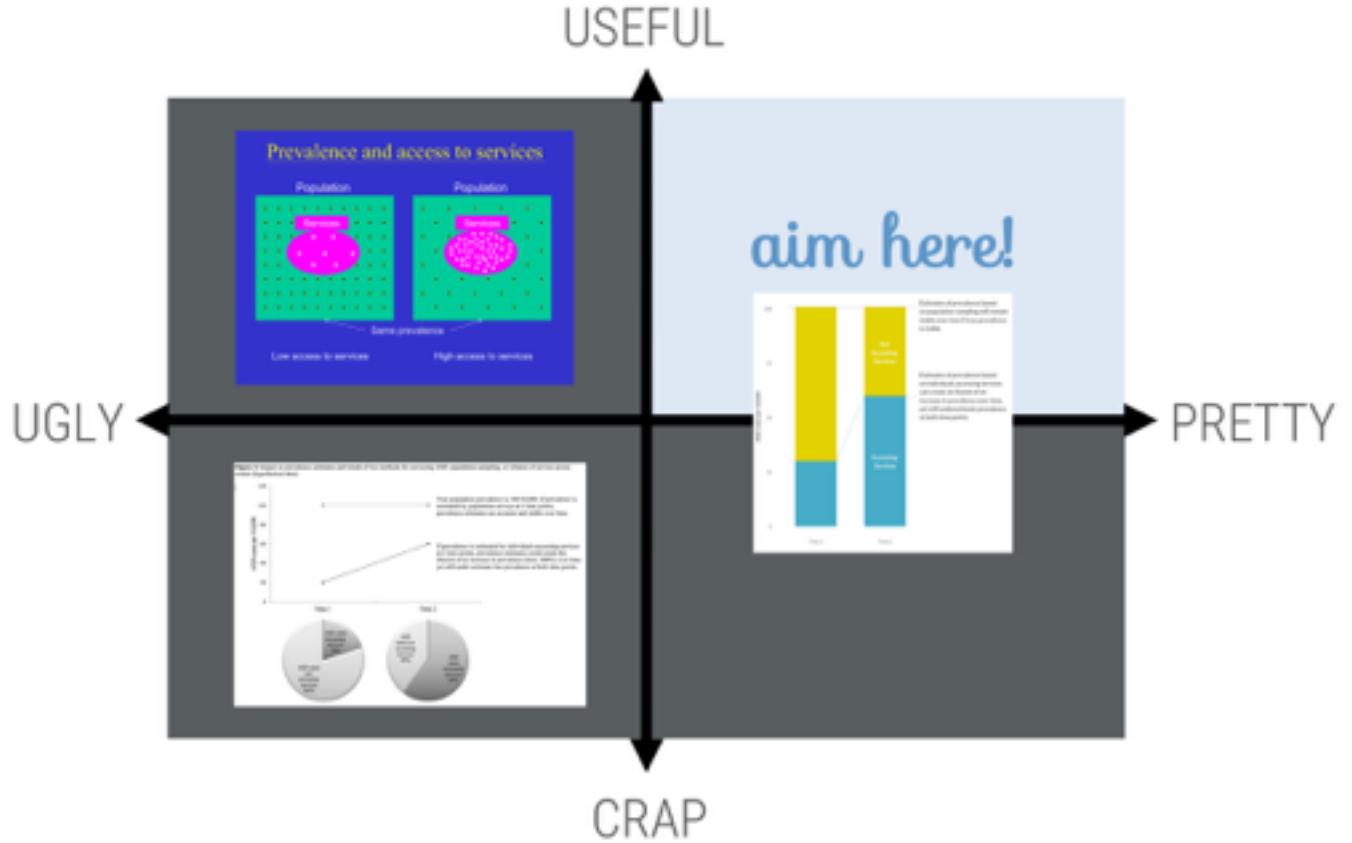
Iteration



Iteration



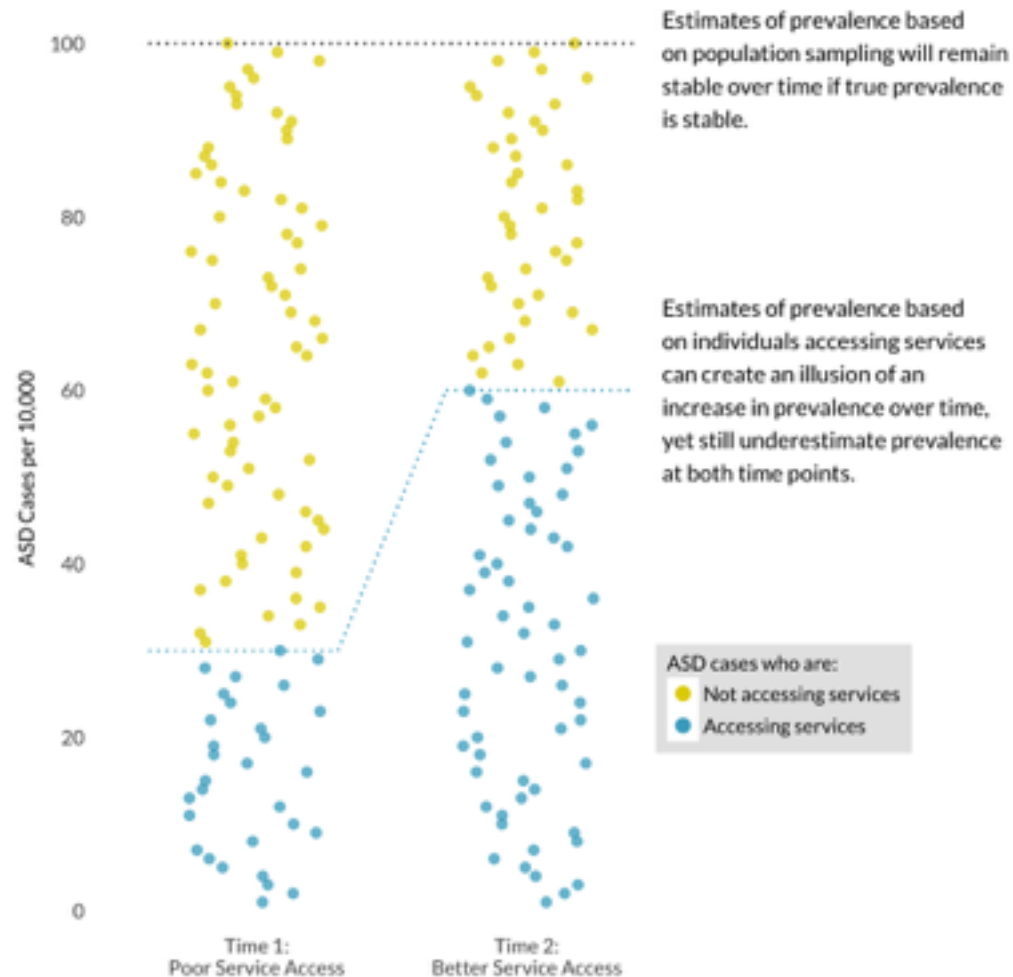
Activity



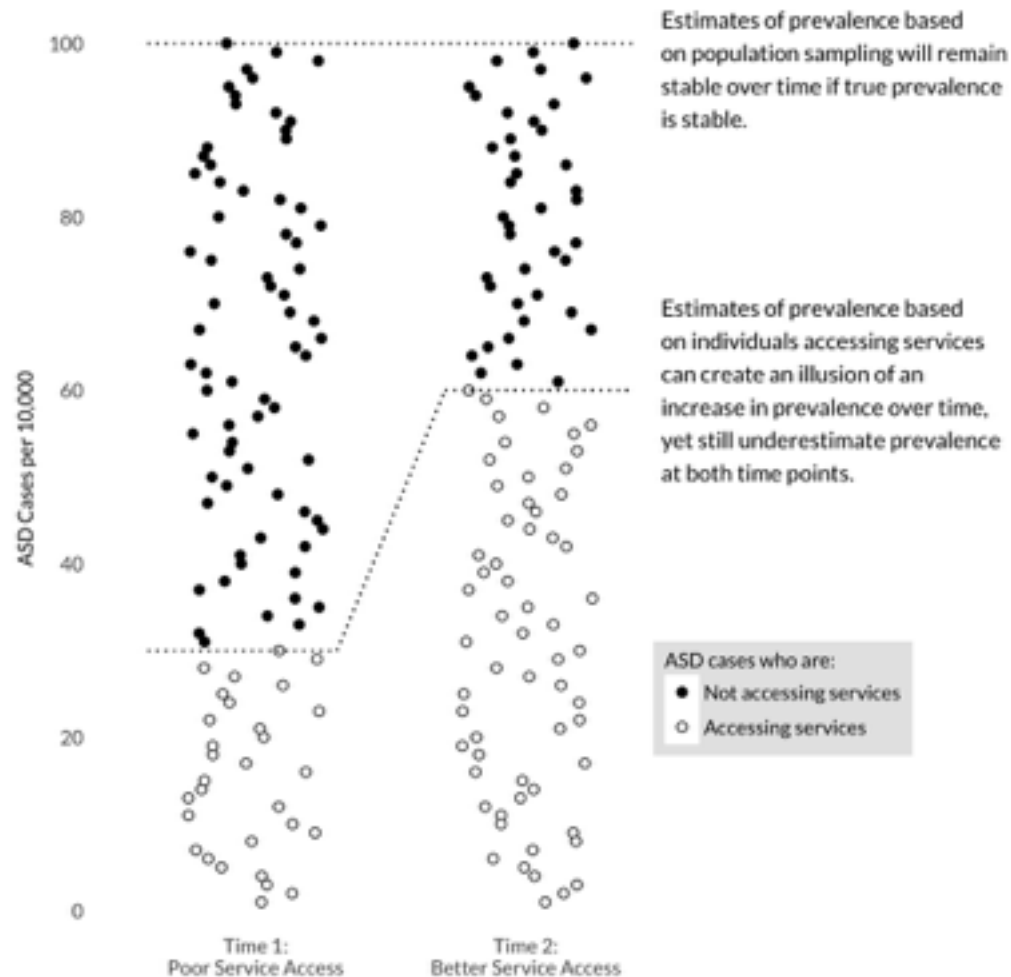
Source: Jackie Wirz

Source: <https://apreshill.github.io/ohsu-biodatavis>

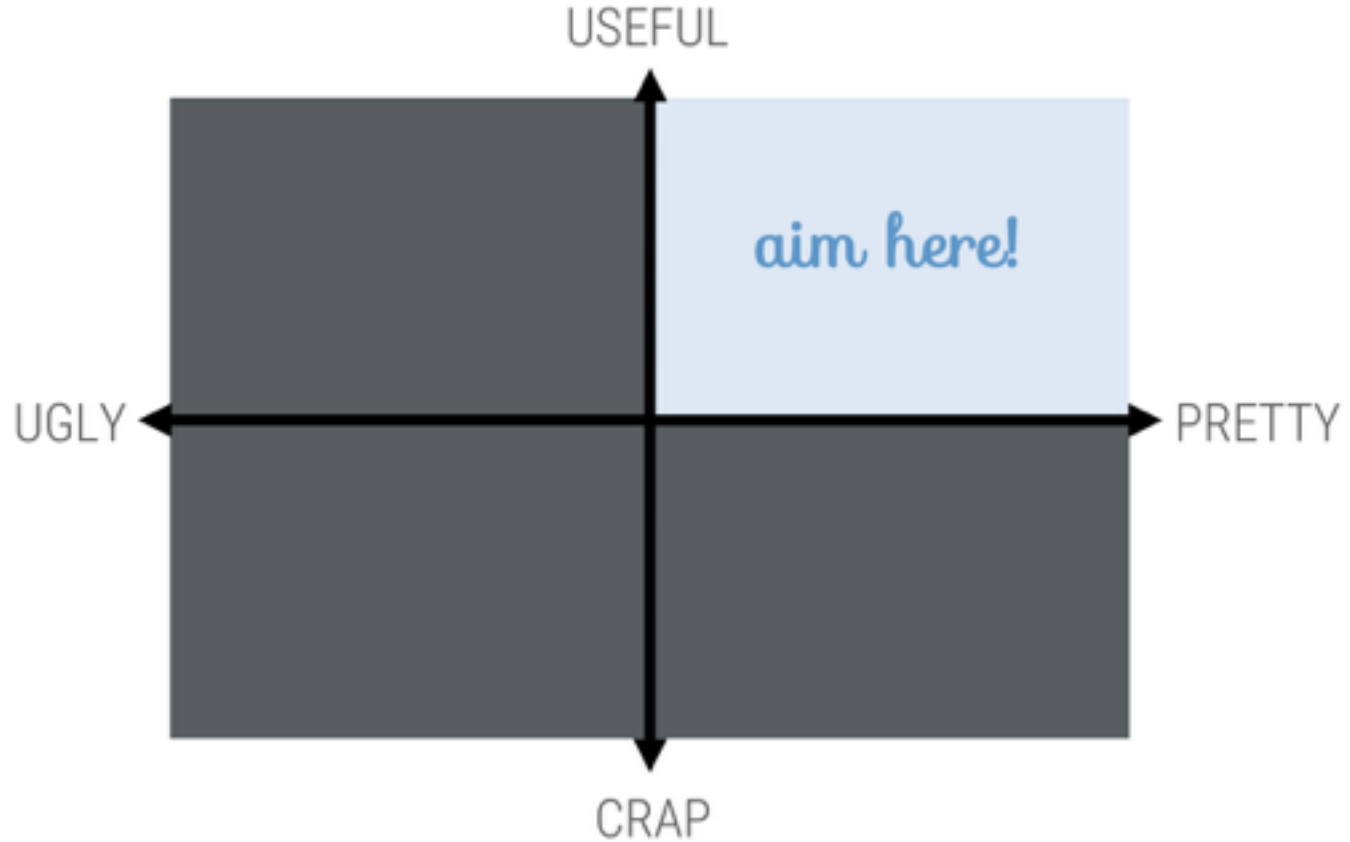
Iteration



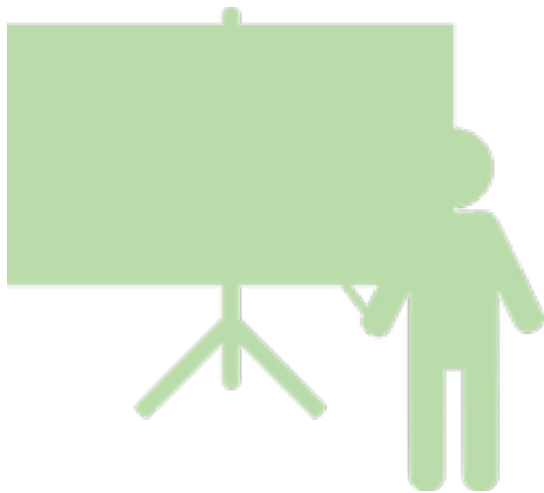
Iteration



Your turn: Take a sad plot & make it better



Source: Jackie Wirz



Presentations: for listening

- don't read directly off slides
- use animation to build your story (not to distract)
- introduce your axes
- benefit: words to explain out loud what you're showing

Moonville: active users over time



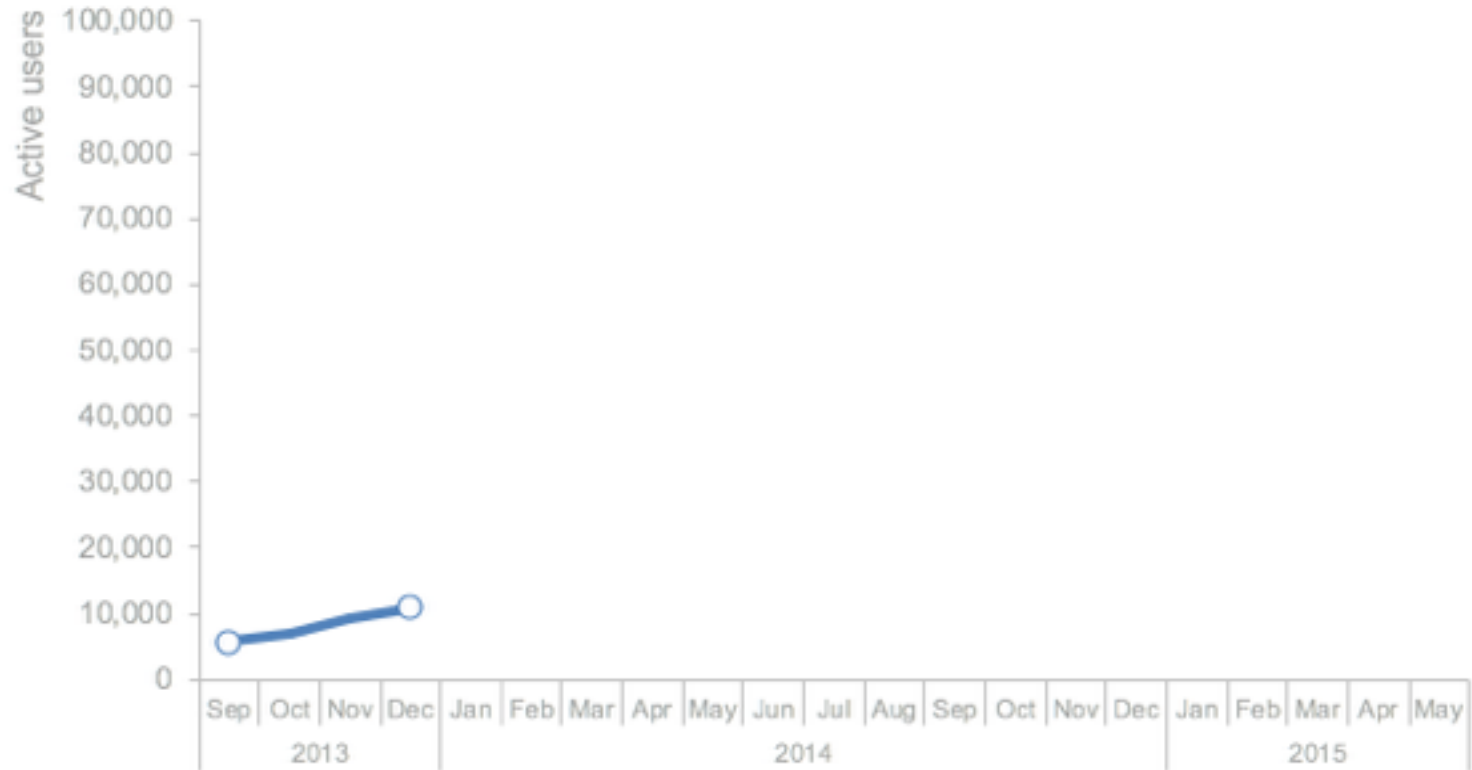
Data source: ABC Report. For purpose of analysis "active user" is defined as the number of unique users in the past 30 days.

Moonville: active users over time



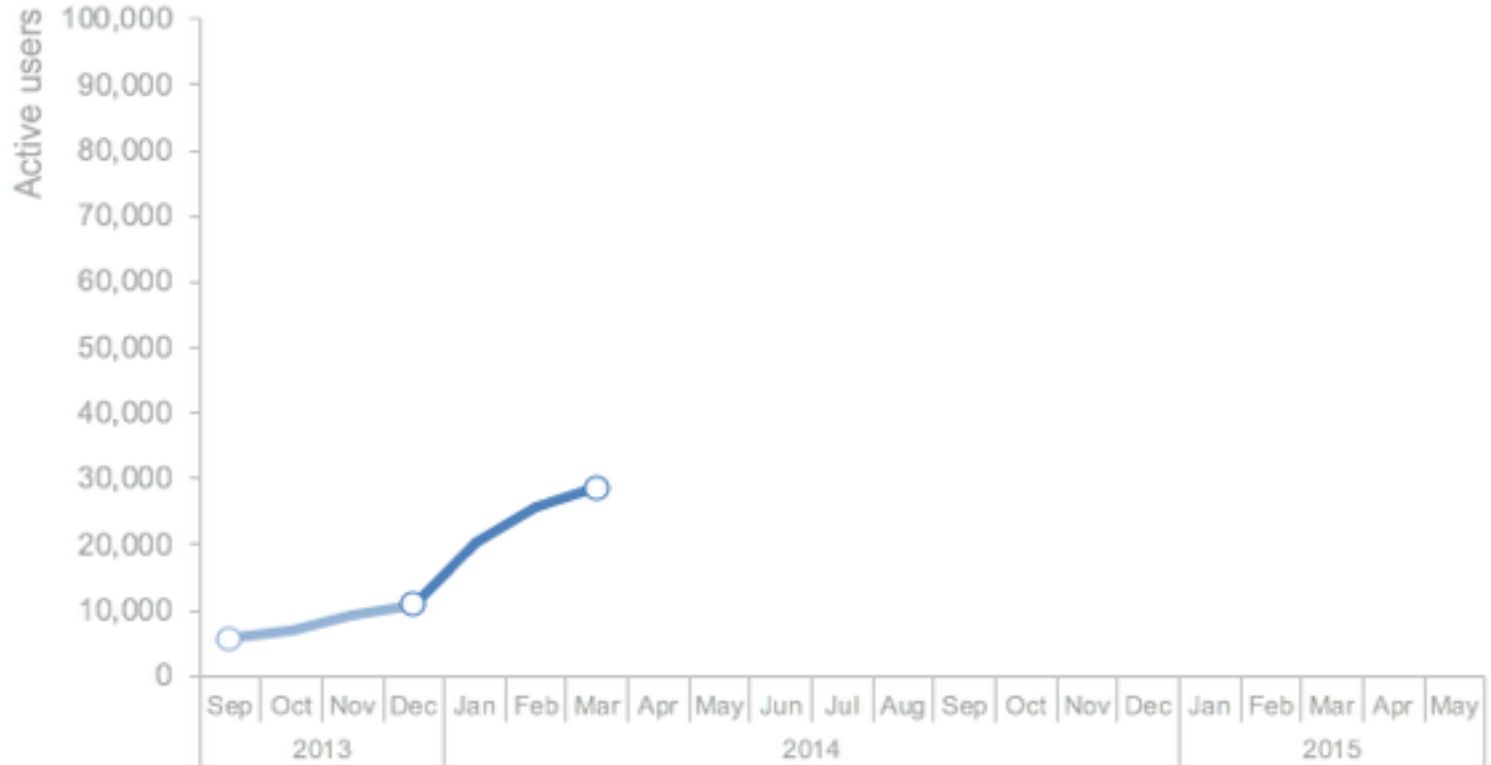
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Moonville: active users over time



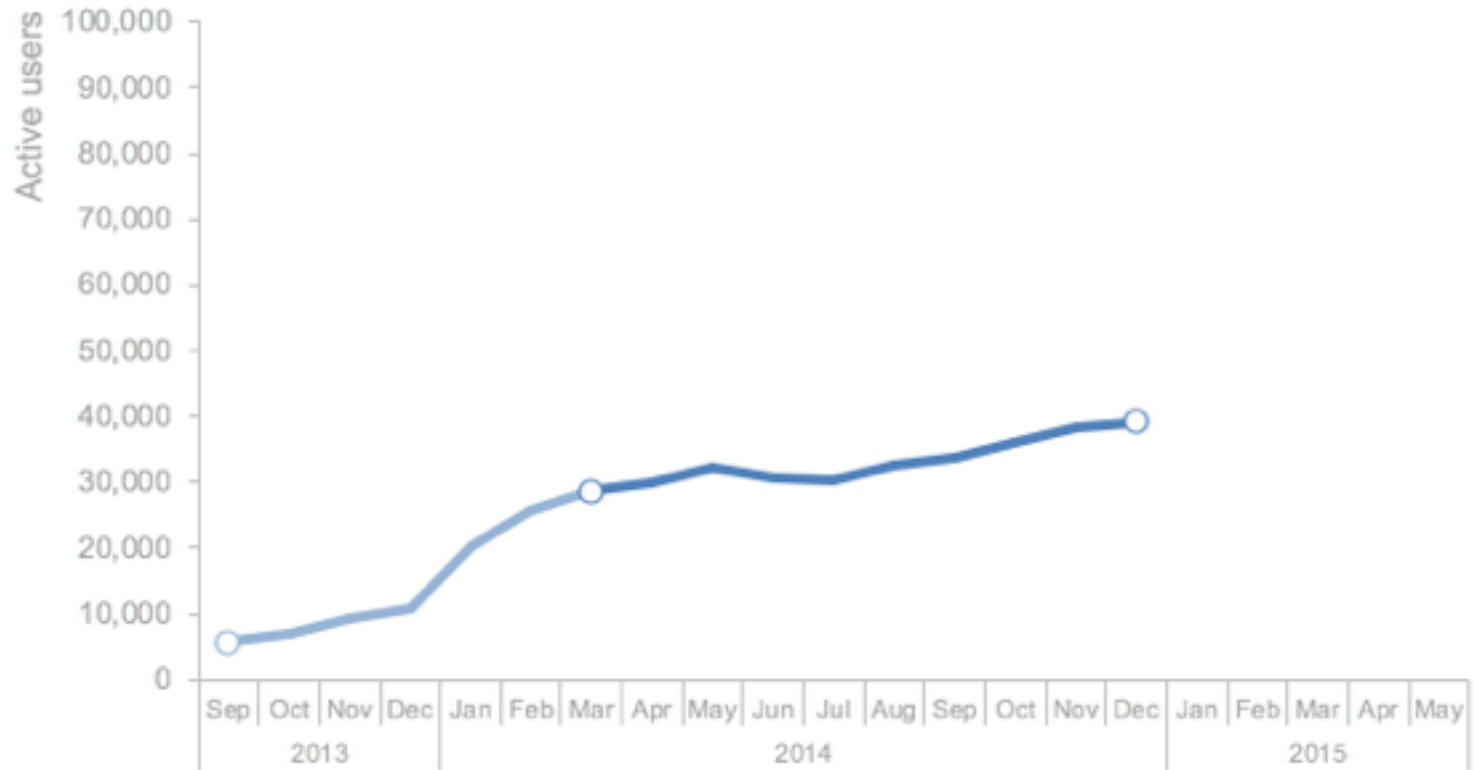
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Moonville: active users over time



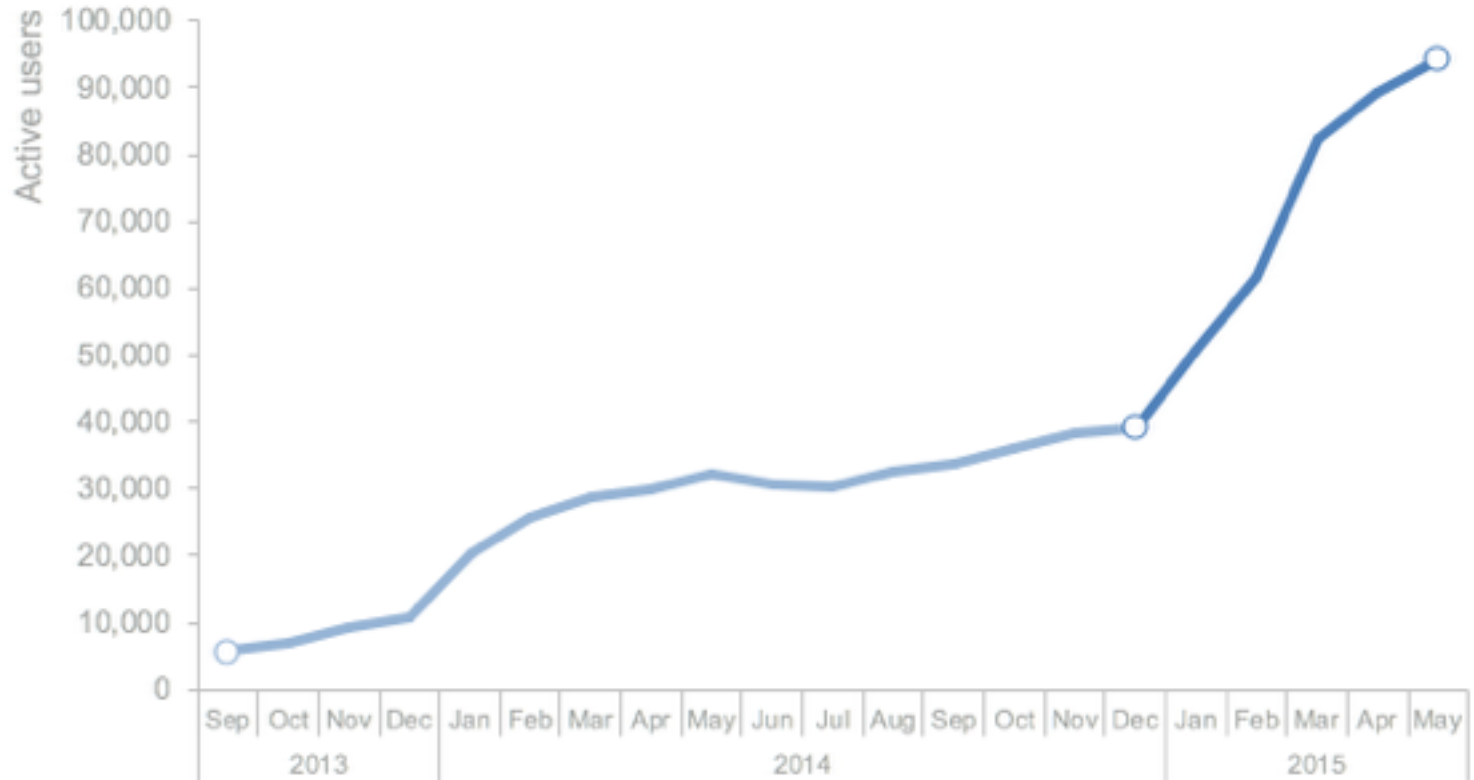
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Moonville: active users over time



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Moonville: active users over time



Data source: ABC Report. For purpose of analysis "active user" is defined as the number of unique users in the past 30 days.



Reports: for reading

- more on a single visualization
- explanation must be there in text
- Benefit: people have time to look at what you've sent

Moonville: active users over time



Data source: ABC Report. For purpose of analysis "active user" is defined as the number of unique users in the past 30 days.

Figures

- ☐ Have informative titles
- ☐ Appropriate figures used
- ☐ Adhering to 'less is more'
- ☐ Mappings clear (maybe a legend)
- ☐ Have consistent colors
- ☐ Take-home message clear
- ☐ Alignment all good
- ☐ Appropriate whitespace

Note: This **takes longer than you expect** it would. You can spend hours on a single figure. But, you worked *really* hard to understand the data and do the project. Now it's time to show it off! You get to do this through your presentation of your results - **spend the time to do this effectively**.

We don't need it for this class,
but you might in the future



Better poster template: <https://osf.io/6ua4k/>