National Center on Program Management and Fiscal Operations



Dynamic Data: Transforming Numbers into Stories of Success

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Your Presenters Today



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6 Elements of Organizational Effectiveness

ACCOUNTABILITY
Building an environment where individuals and teams deliver on commitments

METRICS
Using a common set of measurements to track operations, opportunities, and improvements

COMMUNICATION
Providing the organization with an effective exchange of information

LEADERSHIP AND GOVERNANCE
Provides the strategic direction and leadership

DELIVERY APPROACH
Developing and implementing the means and methods used to deliver products and services

HUMAN PERFORMANCE
Selecting, retaining, and developing the right people

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Learning Outcomes

During our time together we will be able to:

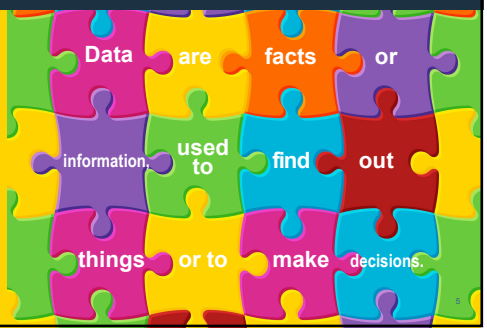
- Identify different ways to display data to support your work as leadership.
- Identify one or more techniques to achieve reporting requirements and share with key stakeholders.

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What is Data?

Data are facts or information, used to find out things or to make decisions.



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What is significant about 425?

- Drives data-based decision-making
- Informs each stage of the program planning cycle
- Uses qualitative and quantitative measures to ensure effective program management



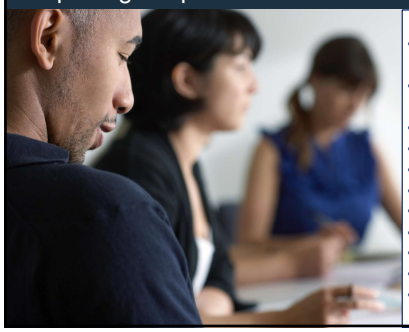
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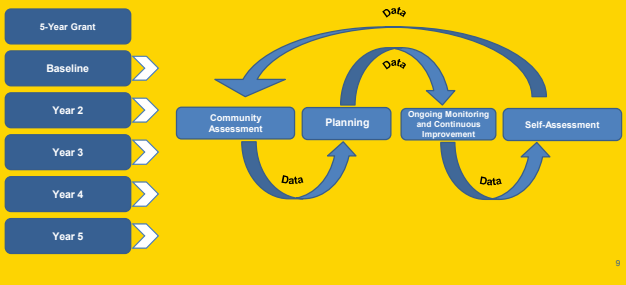
Reporting Requirements



- Financial statements, including credit card expenditures
- Program Information Summaries
- Enrollment
- USDA nutrition reports
- Financial Audit
- Self-assessment
- Community Assessment
- HHS Secretary Communication
- PIR
- School Readiness
- Ongoing Monitoring results

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Data-Informed Continuous Improvement

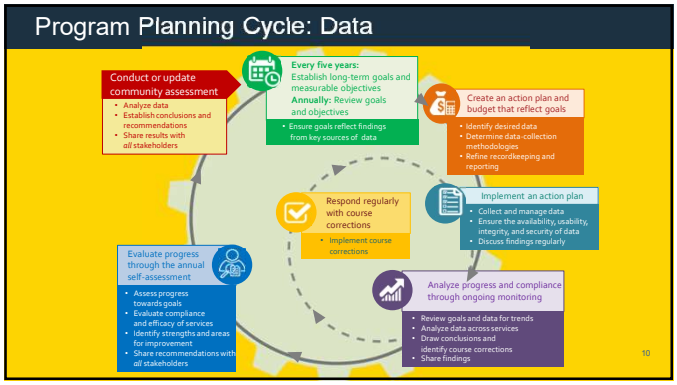


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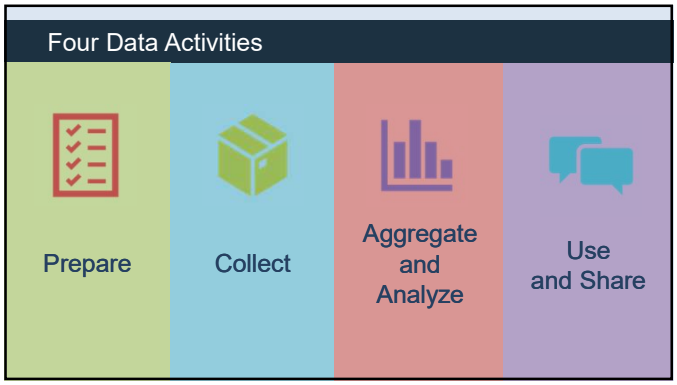
Slide 7

LE1 Not sure what this sentence in the notes means: change this fit data program planning by using data
Louise Eldridge, 2024-06-10T15:55:57.663

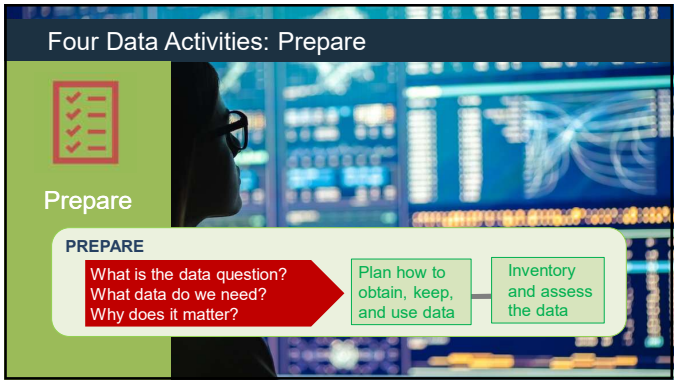
JW1 0 Suggested edit: Explore how data impacts program planning
John Williams, 2024-06-12T11:17:37.182


Program Planning Cycle: Data
Conduct or update community assessment
Analyze data
Establish conclusions and recommendations
Share results with all stakeholders
Every five years:
Establish long-term goals and measurable objectives
Annually: Review goals and objectives
Ensure goals reflect findings from key sources of data
Create an action plan and budget that reflect goals
Identify desired data
Determine data-collection methodologies
Refine recordkeeping and reporting
Implement an action plan
Collect and manage data
Ensure the availability, usability, integrity, and security of data
Discuss findings regularly
Respond regularly with course corrections
Implement course corrections
Analyze progress and compliance through ongoing monitoring
Review goals and data for trends
Analyze data across services
Draw conclusions and identify course corrections
Share findings
Evaluate progress through the annual self-assessment
Assess progress towards goals
Evaluate compliance and efficacy of services
Identify strengths and areas for improvement
Share recommendations with all stakeholders
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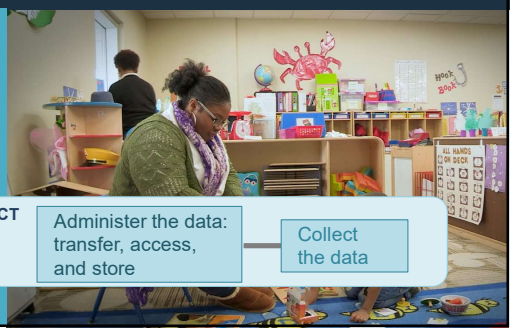

Four Data Activities
Prepare
Collect
Aggregate and Analyze
Use and Share

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Four Data Activities: Prepare
Prepare
PREPARE
What is the data question?
What data do we need?
Why does it matter?
Plan how to obtain, keep, and use data
Inventory and assess the data

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Four Data Activities: Collect



Collect

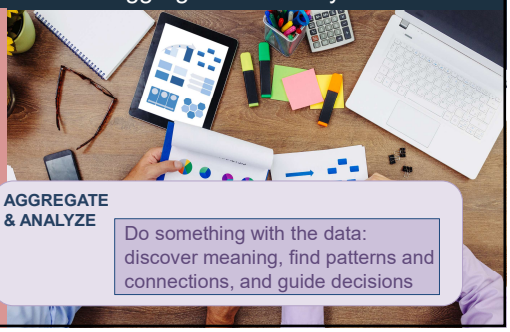
COLLECT

Administer the data: transfer, access, and store

Collect the data

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Four Data Activities: Aggregate and Analyze



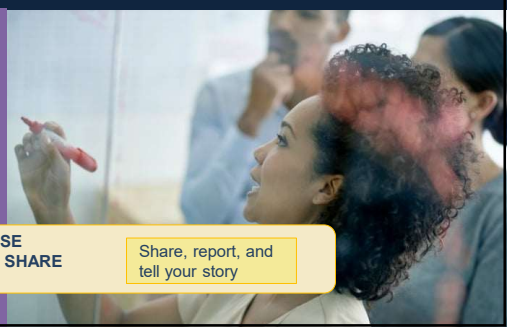
Aggregate and Analyze

AGGREGATE & ANALYZE

Do something with the data: discover meaning, find patterns and connections, and guide decisions

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Four Data Activities: Use and Share



Use and Share

USE & SHARE

Share, report, and tell your story

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Let's Talk



"The skill of data storytelling is removing the noise and focusing people's attention on the key insights."

—Brent Dykes, Author, "Effective Data Storytelling" & Contributing Writer – Forbes Magazine

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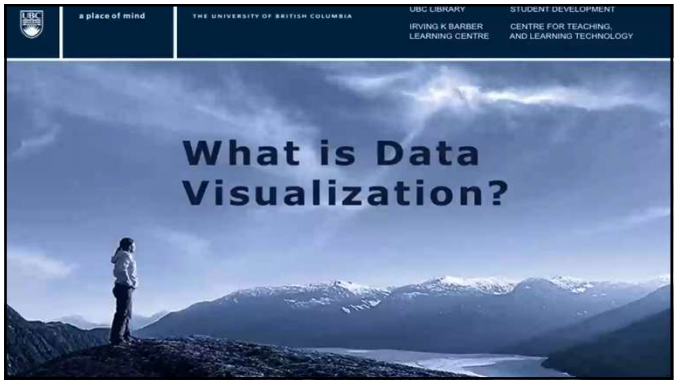
WHAT IS DATA VISUALIZATION?

- Graphical representation of information and data
- Charts, graphs, maps, infographics

Why use data visualization?

- See and understand trends, patterns in data, and outliers
- Analyze massive amounts of information
- Make data-informed decisions

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Why Use Data Visualization?



Data visualizations can be awesome tools when used the right way.



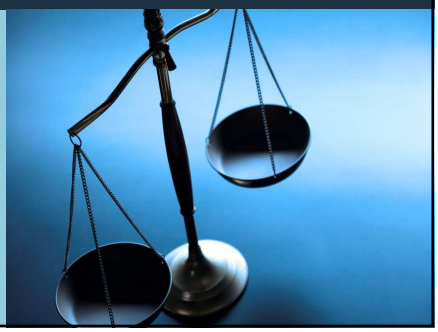
- The human brain is amazing, especially at recognizing shapes and patterns.
- The brain receives 8.96 megabits of data from the eye every second.
- The average person comprehends 120 words per minute reading, or 81.6 bits of data per second.

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It's all about balance...

Data visualizations can be awesome tools when used the right way.



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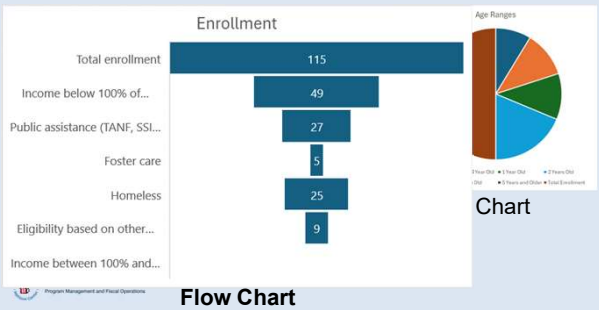
End of Month Enrollment- Raw Data and convert to…

Month	Early Head Start			
Jun 2022	Reported	Funded	Percent	Months Potentially Under Enrolled
Jul 2022	64	116	55 %	0
Aug 2022	64	116	55 %	0
Sep 2022	Closed	116		0
Oct 2022	65	116	56 %	1
Nov 2022	72	116	62 %	2
Dec 2022	69	116	59 %	3
Jan 2023	69	116	59 %	4
Feb 2023	72	116	62 %	5
Mar 2023	77	116	66 %	6
Apr 2023	76	116	66 %	7
May 2023	75	116	65 %	8
Jun 2023	74	116	64 %	9
Jul 2023	72	116	62 %	9
Aug 2023	69	116	59 %	9
Sep 2023	Closed	116		9
Oct 2023	73	116	63 %	10
Nov 2023	79	116	68 %	11
Dec 2023	79	116	68 %	12
Jan 2024	82	116	71 %	13
Feb 2024	83	116	72 %	14
Mar 2024	84	116	72 %	15
Apr 2024	87	116	75 %	16
May 2024	85	116	73 %	17

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Making data visual- Graphs and Charts



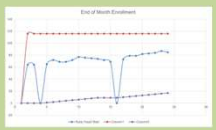
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Pictures

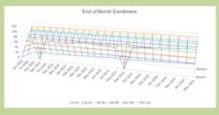


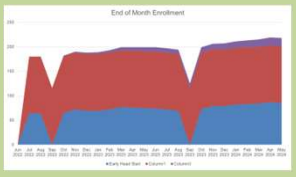
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Ways to Use Data Visualization Effectively



- Analyze and make decisions
- Discover and identify
- Tell or support a story
- Inform or teach

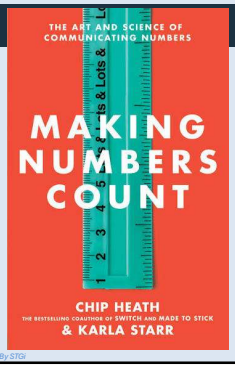




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Making Numbers Meaningful

"We do hard, often painstaking work to generate the right numbers to help make a good decision- but all that work is wasted if those numbers never take root in the minds of the decision makers."



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These materials were developed for OHS/Region 8 TTA Network under contract No.75?IMN26C00021 By STGI

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Facilitate Data Dialogue



In interpreting data, consider these prompts:

- I believe the data suggests [blank] because…
- Here are some tentative conclusions we've reached…
- What additional data would help me confirm or refute my conclusion?
- What are possible causes of the trends or issue we have identified?

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Facilitate Data Dialogue



Translate Everything.

Examples-

"To put that in context…"
"To put that in perspective…"
"What that means is…"
"Think of it this way…"
"That means…"
"By comparison…"

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WHY TRANSLATE

A percentage can hide the children

82%

average daily attendance

sounds strong

→

58

children absent

on a typical day

Show the children behind the percentage.

Adapted from Heath & Starr, Making Numbers Count (2022)

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THE METHOD

Translation is a three-move discipline

1	2	3
Find the meaning	**Choose a familiar scale**	**Write one concrete sentence**
What decision or feeling should the number change?	Use children, families, staff, days, or dollars.	Keep the math visible. State the assumption.

MEANING → SCALE → MEMORY

Adapted from Heath & Starr, Making Numbers Count (2022)

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FROM METRIC TO MEANING

Translate the number before leader's act

Make an abstract metric concrete enough for a Governing Body member to understand and use.

1	2	3
REPORT THE NUMBER	TRANSLATE THE NUMBER	MAKE IT VISUAL
82% average daily attendance	About 58 of 320 children are absent on an average day.	≈ 3 classrooms absent each day

The goal is not to make the number dramatic.
The goal is to make it understandable.

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Favor User-Friendly Numbers- Experiment

1. Glance at List A for a few seconds, close your eyes, and say the numbers out loud.
2. Repeat for List B.

List A	List B
2,842,900 5.73 times bigger 9/17	3 million 6 times bigger 1/2

Which list do you remember better? Why?

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Favor User-Friendly Numbers

1. Simpler is better. Round with enthusiasm
2. Concrete is better: Use Whole Numbers
3. Follow the rules but defer to expertise.

40% of U.S adults do not always wash their hands after using the bathroom at home.

2 out of every 5 people you shake hands with may not have washed their hands between using the toilet and touching your hands.

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Adapted from Heath & Stern, Making Numbers Count (2022)

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"To help people grasp your numbers, Ground them in the familiar, concrete and human scale"

Convert Abstract Numbers into Concrete Objects

One Saturday in 2014, in Toledo, Ohio municipal officials asked the 500,00 people served by the metropolitan area's water system to stop using tap water after toxins from algae were found at a regional water treatment plan.

Of the 650,000 residents of the Toledo, Ohio metro area, 4 out of 5 households can't fill up a glass from the kitchen faucet in their own home and drink the water without swallowing toxins from algae.

FIND YOUR FATHOM

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Adapted from Heath & Stern, Making Numbers Count (2022)

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Recast your number in different dimensions…

Try Time, Space, Distance, Money and Pringles!

A single pringle has 10 calories.

In order to burn off the calories in a single pringle, you'd have to walk 176 yards, or almost 2 football fields.

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FIND YOUR FATHOM

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Use Emotional Numbers

1 in 5 children experiences food insecurity

About 1 in 4 caregivers struggling to afford diapers said they had skipped meals to save money for diapers.

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FROM METRIC TO MEANING

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82% average daily attendance	**About 58 of 320** children are absent on an average day.	**≈ 3 classrooms** absent each day

The goal is not to make the number dramatic. The goal is to make it understandable.

Fiscal Cohort • Making Numbers Count

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YOUR 8-MINUTE TRANSLATION SPRINT

Make one number impossible to misunderstand

Illustrative grant-level scenarios for a Head Start director.

1. Average daily attendance: 88% for 240 funded slots.
2. Workforce: 12 open roles across 80 budgeted positions.
3. Health screenings: 95% complete across 240 children.
4. Family goals: 75% complete across 360 goals.
5. Meals + snacks: 180,000 served across 250 operating days.
6. Transportation: 98.7% on time across 12,000 one-way trips.

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90-SECOND RETURN

Debrief the choice, not just the math

2 × 20 sec

Two rooms share a director-ready sentence.

01 What familiar frame did you choose?

02 What changed in how the number felt?

03 What assumption must the audience hear?

Listen for: clarity · honesty · repeatability

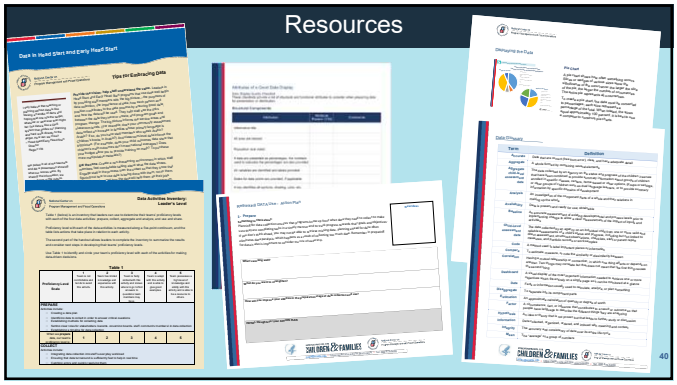
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IF THEY CAN PICTURE IT,
THEY CAN USE IT.

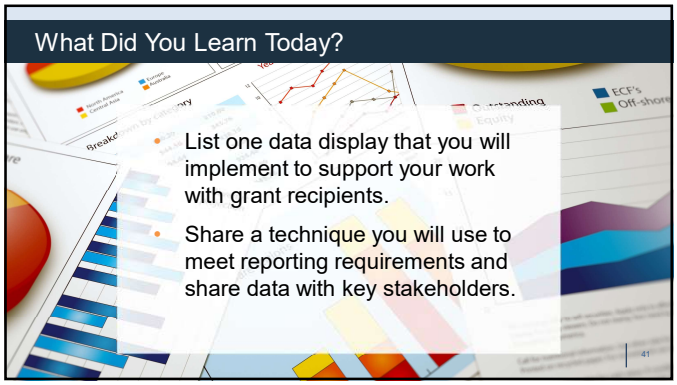
Can they	Can they	Can they
PICTURE IT?	COMPARE IT?	REPEAT IT?

Keep the number. Change the frame.

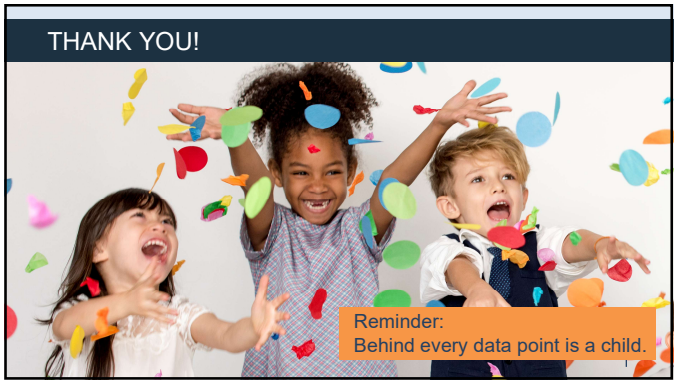
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Resources

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What Did You Learn Today?
List one data display that you will implement to support your work with grant recipients.
Share a technique you will use to meet reporting requirements and share data with key stakeholders.

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THANK YOU!
Reminder:
Behind every data point is a child.

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