

Creating and Implementing Data Dashboards to Drive Continuous Improvement

Frequently Asked Questions:

- **The SJLA Workbook is not required to participate in the SJLA Learning Series.** However, if you are interested in purchasing a copy, digital downloads of the SJLA Workbook are available for purchase on the SJLA website.
- The SJLA Learning Series is not CEU accredited.
- All SJLA Learning Series events to date are recorded and available to view on demand, including copies of slides, on the SJLA webpage.



About Me:



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Learning Objectives

This presentation will help you:

- Understand what it means to create a culture of data-informed continuous improvement.
- Examine the importance of, and ways to, present data with context.
- Identify tips and tricks for creating and implementing effective dashboards.



Agenda:

- Creating a Culture of Continuous Improvement
- Measuring Process
- Presenting with Context
- Thinking About Data Quality
- Creating and Implementing a Dashboard
- Being Persuasive



Introduction:

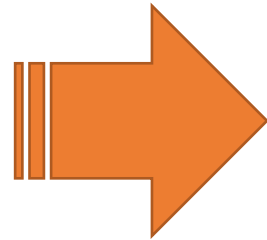
- This webinar is intended to build your change management toolkit.
- Use principles from this presentation in conjunction with other SJLA webinars, such as [Self-Modification of Anti-Racism Tool \(SMART\) presentation \(July 2022\)](#)



Creating a Culture of Continuous Improvement:

Data as a Report Card:

- Used to measure success
- Often binary results: pass / fail, met expectations / fell short
- Emphasis on result, not process



Data as a Tool:

- Used to improve efforts
- Analyze results to harness successes, identify gaps
- Process mindset. The “how” and “why” are just as important as the result
- Embedded into routine decision making and team conversations

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Agenda:

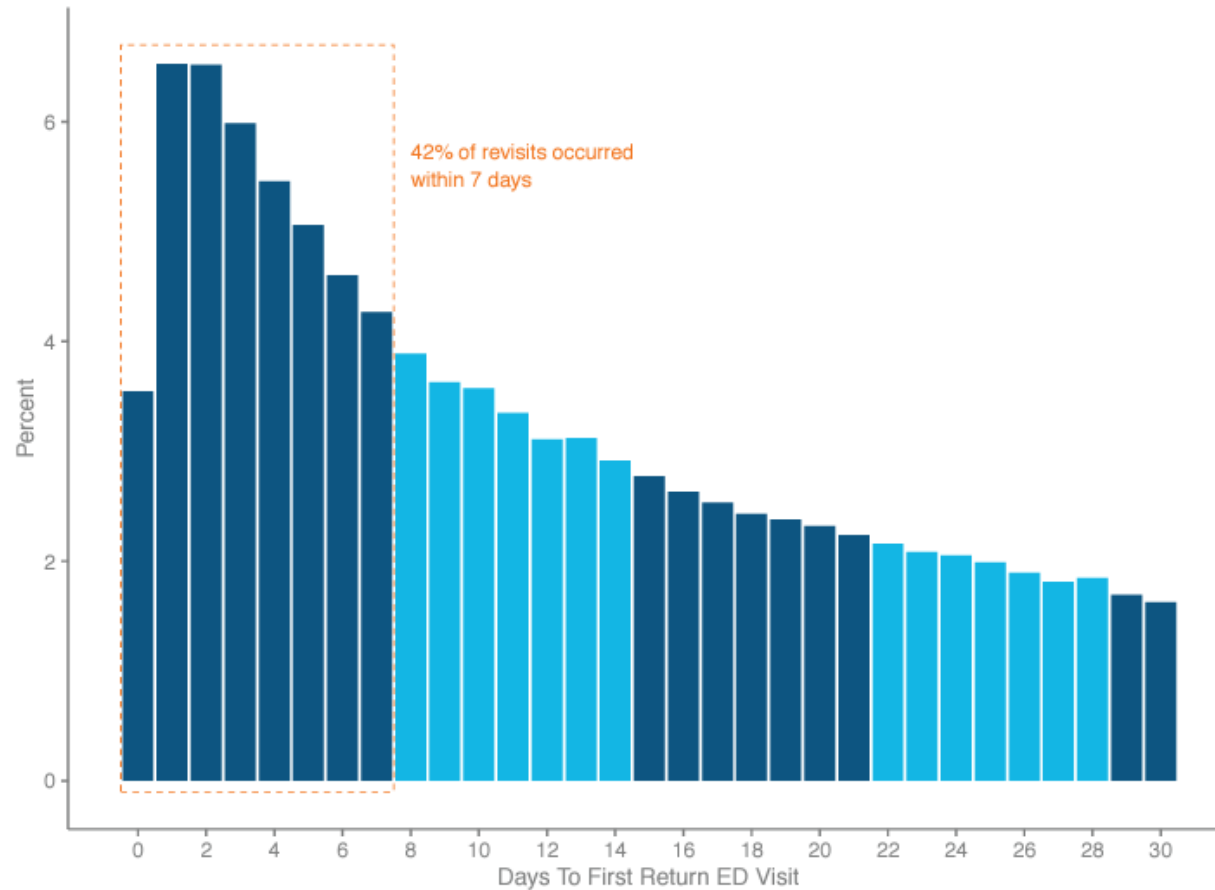
- Creating a Culture of Continuous Improvement
- **Measuring Process**
- Presenting with Context
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Measuring Process

Grant Program Outcome Goals:

1. Reduce avoidable target population emergency department (ED) visits
 - Outcome measure: target population ED revisit rate
2. Increase access to and use of community-based services

Measuring Process



Measuring Process

Grant Program Outcome Goals:

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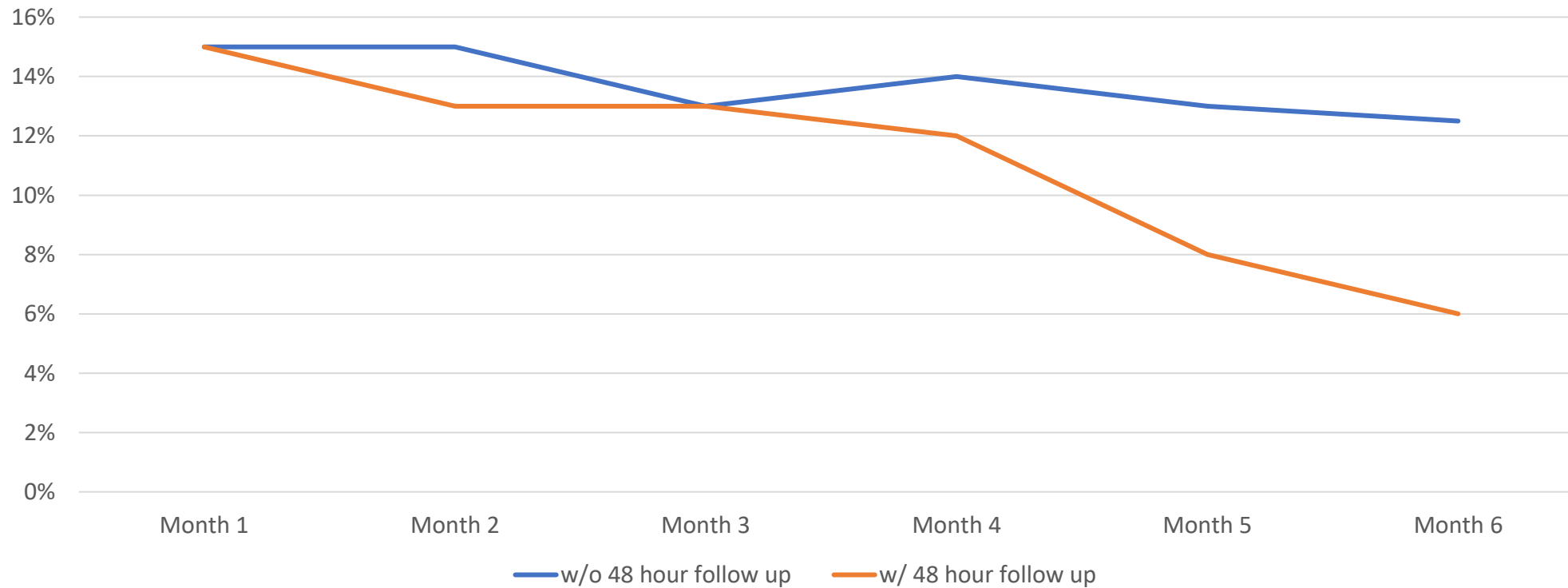
How? If the majority of ED revisits happen within 48 hours, is there an intervention we can implement in that timeframe?

Process: Implement a 48-hour follow-up phone call

Measuring process: Measure whether patients receive a phone call within 48 hours

Measuring Process

Target Population ED Revisit Rates



Agenda:

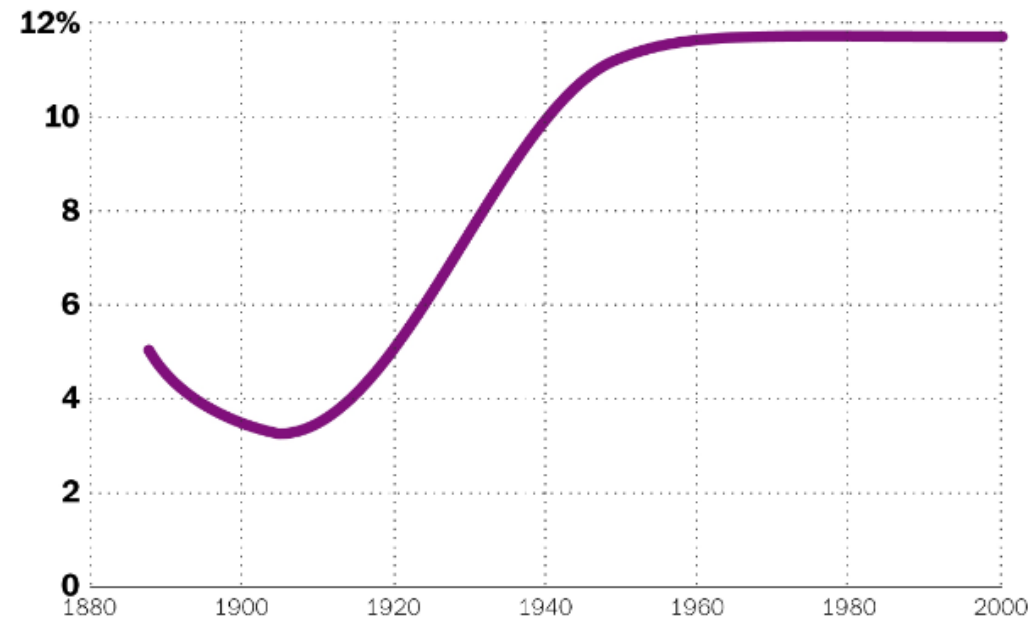
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Presenting Data with Context:

The history of left-handedness

Rate of left-handedness among Americans, by year of birth



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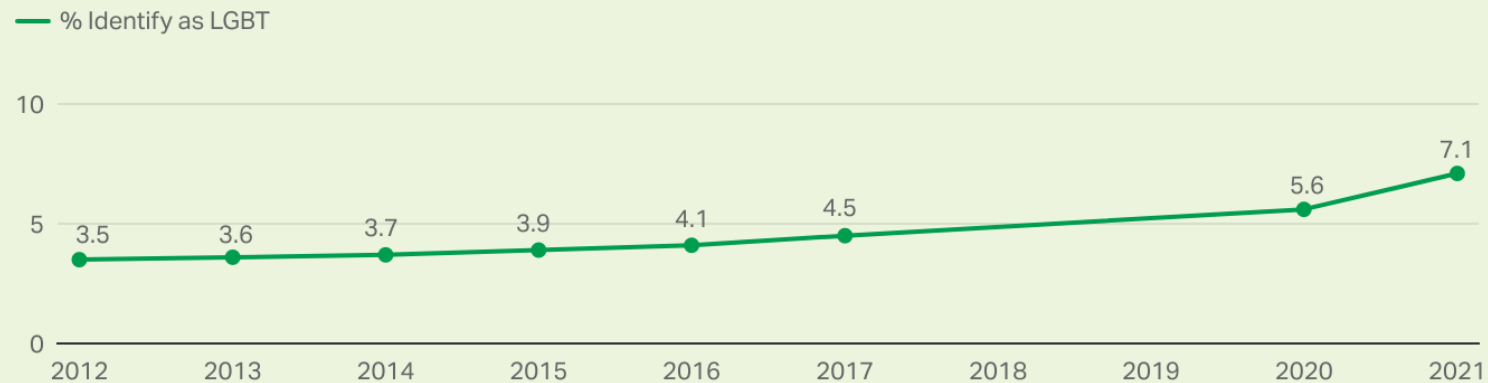
Source: Survey data reported in "The History and Geography of Human Handedness" (2009)



Presenting Data with Context:

Americans' Self-Identification as Lesbian, Gay, Bisexual, Transgender or Something Other Than Heterosexual

Which of the following do you consider yourself to be? You can select as many as apply. Straight or heterosexual; Lesbian; Gay; Bisexual; Transgender



--Respondents who volunteer another identity (e.g., queer, same-gender-loving; pansexual) are recorded as "Other LGBT" by interviewers. These responses are included in the LGBT estimate.

--Data not collected in 2018 and 2019.

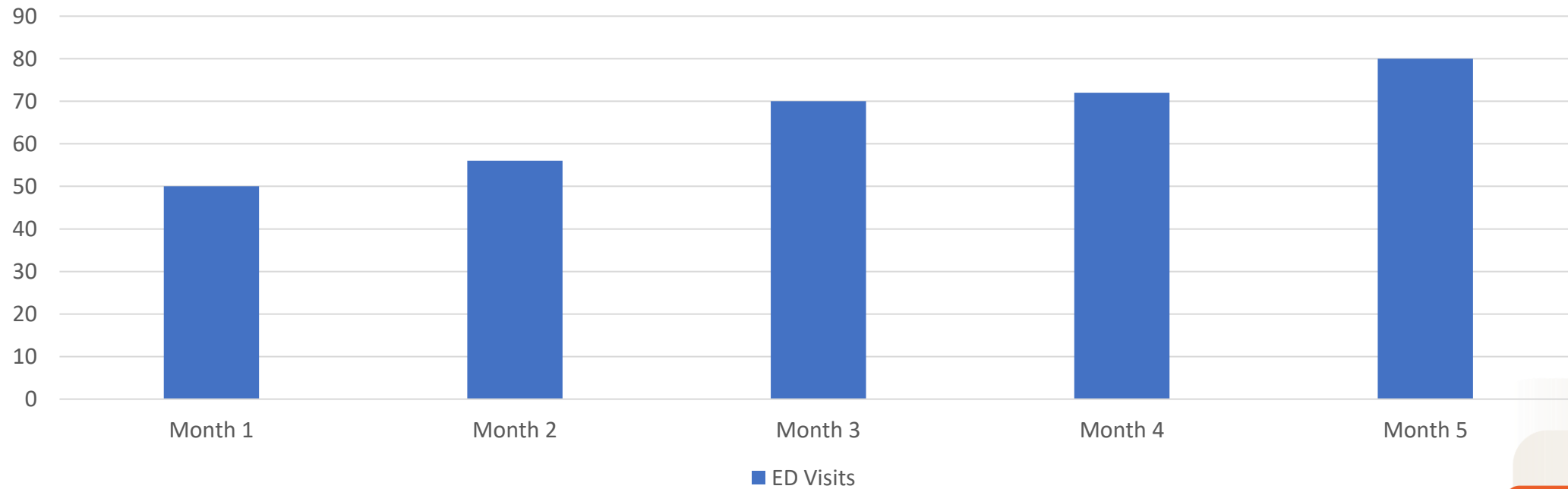
--2012-2013 wording: Do you, personally, identify as lesbian, gay, bisexual or transgender?

GALLUP®



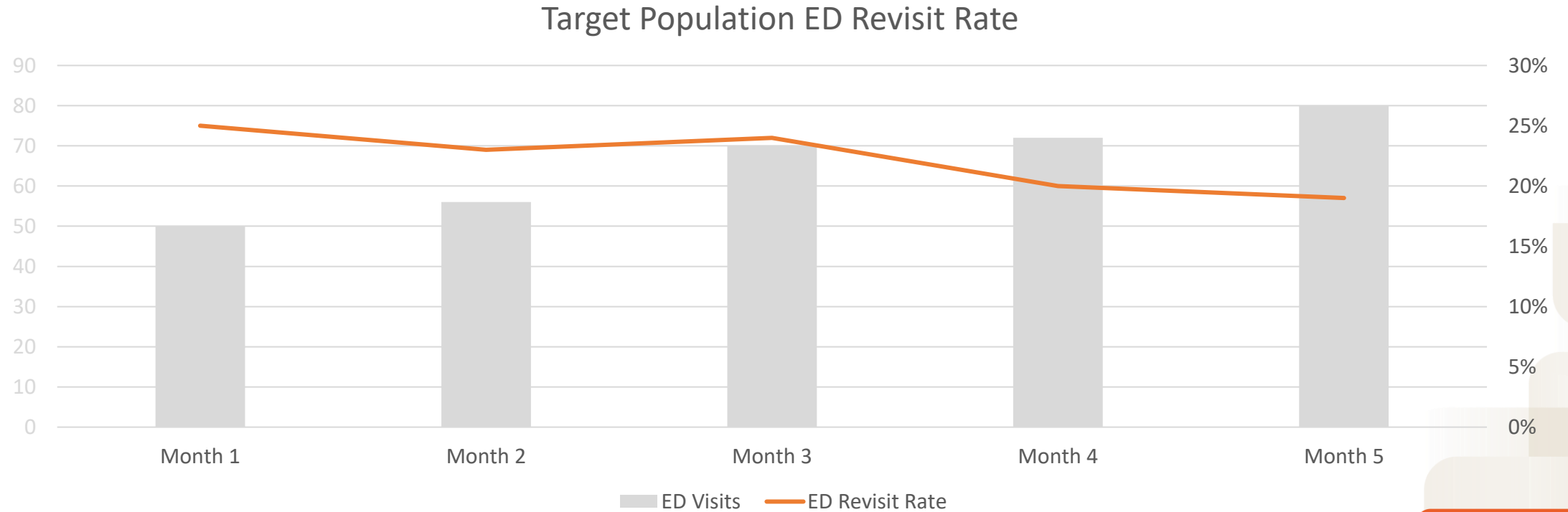
Presenting Data with Context:

Target Population Emergency Department Visits



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Presenting Data with Context:



Agenda:

- Creating a Culture of Continuous Improvement
- Measuring Process
- Presenting with Context
- **Thinking About Data Quality**
- Creating and Implementing a Dashboard
- Being Persuasive



Thinking About Data Quality:

- Always start with your data collection – good data in is good data out
- Be mindful of your comparisons, don't compare apples to oranges
- Identify and implement quality tests for your data
 - If a target population is a subset of all people using your services, that target population should never be larger than the “all” population.
 - If you field a survey, the number of responses shouldn't be higher than the number of people who received the survey



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Creating a Dashboard: What is a Dashboard?

Data Report	Dashboard
Collection of data displayed in an easy to digest way	
Can include charts, visualizations, and tables	
Displays findings	Prompts questions
Potentially large effort to refresh	Relatively easily replicated and updated

Creating a Dashboard: Tips

- **Keep it simple**
 - Your dashboard should be a tool to help facilitate conversations or to answer quick questions
- **Present data “at a glance”**
 - If it’s too busy, your visual will distract from your message
 - Think about the takeaways
- **Think about the workflow**
 - How will you update the dashboard on a regular basis?

Using Visualizations:

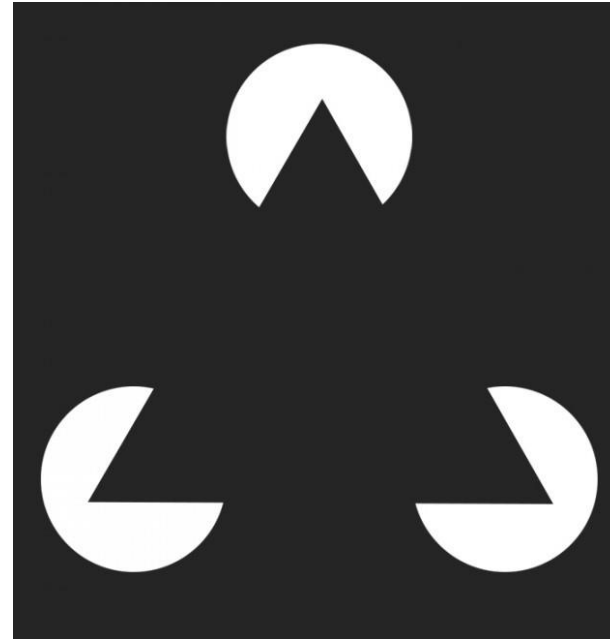
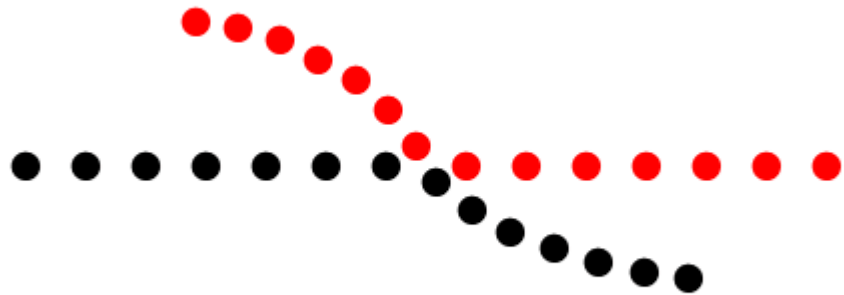
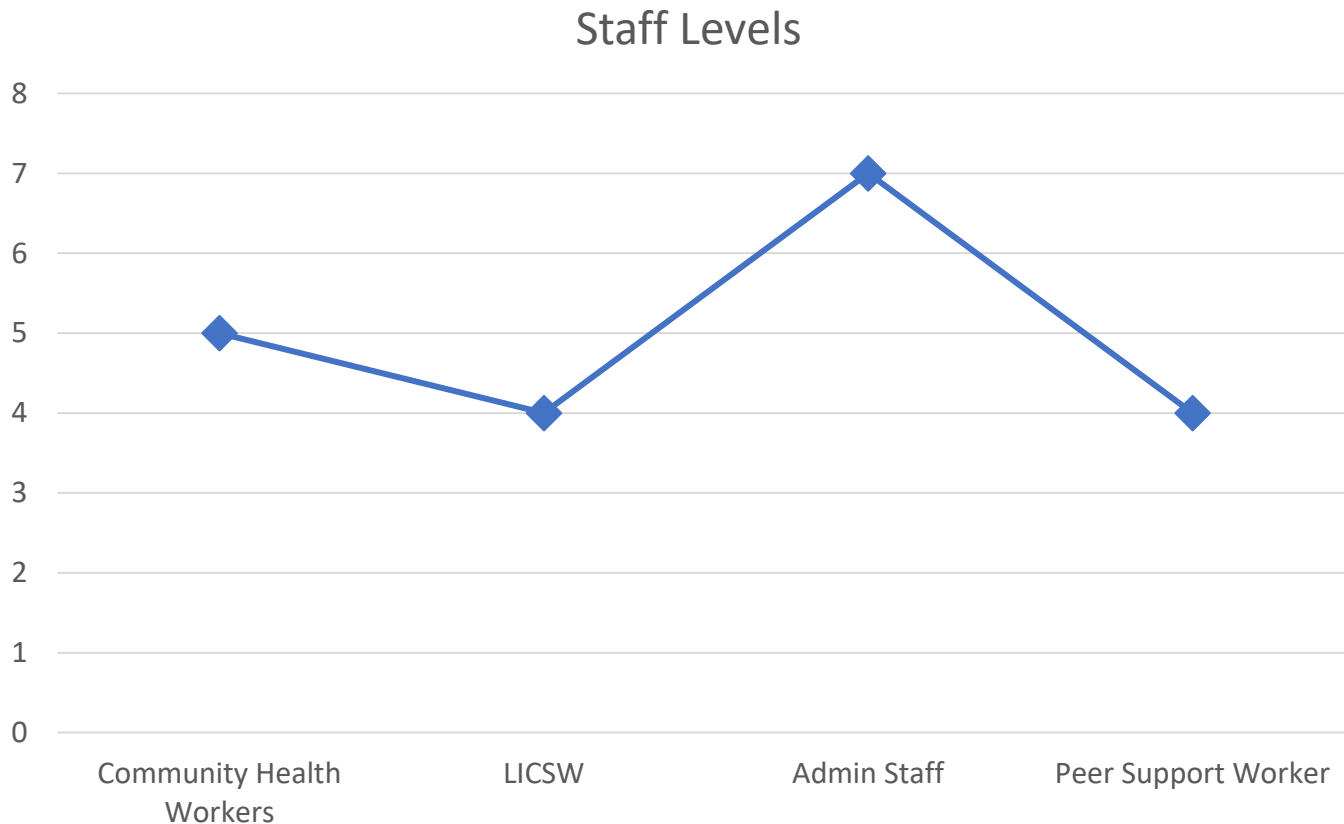


Chart Types: When to Use

	Use for:	Avoid using for:
Bar Chart	<ul style="list-style-type: none">• Showing change over time• Highlighting exact values	<ul style="list-style-type: none">• Datasets with a large number of categories
Line Chart	<ul style="list-style-type: none">• Showing change over time• Showing multiple series on one timeline• Highlighting trends more than values	<ul style="list-style-type: none">• Distinct categories that aren't related to each other• Small datasets and numbers
Pie Chart	<ul style="list-style-type: none">• Small number of categories (5 or 6 max)• Highlighting relative (rather than exact) proportions	<ul style="list-style-type: none">• Showing change over time• Drawing comparisons between exact values
Scatter Plot	<ul style="list-style-type: none">• Finding the relationship between 2 measures	<ul style="list-style-type: none">• Measures that are not correlated

Chart Types (examples):



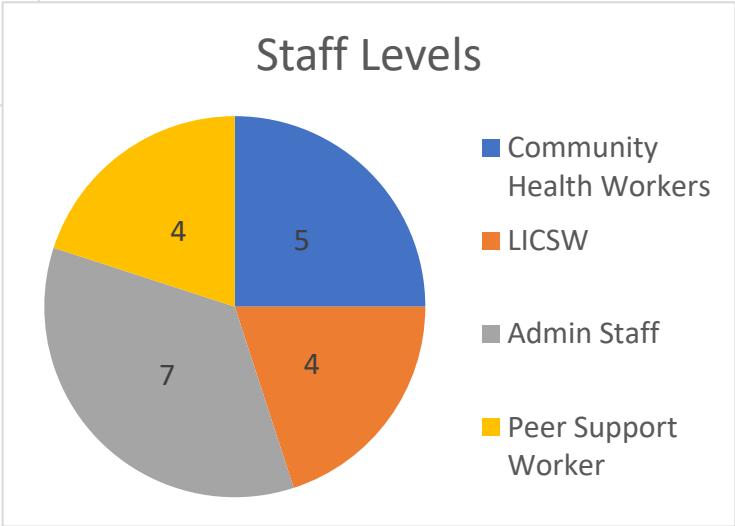
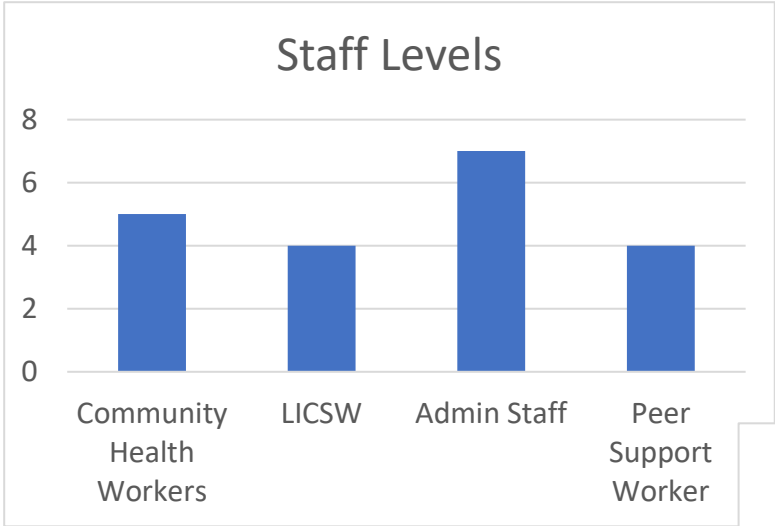
Use line charts unless you want to show relationships between datapoints

Line charts tend to create perceptions of movement and trends over time

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Chart Types (examples):



INSTEAD

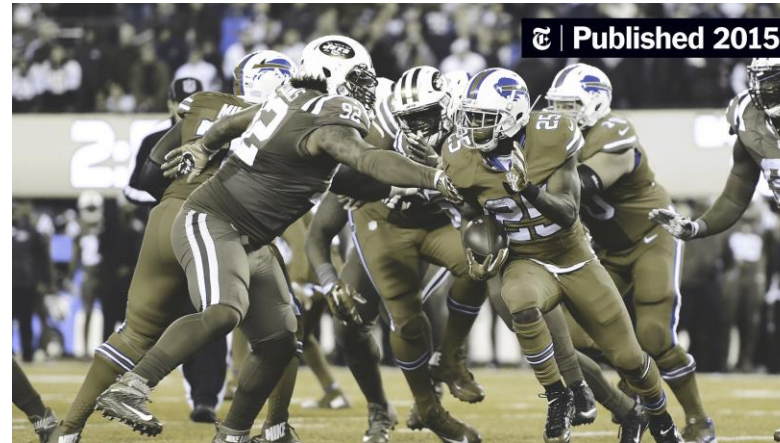
Use bar charts or pie charts to show a snapshot of levels at a point in time

Other Visualization Considerations:

- Color is helpful, *but*:
 - Consider the connotations (spotlight colors have meaning already assigned, try blue and orange)
 - Think about accessibility



<https://www.cbsnews.com/boston/news/bills-jets-nfl-color-rush-uniforms-thursday-night/>

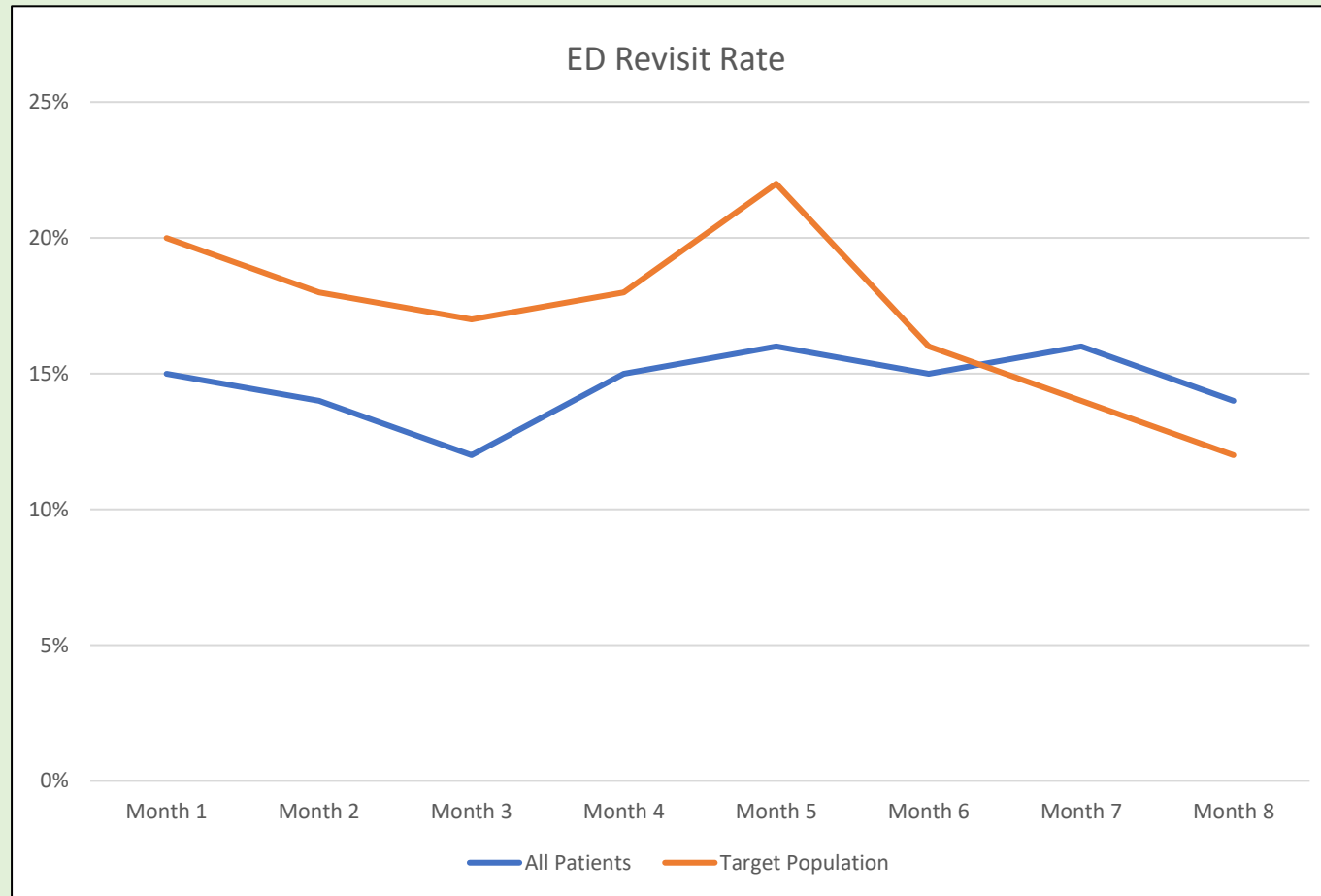


<https://www.nytimes.com/2015/11/14/sports/football/when-red-bills-met-green-jets-colorblind-fans-lost.html>

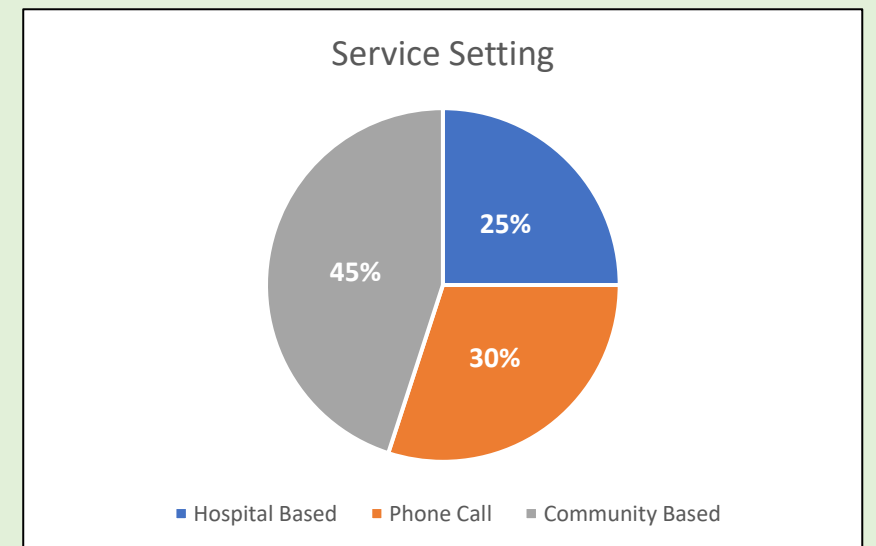
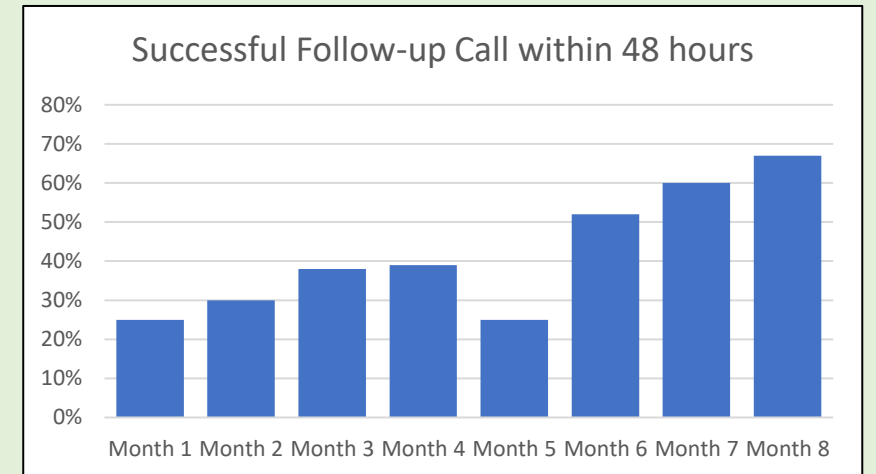


Example Dashboard:

Service Dashboard:

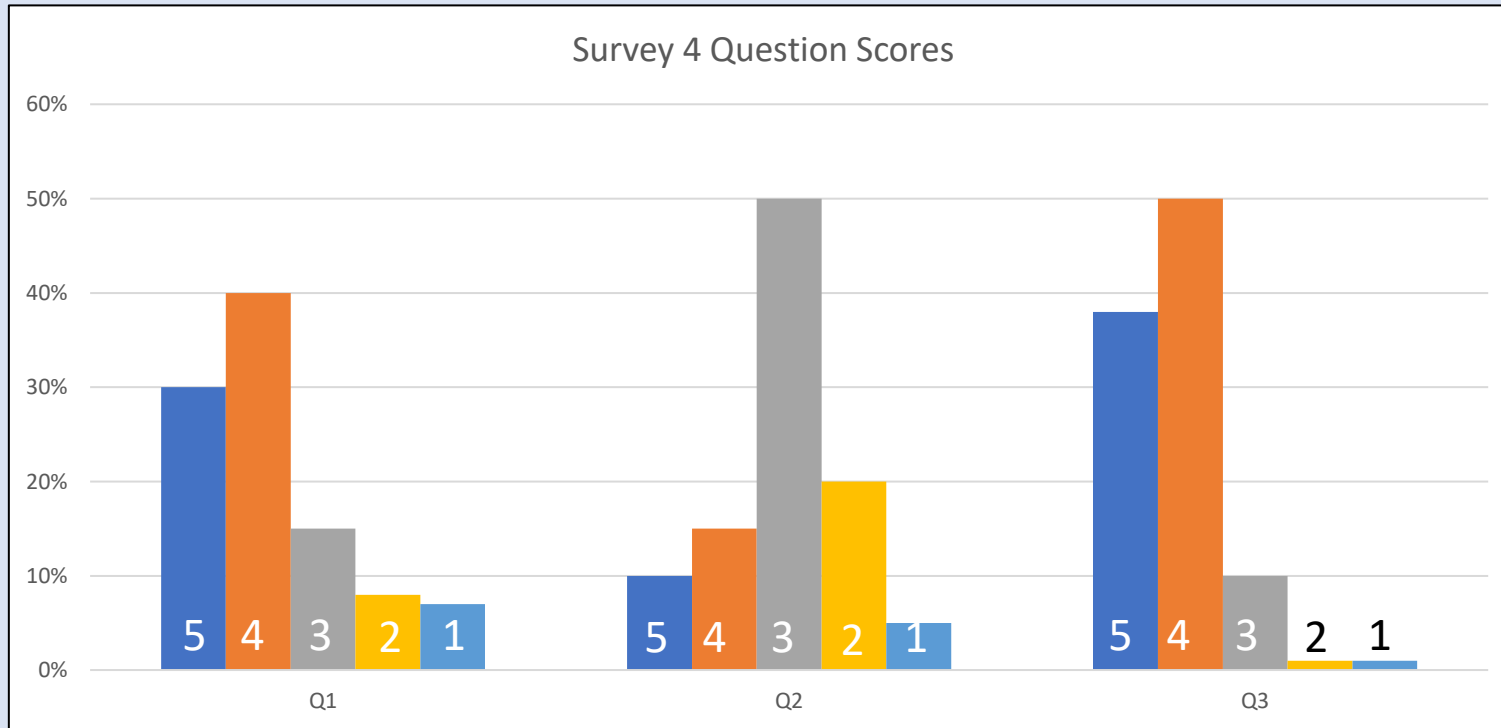


[Mock data for purpose of example]

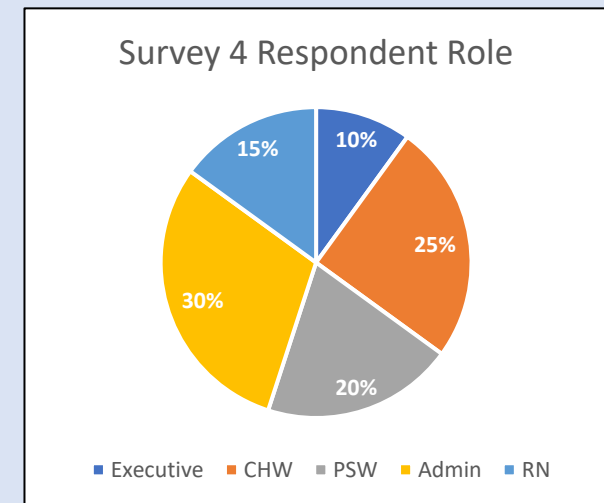
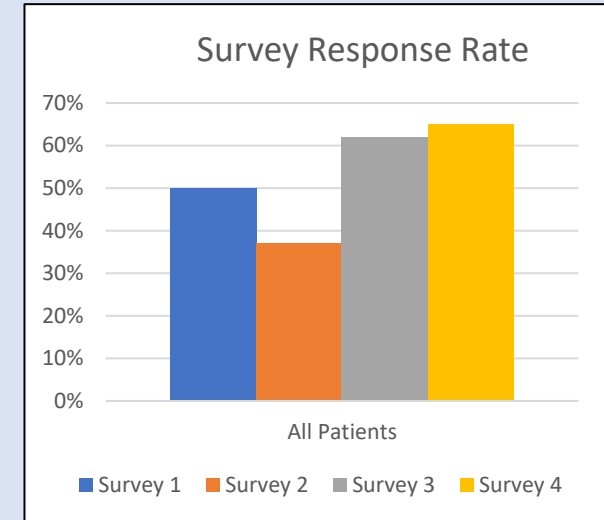


Example Dashboard:

Survey Dashboard:



Question	Scores				
	5	4	3	2	1
Q1	30%	40%	15%	8%	7%
Q2	10%	15%	50%	20%	5%
Q3	38%	50%	10%	1%	1%



[Mock data for purpose of example]

Implementing Your Dashboard:

- **Keep an open mind**
 - Confirmation bias is real! Be open to asking new questions and shifting your thinking
- **Welcome fresh eyes**
 - Get your team's reactions
 - Context, context, context
- **Set a regular review schedule**



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Being Persuasive with Data:

Being persuasive is hard!

- Assess, and if possible, align your incentives
- Be realistic about unfortunate realities (\$)
- Don't let the perfect be the enemy of the good – a pilot program is better than no program

For more on change theory: January 2023 SJLA Event (available on website)

Additional Resources:

- More about outcome vs. process measures:
<https://www.ihl.org/resources/Pages/HowtoImprove/ScienceofImprovementEstablishingMeasures.aspx>
- Dashboard example: Washington DC Child and Family Services Administration
<https://cfsadashboard.dc.gov/>

Evaluation



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<https://www.surveymonkey.com/r/SJLASession11>



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Thank you!

Questions about this presentation? Email me at kevinc@thenationalcouncil.org

Questions about the SJLA program? Email us at SJLA@thenationalcouncil.org