

# Analysis of An Integrated County-Based System of Care Through Cross-Sector Collaboration: Humboldt County

CERA 2022

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<https://impactseries.ccee-network.org/cera-2022-presentation>

# Introduction

Partners from across California in the education & health sectors examined statewide & local [data collections and programs](#) on social-emotional learning (SEL) and whole-person programs by exploring **two guiding questions:**

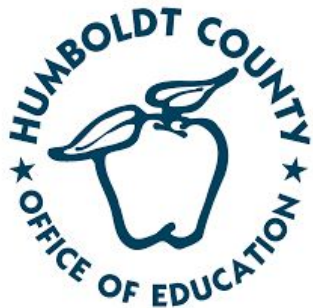
- How is the unprecedented state and federal funding being deployed to address the social, emotional, and mental health and well-being of California's young people?
- How are the success and progress of these initiatives/programs being measured and understood among local educational agencies (LEAs)?

# Data Demonstration Projects



## Statewide

- [California Healthy Kids Survey](#)
- [Multi-Tiered System of Support](#)



## Regional/Countywide

- [Humboldt County](#)



# Demographic Data



## Student Demographic

- Enrollment (2016/17 through 2021/22)
- Unduplicated Pupil Groups (2016/17 through 2021/22)
- Students with Disabilities (2016/17 through 2021/22)

## Student Mental Health and Wellbeing

- ACES-Adverse Childhood Experiences Survey (2016-2019)
- Student Depression (2013-2019)
- Mental Health Services (2017-2020)

# Outcome Data (pre-pandemic avg and 2020-2021)

## Behavioral/Engagement:

- Chronic Absence Rate
- Suspension Rate
- Graduation Rate
- Drop Out Rate
- SPED Certificate Completion Rate



## Academic Performance:

- Meeting or Exceeding ELA Testing Benchmarks
- Meeting or Exceeding Math Testing Benchmarks
- Not Meeting or Nearly Meeting ELA Testing Benchmarks
- Not Meeting or Nearly Meeting Math Testing Benchmarks

# Humboldt Programs

**Multi-Tiered System of Support:** Comprehensive framework that aligns academic, behavioral, social and emotional learning, and mental health supports in a fully integrated system of support for the benefit of all students.

- 16 school districts and one charter school have participated in the program through cohorts 1-3 (e.g., approximately 15,477 students).

**Bridges to Success (Triage MHSA):** Provides school-based mental health intervention and support to students, in crisis or at risk of crisis and increases access by providing services in locations that are easily accessible to students and their families.

- All 32 school districts have access; from 2019 through 2021, 17 districts accessed the referral system for a total of 771 referrals.

# Overarching Question & Analyses

What are the **county/regional trends** in social-emotional learning student mental health, well-being, and conditions of learning?

## Ad-hoc, exploratory analyses:

- Combine education and health files to understand potential relationships
- Graph district and county scores to observe trends
- Conduct a preliminary examination of data to determine if there are any significant associations



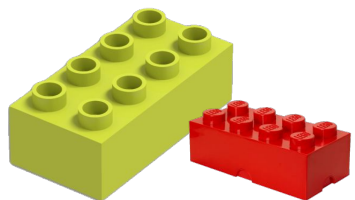
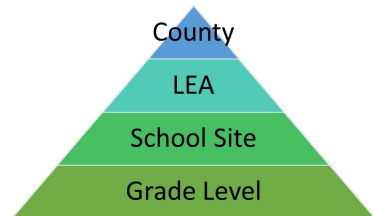
# Methods

How do I combine different data elements to **explore data in new ways** or **tell a deeper story**?



# Methods

## Data Properties to Consider



**Scope:** What is the Time element in each dataset and how do they compare?

**Granularity:** What level of detail do I have in each dataset and how does that change the way I combine and aggregate those data?

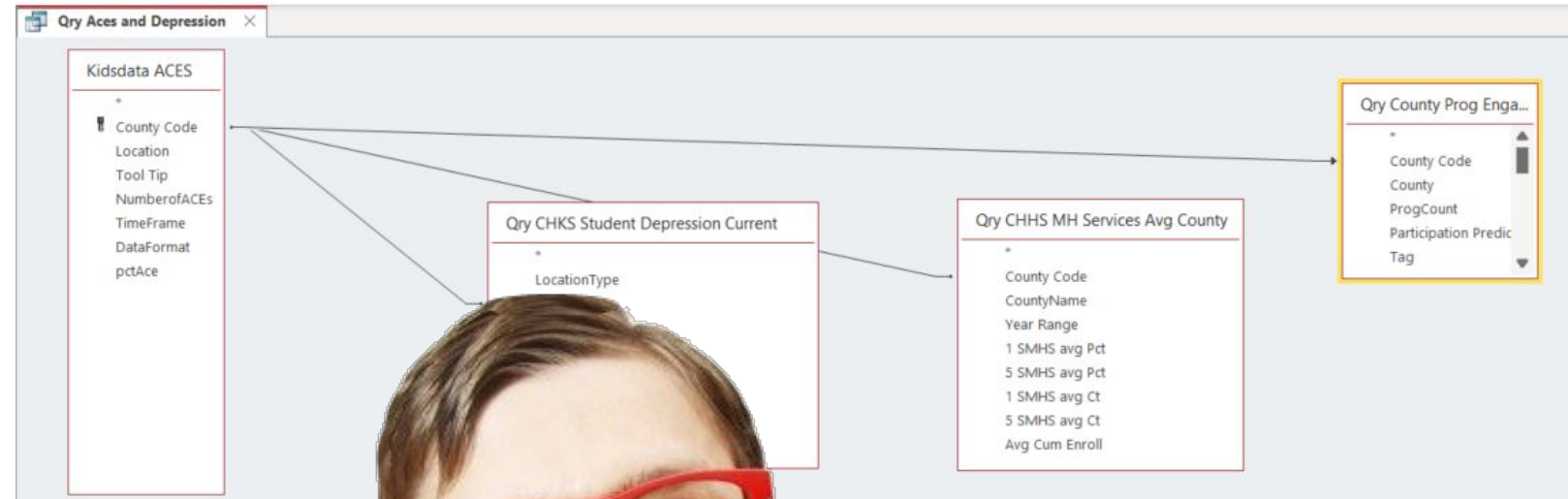
**Relatability:** What element(s) are the same in both datasets? Are they the same data type? Can I connect them?

# Methods

## SQL Programming Anyone?

```
SELECT [Kidsdata ACES].*, [Qry CHKS Student Depression Current].*, [Qry CHHS MH Services Avg County].[Year Range], [Qry CHHS MH Services Avg County].[1 SMHS avg Pct], [Qry CHHS MH Services Avg County].[5 SMHS avg Pct], [Qry CHHS MH Services Avg County].[1 SMHS avg Ct], [Qry CHHS MH Services Avg County].[5 SMHS avg Ct], [Qry CHHS MH Services Avg County].[Avg Cum Enroll], [Qry County Prog Engagement].ProgCount, [Qry County Prog Engagement].Tag INTO [tbl Aces and Depression]
```

```
FROM (([Kidsdata ACES] INNER JOIN [Qry CHKS Student Depression Current] ON [Kidsdata ACES].[County Code] = [Qry CHKS Student Depression Current].[County]) INNER JOIN [Qry CHHS MH Services Avg County] ON [Kidsdata ACES].[County Code] = [Qry CHHS MH Services Avg County].[County Code]) LEFT JOIN [Qry County Prog Engagement] ON [Kidsdata ACES].[County Code] = [Qry County Prog Engagement].[County Code];
```



# Methods



There is a level of data modeling you can do **without** having to learn SQL.



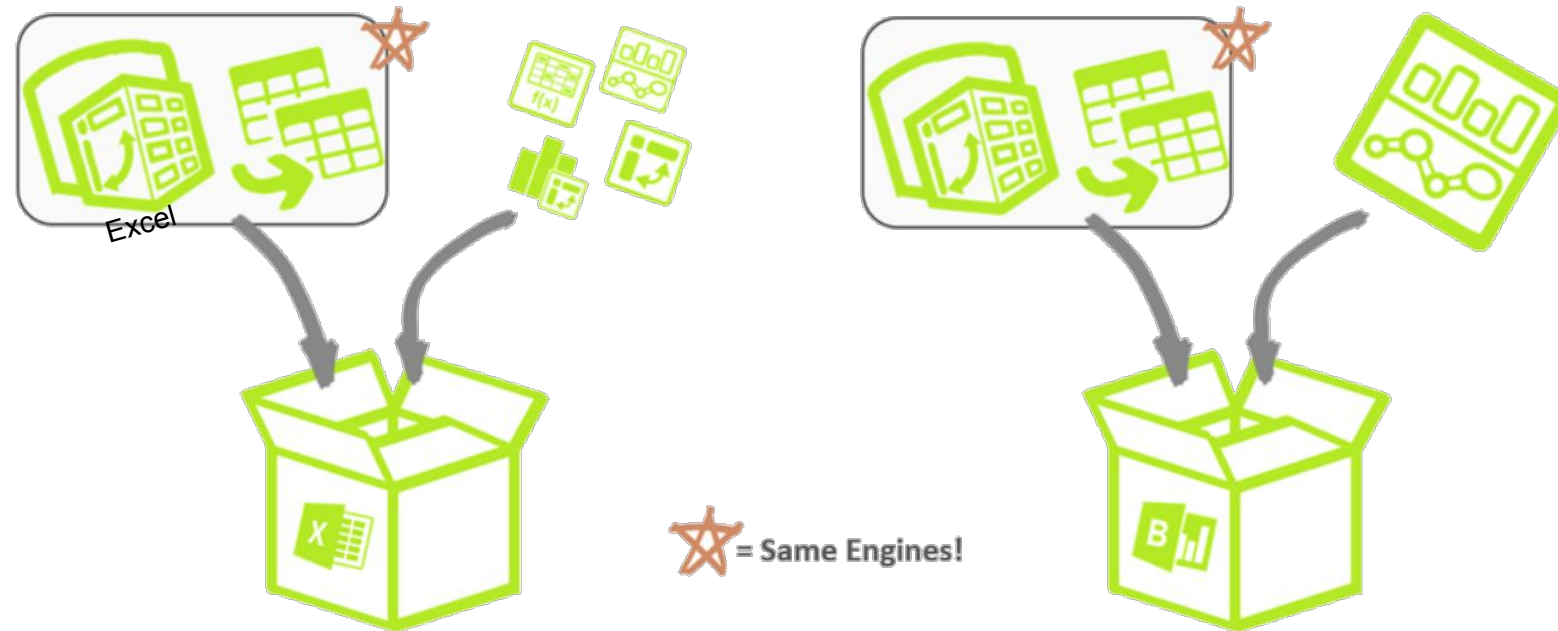
# Methods

The tools you need reside in a program you have known and (mostly) loved your whole career...



**EXCEL!**

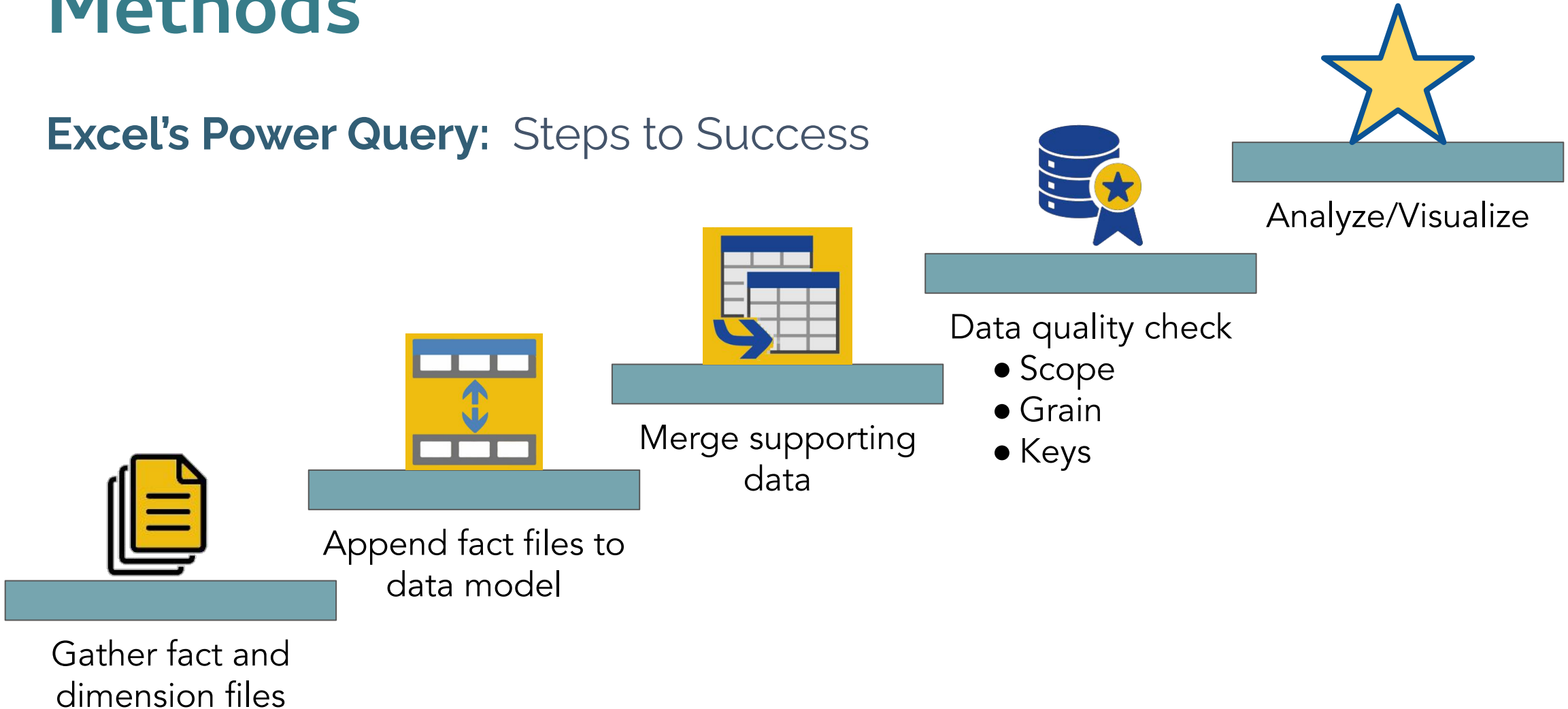
## Different Containers, But It's What's INSIDE That's Important



Power Query remains in Excel and is essentially the same data engine software as what is used in Power BI.

# Methods

## Excel's Power Query: Steps to Success



# Methods

## Excel's Power Query: Steps to Success



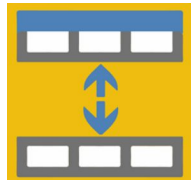
**Gather fact and dimension files**

- Convert Excel Sheets to Tables
- You can work with other file formats
- If combining the same data over multiple years (1 file/year), sheet tab name needs to be THE SAME.

Year	Student Responses	pct Depressed	
2019	Yes	0.304	
2019	Yes	0.326	
2019	Yes	0.366	
2019	Yes	0.321	
2019	Yes	0.256	
2019	Yes	0.299	
2019	Yes	0.352	
2019	Yes	0.374	
2019	Yes		
2019	Yes		
Grade 11	2017_2019	Yes	
Non Traditional	2017_2019	Yes	
Grade 7	2017_2019	Yes	0.324
Grade 9	2017_2019	Yes	0.39
Grade 11	2017_2019	Yes	0.348

# Methods






## Excel's Power Query: Steps to Success



**Append fact files  
to data model**

- Append used to combine files with the same columns by **ADDING ROWS**
- Take separate files by year and create 1 multi-year dataset
- To do this, workbooks reside in a single folder, and the sheet tab names in each workbook need to be THE SAME.

OneDrive - Personal > Projects > CCEE > CERA 2022 > CaIPADS UPC

<input type="checkbox"/> Name	Status	Date modified
 CaIPADS UPC 16-17.xlsx	✓	10/17/2022 1:32 PM
 CaIPADS UPC 17-18.xlsx	✓	10/17/2022 1:32 PM
 CaIPADS UPC 18-19.xlsx	✓	10/17/2022 1:32 PM
 CaIPADS UPC 19-20.xlsx	✓	10/17/2022 1:32 PM
 CaIPADS UPC 20-21.xlsx	✓	10/17/2022 1:32 PM



# Methods

## Excel's Power Query: Steps to Success

The screenshot shows the Excel ribbon with the 'Data' tab selected. The 'Get Data' group is expanded, showing various data sources. The 'From File' sub-menu is open, and 'From Folder' is highlighted. Other options include 'From Excel Workbook', 'From Text/CSV', 'From XML', 'From JSON', 'From PDF', and 'Combine Queries'.



C:\Users\rstem\OneDrive\Projects\CCEE\CEP

Content	Name	Extension	Date accessed
Binary	CalPADS UPC 16-17.xlsx	.xlsx	10/19/2022 12:04:05
Binary	CalPADS UPC 17-18.xlsx	.xlsx	10/18/2022 6:08:22
Binary	CalPADS UPC 18-19.xlsx	.xlsx	10/18/2022 6:08:22
Binary	CalPADS UPC 19-20.xlsx	.xlsx	10/18/2022 6:08:22
Binary	CalPADS UPC 20-21.xlsx	.xlsx	10/18/2022 6:08:22

The 'Combine Files' dialog box is shown. It prompts the user to 'Select the object to be extracted from each file.' The 'Sample File' dropdown is set to 'First file'. Under 'Display Options', a folder named 'Parameter1 [2]' is expanded, showing two items: 'CUPC1617' and 'CalPADS UPC'. The 'CalPADS UPC' item is selected and highlighted in green.

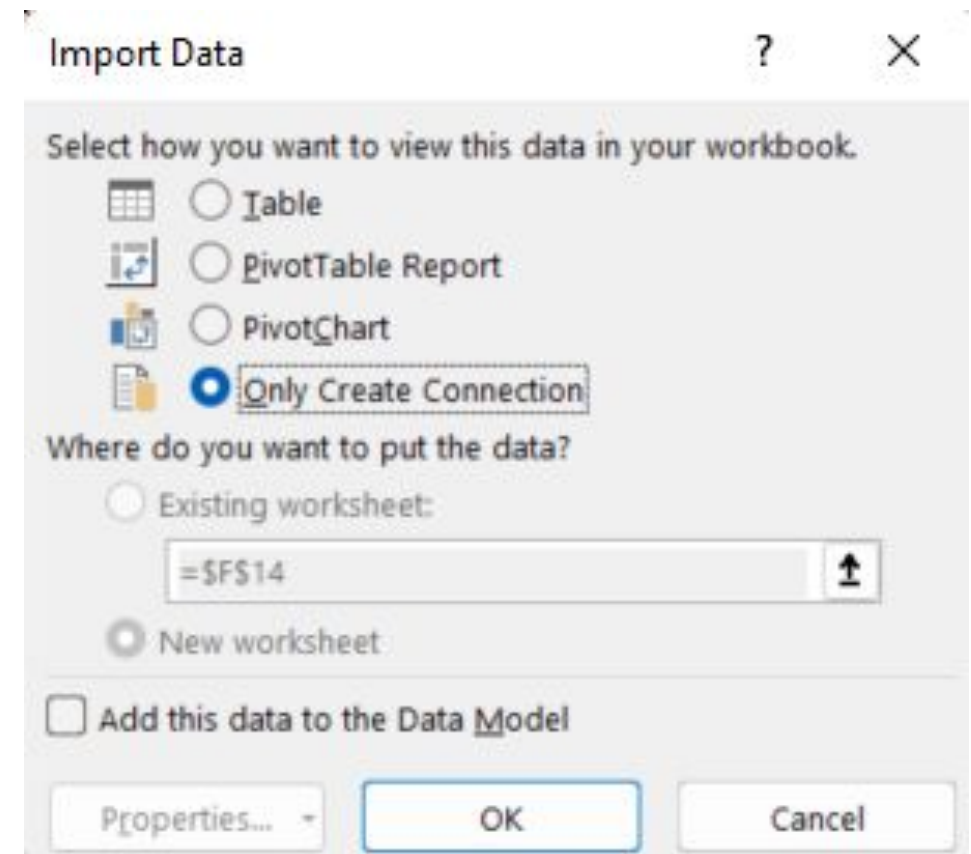
# Methods

## Excel's Power Query: Steps to Success



### Merge Supporting Data

- Merge used to combine files by ADDING COLUMNS
- Tables must first be defined as a query connection.
- Tables to be merged must share at least one common field.
- Start with highest grain "FACT" table and merge with "dimensions" using default left outer join
- If merging > 2 tables, start with 2 and then merge the result with the next.



# Methods

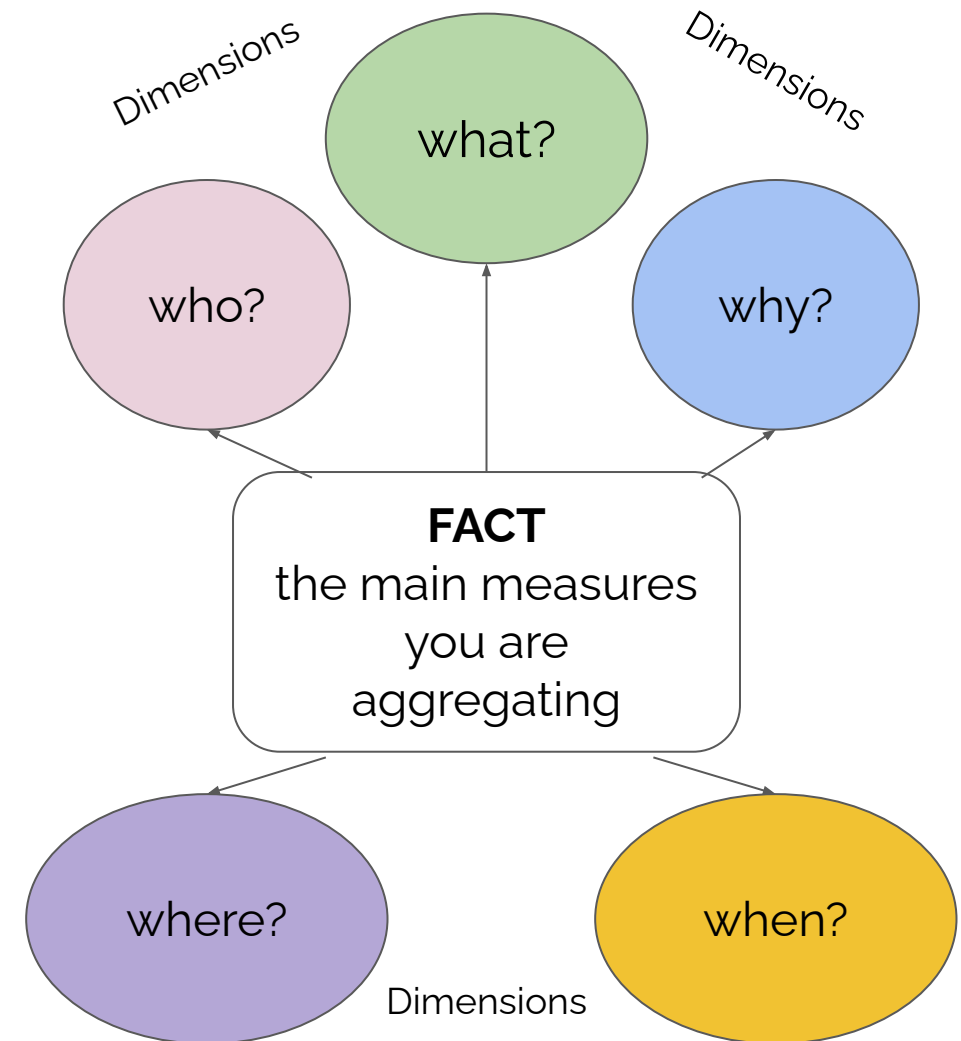
## Excel's Power Query: Steps to Success



### Data quality check

- Scope
- Grain
- Keys

- Are the datasets you are merging all look at the same time period?
- Are you getting the number of rows you expected? Did any rows duplicate *accidentally*?
- Did you get all the information connected with common fields of the same datatype?



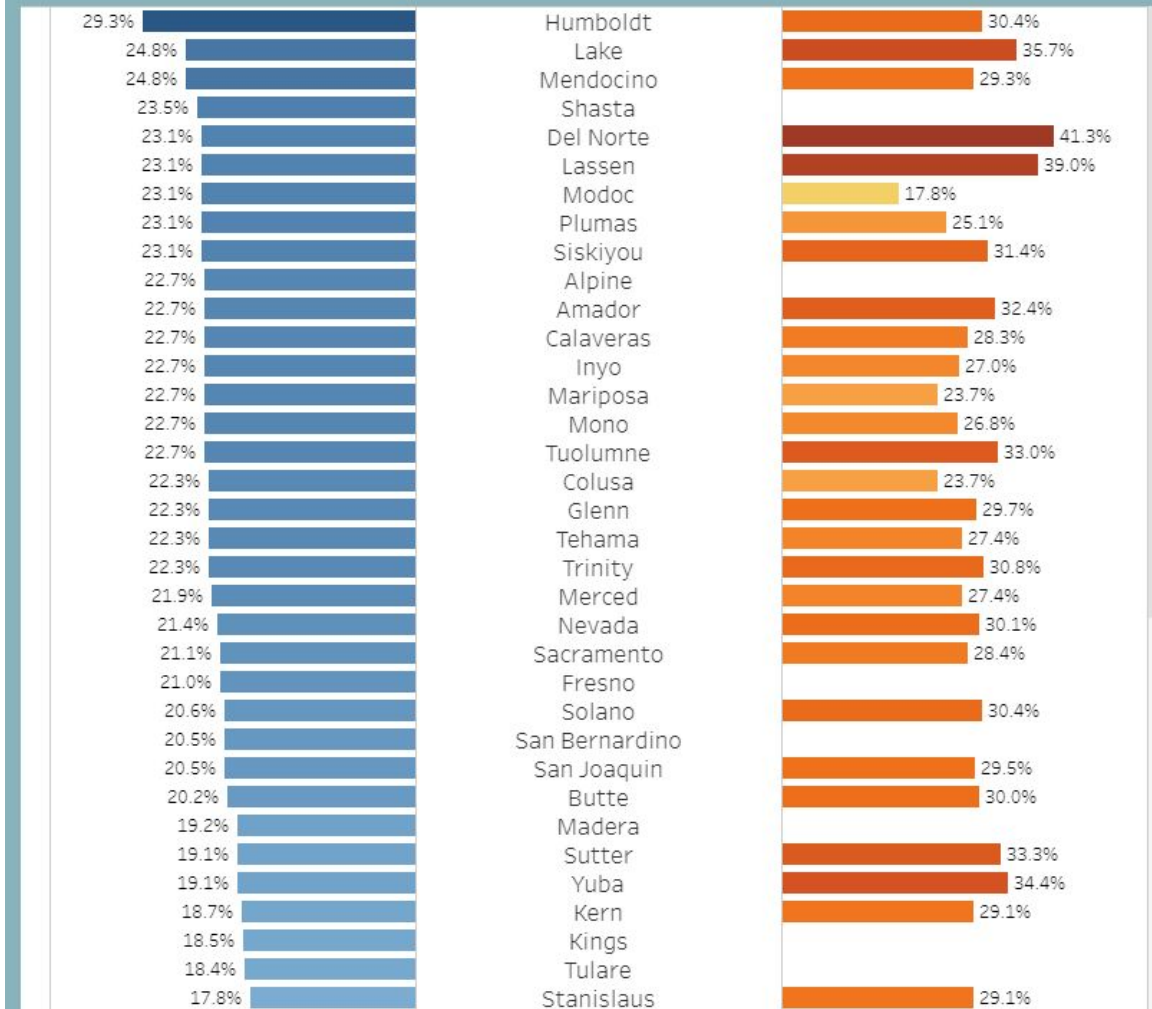
# Methods

## Excel's Power Query: Steps to Success



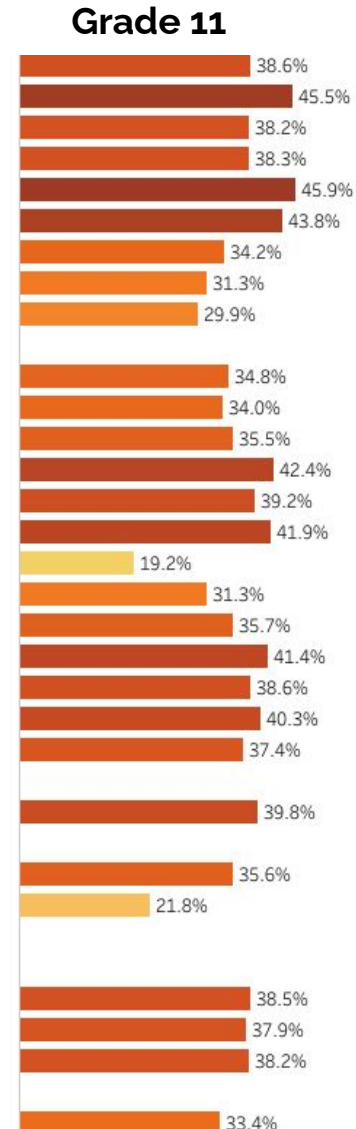
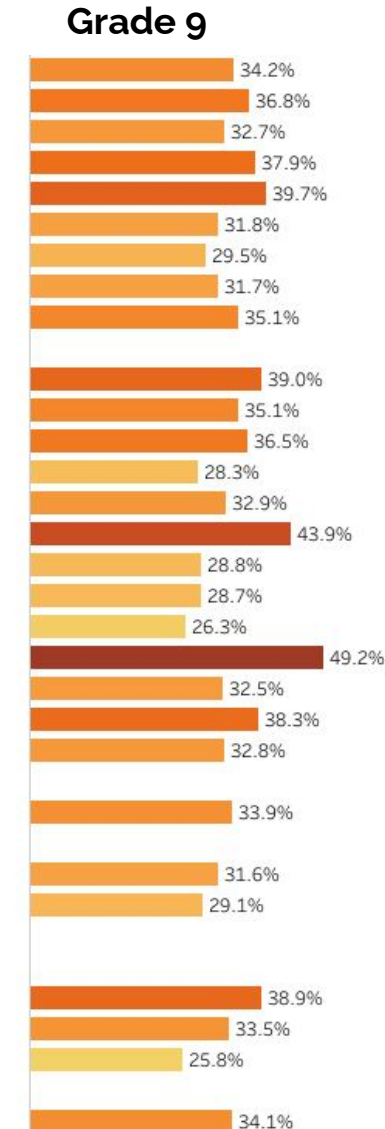
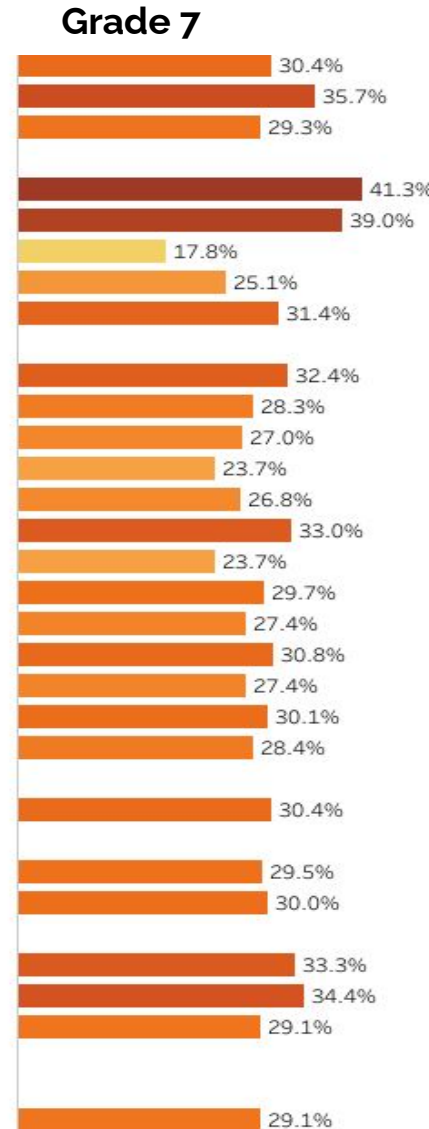
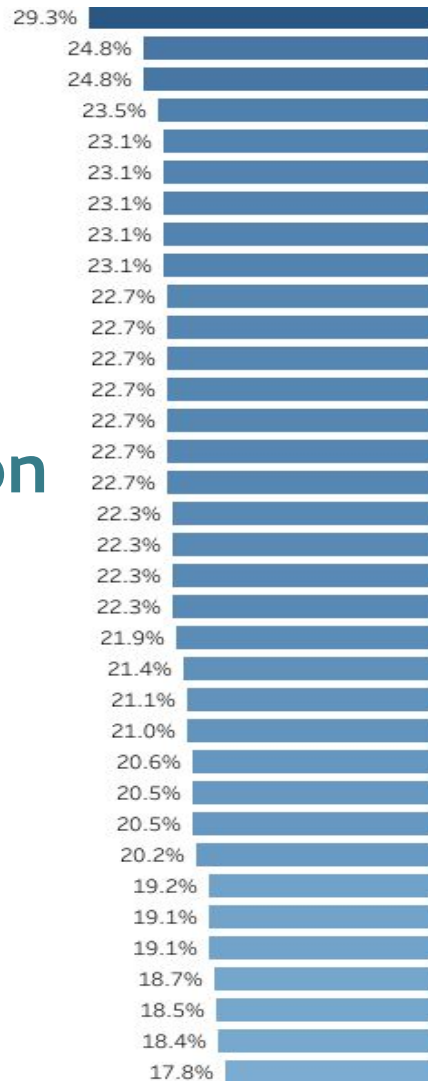
Analyze and  
Visualize

Aces (children 0-17) and Student Depression (Grade 7) by County



Grade Level  
 Grade 7  
 Grade 9  
 Grade 11  
 Non\_Traditional

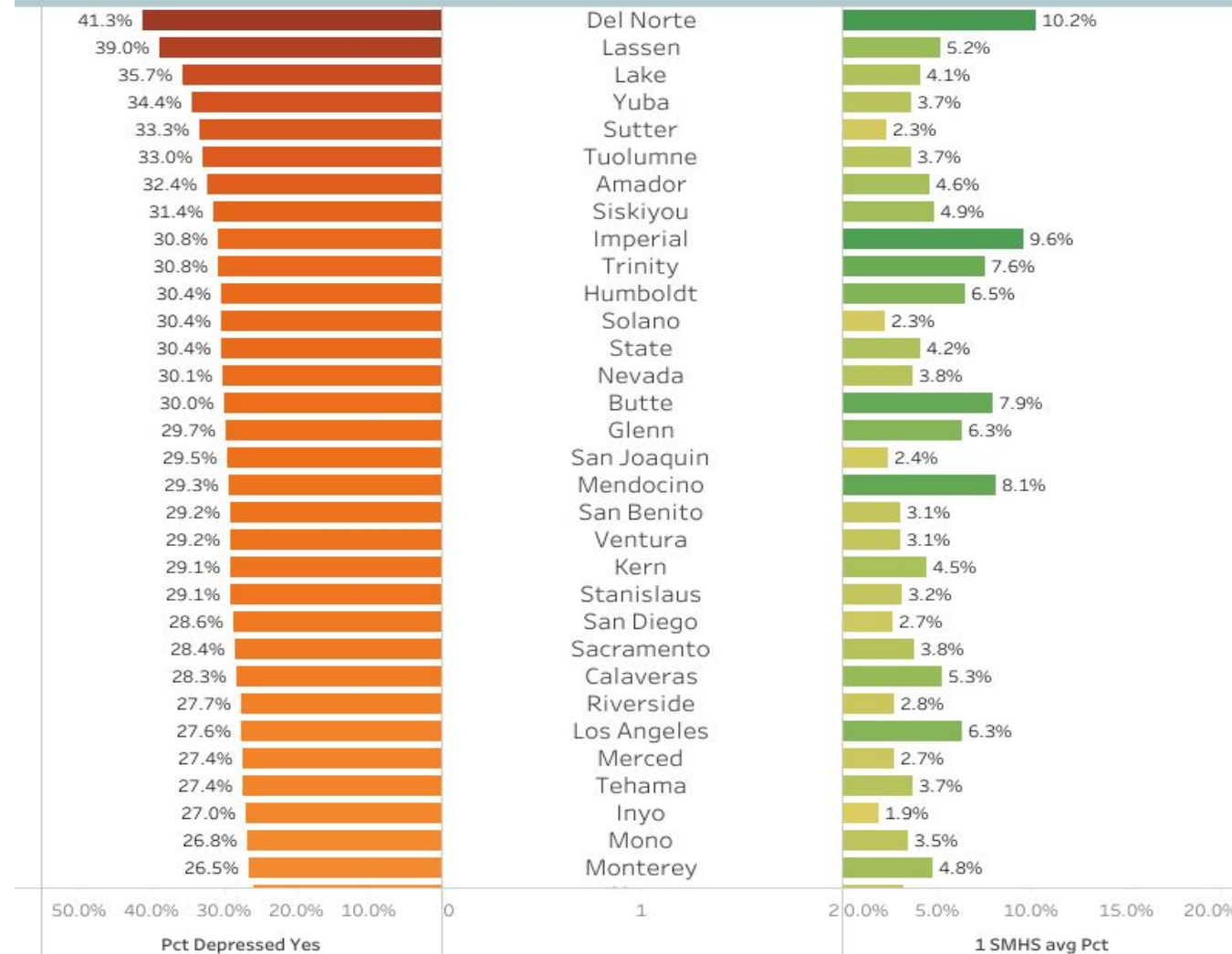
# ACEs & Depression Grades 7,9,11





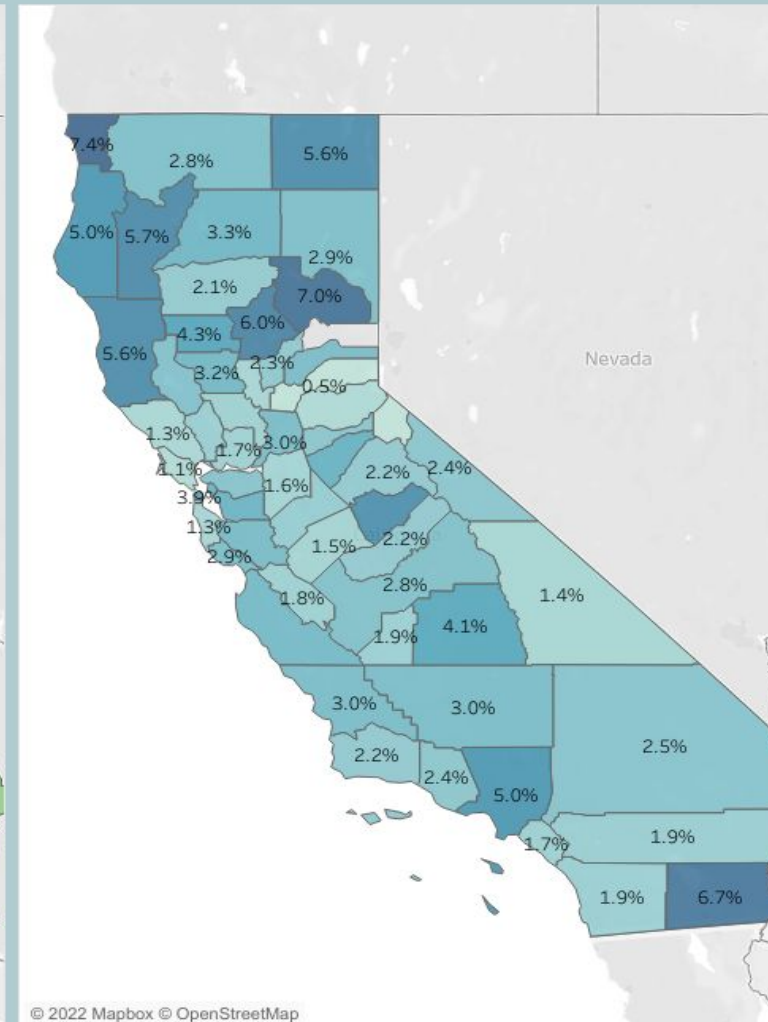
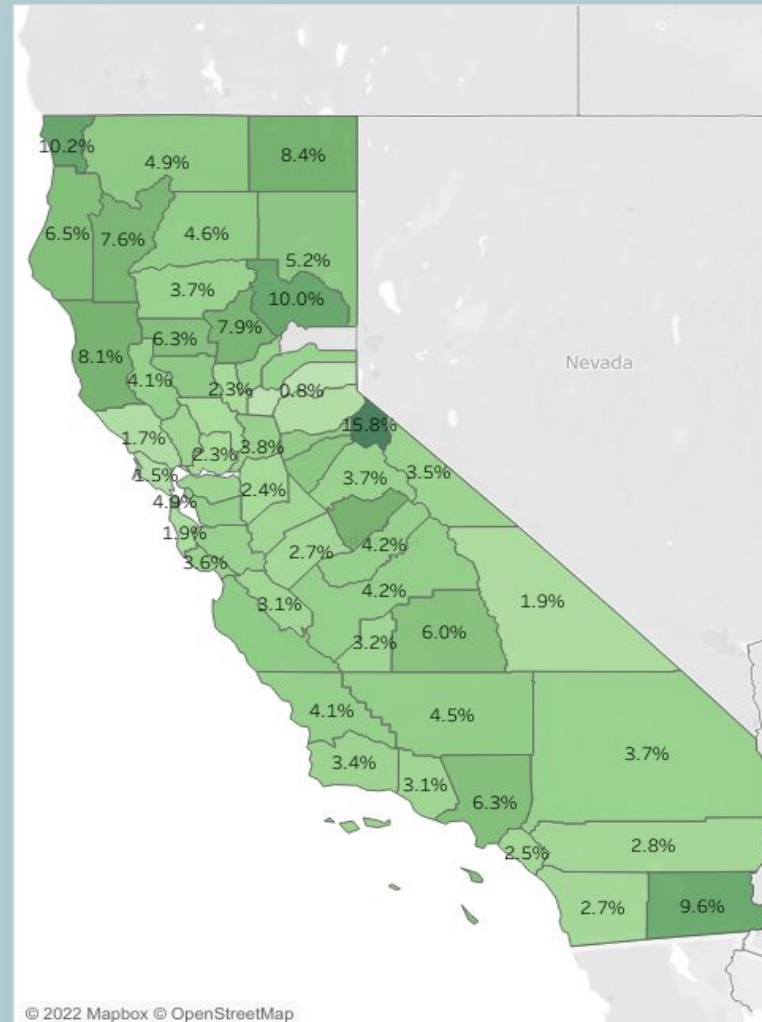
# Student Depression and Specialized Mental Health Services

## Student Depression for (Grade 7) and Specialized Mental Health Service Recipients by County



# Mental Health Service Student Recipients by County

Mental Health Service Student Recipients by County receiving **at least 1 specialized service** and **at least 5 specialized services**







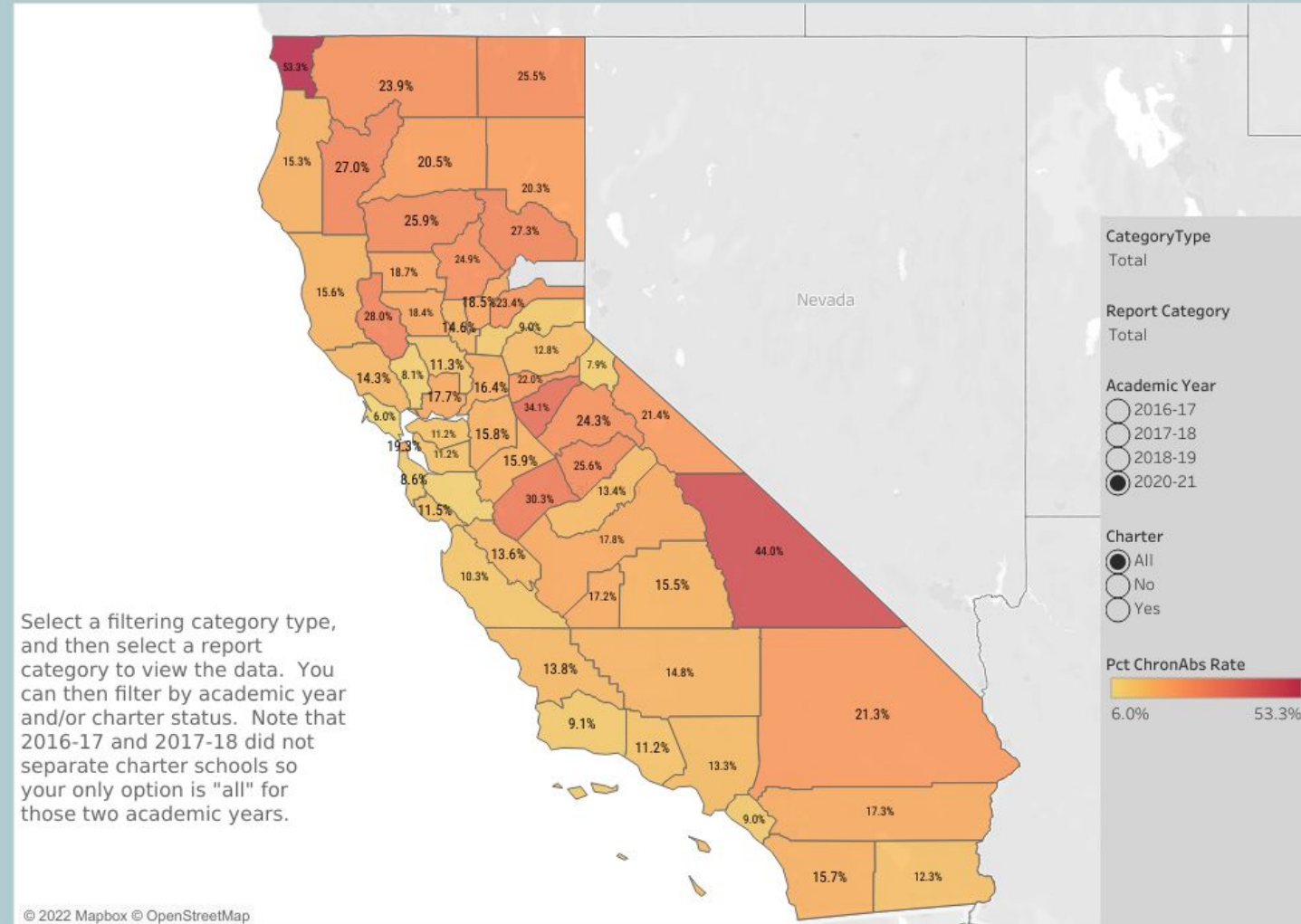


## Feedback

1. What resonates from the data linkages/education and health relationships?  
→ What might we improve?
2. What questions might the data visualizations be bringing up for you?

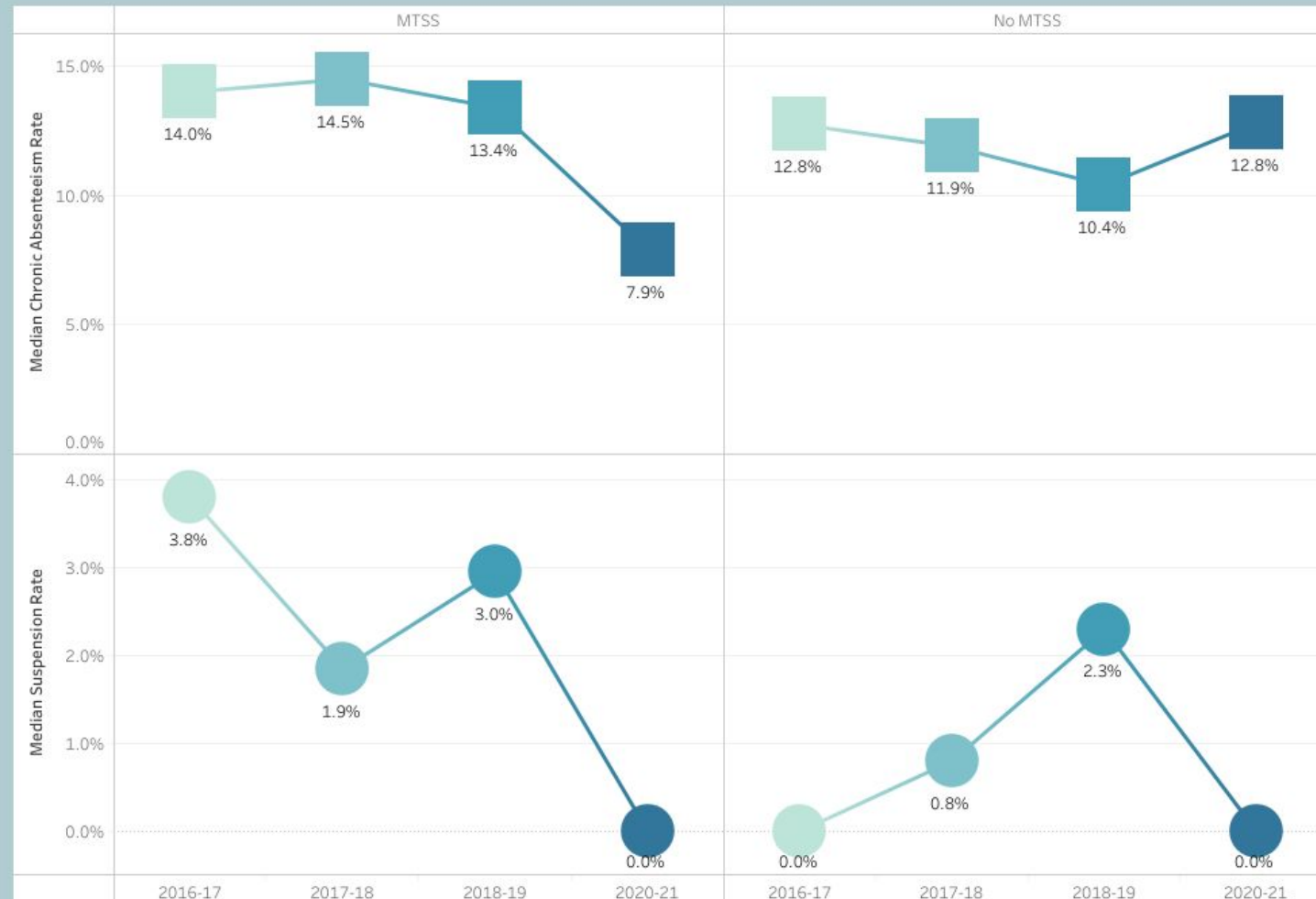
# Chronic Absenteeism 2020-2021

## Chronic Absenteeism for the 2020-21 school year, filtered for Total Students



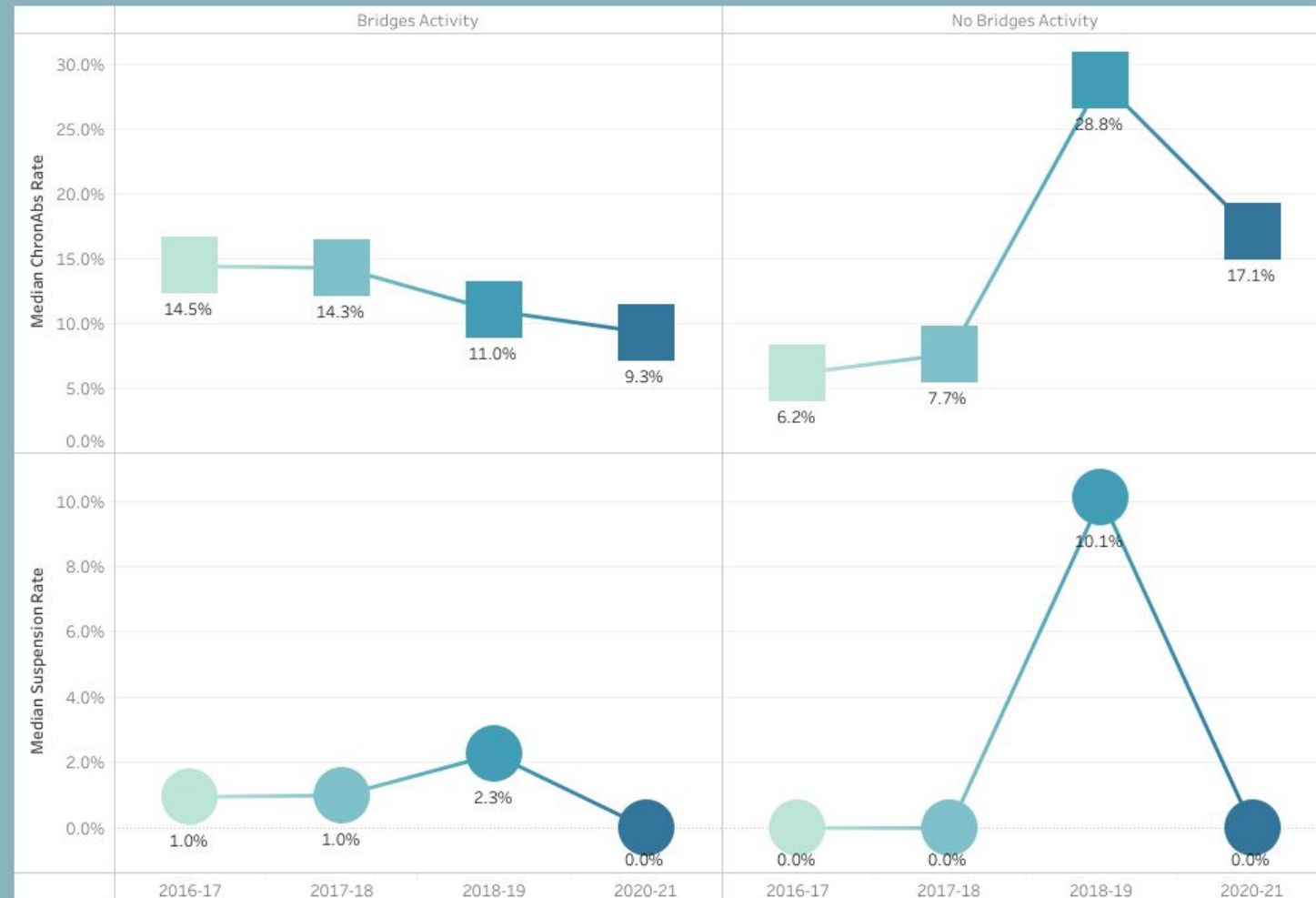
# MTSS: Chronic Absenteeism and Suspension

The median ■ Chronic Absenteeism and ● Suspension rates show overall improvement for districts participating in MTSS



# Bridges: Chronic Absenteeism and Suspension

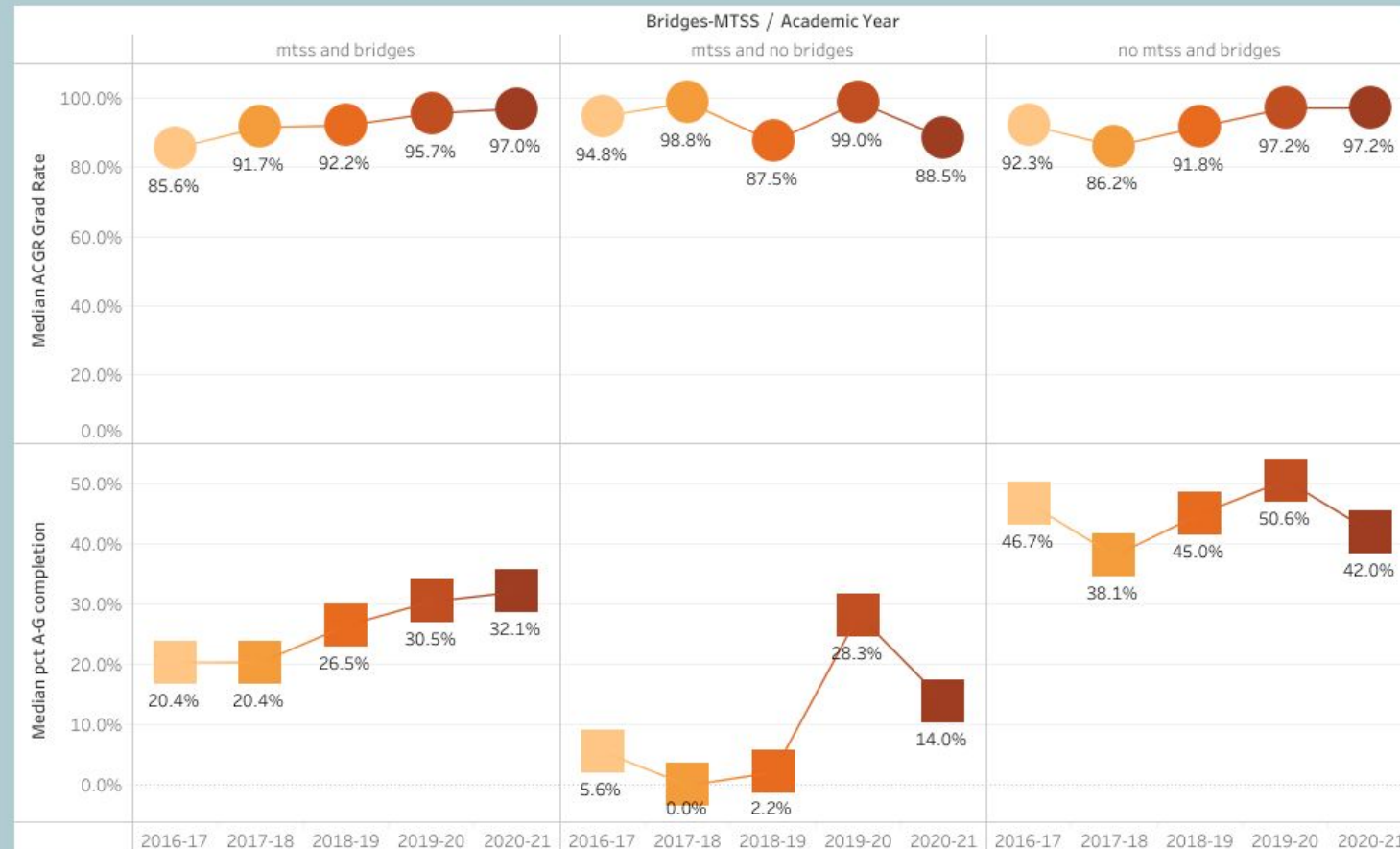
The median ■ Chronic Absenteeism and ● Suspension rates show overall improvement for districts participating in Humboldt Bridges to Success



The median ● Adjusted Cohort Graduation Rate (ACGR) and ■ A-G Completion Rate show overall improvement for districts participating in both MTSS and Humboldt Bridges to Success

Class  
○ Both  
● No  
○ Yes

ACGR Graduation Rates and A-G Completion Rates - MTSS



# MTSS and Bridges: Graduation Rate and A-G Completion

# Preliminary Associations

## Participation in MTSS:

- Is associated with a slight decrease in chronic absenteeism and suspension rates

## Participation in Bridges:

- Is associated with a slight decrease in chronic absenteeism and suspension rate
- Is associated with increase in graduation rate and decrease in dropout rate

## Next Steps



- Analyze relationships with 2021-2022 data
- Add Triage Grantees
  - ◆ Placer, Tulare, and San Bernardino
- Build out visualization/analytics at county level that may be helpful & inform the statewide system of support





## Feedback

1. What other state or local data analysis demonstration projects or profiles might we want to consider in the future?
2. How might we continue to engage practitioners from the field to explore collaboration on whole-person implementation and measurement?
3. Anything else to share/discuss?

# Thank you!

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