

# Developing Data Visualizations and Dashboards to Enhance Decision Making

Greg Rafn, MA

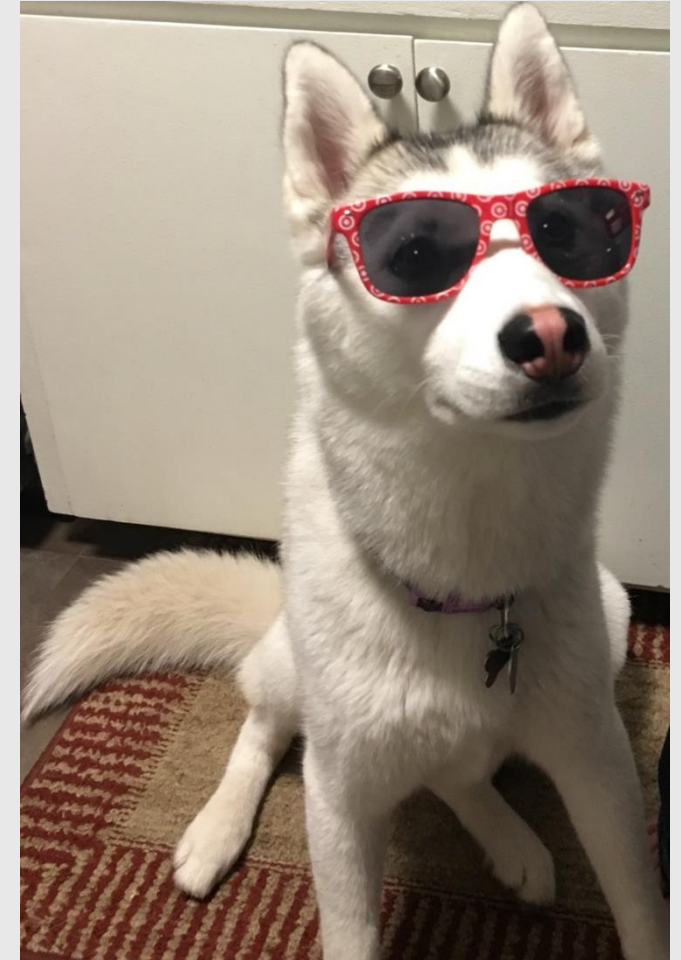
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# Background

- Greg Rafn, MA
- Social Service direct practice and Supervision
- Research and Evaluation



# Background

- Cynthia Shypulski, MSW LISW
- Child Welfare direct practice
- Child Welfare training
- Research and Evaluation



# Presentation Goal

Experience how data visualizations and dashboards can enhance decision making for continuous quality improvement

# Presenting Problem

Children and families at high risk for future maltreatment are not receiving on-going child protection case management services in Minnesota

# Exercise 1 Questions

Using the contextual information , news article, and excel data in the handout, answer the following questions from the perspective of a state child welfare planner.

1. Is the presenting problem supported by the data?
2. How would you recommend the State use the allocated money to help "move the needle," and improve the State's performance in this area?
3. How you would measure success (performance measure)?
4. What, if anything, made it easy to analyze the data?
5. What, if anything, made it difficult to analyze the data?
6. How did the process of developing recommendations feel?

# Exercise 1 Follow-up

- Did data support the presenting problem?
- Where did you target your resources?
- How did they come to make those decisions?
- What data was most helpful?
- Could You identify performance patterns?
- How did the process feel? Difficult? Easy?

# Exercise 2 Questions

Using the contextual information , news article, and Tableau Dashboard answer the following questions from the perspective of a state child welfare planner.

1. Is the presenting problem supported by the data?
2. How would you recommend the State use the allocated money to help “move the needle,” and improve the State’s performance?
3. What, if anything, made it easy to analyze the data?
4. What, if anything, made it difficult to analyze the data?
5. How did the process of developing recommendations feel?

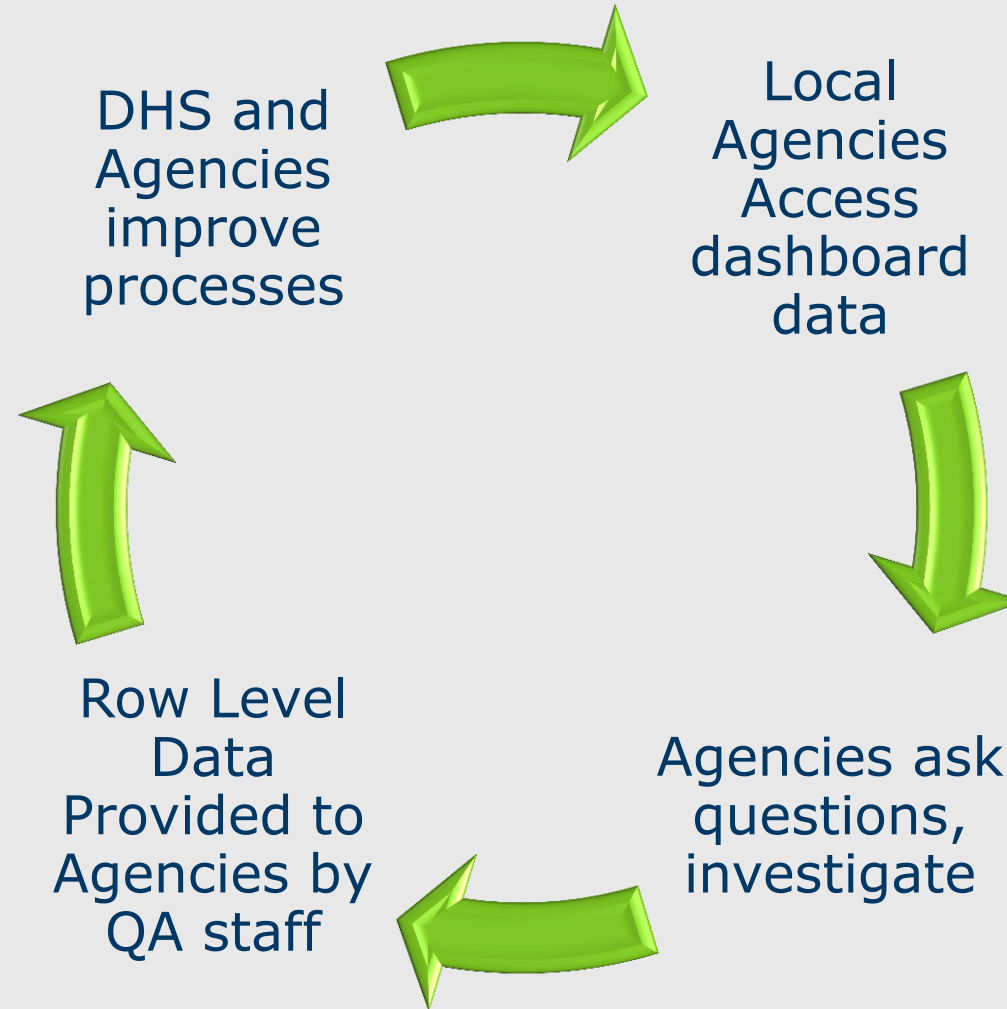


# Exercise 2 Follow-up

- Where did you target your resources? Why?
- What was the issue? Was it statewide or county?
- How did they come to make those decisions?
- What data was most helpful?
- Was it easier to identify performance patterns?
- How did the process feel? Difficult? Easy?
- How did this feel compared to the first go-around? Easier?

Time to initial invest. Within 24 hours												
	B	C	D	E	F	G	H	I	J	K	L	M
County	1. Timeliness to initial investigation			2. Repeat Maltreatment	3. Rate of entry into foster care	4. Time to reunification in 12 months	5. Rate of relative care	6. Foster care re-entry percent	7. Aging out of foster care percent	8. Placement stability: <=2 placements < 12 mos.	9. Timeliness to adoption within 24 mos.	10. Percent of Children with Visits Each and Every Month
	FI	FI	FA									
	Time to initial invest. Within 24 hours	Time to initial invest. Within 5 days	Time to initial invest. Within 5 days	% with no repeat maltreatment within six months	% of children entering foster care for first time	% of children who leave foster care & re-enter	% of children in relative care	% of children who leave foster care and re-enter < 1 yr	Of all FC children who during the yr reached 18th B Day while in foster care. in	% of Children w/2 or <plc settings when in fc < 12 months	% of children who achieve adoption w/24 mo from most recent entry in fc	% of Children with Visits Each and Every Month
	1a	1c	1e	2	3	4	5	6	7	8	9	10
01	100.0%	100.0%	50.8%	100.0%	66.7%	100.0%	40.4%	41.2%	75.0%	88.9%	100.0%	17.0%
02	56.5%	67.9%	60.4%	98.2%	76.3%	86.6%	28.5%	34.3%	64.1%	85.0%	52.8%	34.5%
03	53.7%	70.3%	55.0%	92.2%	77.8%	83.1%	31.0%	22.0%	83.3%	80.2%	100.0%	16.3%
04	50.5%	100.0%	72.0%	100.0%	68.7%	84.1%	39.2%	10.0%	87.5%	81.2%	33.3%	21.1%
05	70.4%	75.0%	79.5%	100.0%	79.5%	87.5%	37.7%	24.1%	100.0%	82.5%	60.0%	45.0%
06	55.6%	73.5%	46.9%	100.0%	100.0%	83.3%	33.3%	0.0%	100.0%	100.0%	0.0%	50.0%
07	54.5%	80.8%	79.4%	96.5%	71.7%	90.7%	6.3%	28.1%	76.9%	87.5%	66.7%	48.2%
08	81.4%	100.0%	91.0%	97.4%	62.2%	90.0%	20.0%	32.7%	40.0%	75.0%	100.0%	51.1%
09	20.0%	100.0%	95.5%	100.0%	75.9%	78.0%	38.4%	37.2%	58.8%	86.3%	40.0%	25.0%
10	57.1%	90.7%	82.6%	88.9%	71.8%	83.6%	25.3%	33.7%	78.6%	88.6%	60.0%	54.7%
11	53.8%	100.0%	75.0%	100.0%	65.8%	91.2%	40.7%	28.8%	90.9%	88.6%		23.1%
12	100.0%	100.0%	100.0%	100.0%	83.3%	25.0%	20.0%	0.0%		100.0%	100.0%	71.4%
13	35.0%	88.9%	89.5%	100.0%	74.6%	96.3%	8.5%	14.5%	83.3%	86.5%	0.0%	51.2%
14	21.1%	63.5%	65.4%	96.6%	73.7%	91.7%	11.3%	24.4%	78.6%	85.9%	61.9%	33.0%
15	62.7%	60.0%	97.9%	100.0%	79.6%	92.2%	75.0%	50.0%	50.0%	92.2%		

# Framework for Data Informed CQI in Minnesota





**Agency:** . Moose

Agency Selecti...

Moose ▾

**Performance Year:** 2019

**Federal Measure:** (3) Foster Care Reentry

**Description of measure:** Of all children who enter foster care two years prior to the reporting year who were discharged within 12 months to either a) reunification with parents/primary caretakers, b) living with other relatives, c) guardianship to an unrelated individual, or d) transfer of permanent legal and physical custody to a relative, what percent re-enter foster care within 12 months of the discharge date associated with the entry episode?

**Description of list:** This list shows children with an entry into out-of-home care in 2017 that is either still ongoing or ended within 12 months of the start date. These children may be included in the denominator if they meet the inclusion criteria for the reentry measure (i.e. they achieve reunification in less than 12 months from their entry), but this has not yet been determined.

\* For an exhaustive description of methodology, please contact Nikki Kovan at [nikki.kovan@state.mn.us](mailto:nikki.kovan@state.mn.us)

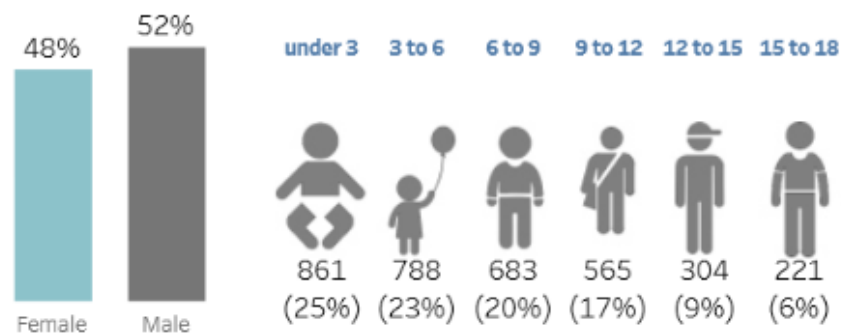
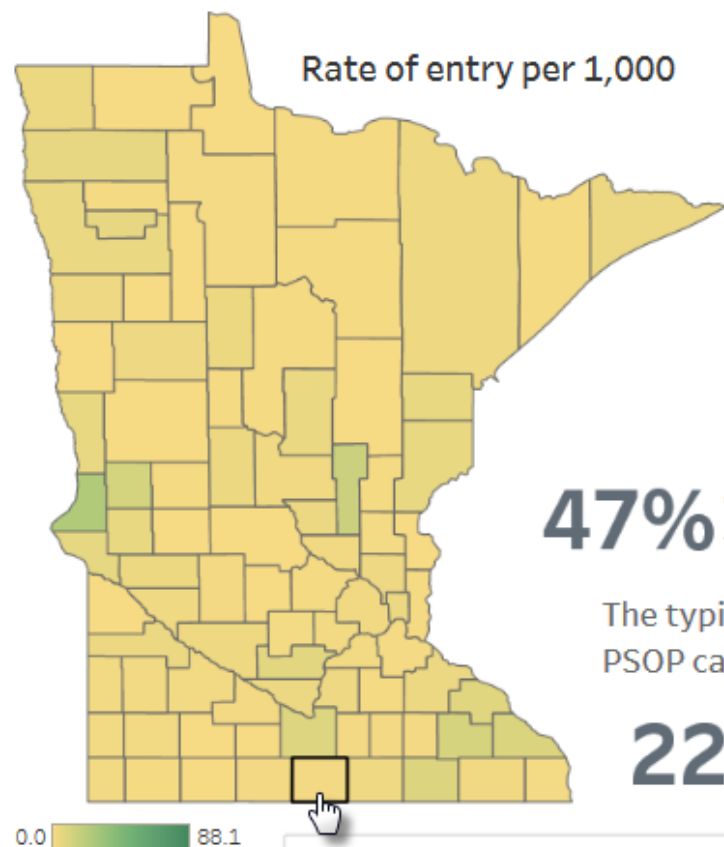
Full Name (Person ID)	Current Episode Start Date	Prior Episode Discharge Date	Target Permanency Date	Race / Age	Program Area
B...	2017-06-06	2017-06-26		White / 13	Children's Mental Health
D...	2017-01-12	2017-07-06		American Indian / 16	Child Protective Services
M...	2017-02-03	2017-03-06		American Indian / 11	Children's Mental Health
B...	2017-06-23		2018-06-23	White / 0	Child Protective Services
E...	2017-05-25		2018-05-25	White / 16	Child Protective Services
G...	2017-01-05		2018-01-05	Two or more races / 5	Child Protective Services
G...	2017-01-05		2018-01-05	Two or more races / 8	Child Protective Services
G...	2017-01-05		2018-01-05	Two or more races / 9	Child Protective Services
H...	2017-06-21		2018-06-21	White / 5	Child Protective Services
H...	2017-06-21		2018-06-21	White / 2	Child Protective Services
K...	2017-06-20		2018-06-20	White / 12	Child Protective Services

# Parent Support Outreach Program - 2017

**-2.1%**  
  
**1,588** families opened.  
**3,422** children under 18 opened.  
 Since last year through July

## Characteristics of children entering PSOP

African American/Black	1,081 (31.6%)	9.1 per 1,000
American Indian	266 (7.8%)	10.3 per 1,000
Asian or Pacific Islander	170 (5.0%)	2.1 per 1,000
Two or more races	338 (9.9%)	4.7 per 1,000
Missing	220 (6.4%)	N/A per 1,000
White	1,347 (39.4%)	1.4 per 1,000



**47%** of families had a screened in child protection report prior to their enrollment into PSOP services.

The typical family received ongoing PSOP case management services for **4.0** months.

**22%** of families had a screened-in child protection report within the 12 months following their disenrollment.

During 2017, 1.4 children per 1,000 living in **Zephyr** entered into the Parent Support Outreach Program (PSOP).

# Key Considerations: Collaboration

- Collaboration with Quality Assurance team to develop ongoing improvements plans and strategies with local agencies (county and tribe)
  - Honest two-way communication
  - Clear two-way translation

# Key Considerations: Be Proactive

## Stop Chasing Your Tail

Be Proactive,  
not Reactive





# Key Considerations: Clear and Intentional

- Data is only powerful if it is communicated in a method that is clear to the intended audience
  - Simple is often better than complex
- Be intentional
  - Know your audience
  - Have realistic expectations

# Best Practices for Visualizations

- Select the chart or graph that best suits the data
  - Trends over time- use a line graph,
- Be consistent with your templates
  - colors, font, white space, clear titles and captions
  - color and font can be effective in highlighting or drawing attention, but over use or jarring colors take away meaningfulness (don't use hot pink )
- Know your audience: what they really want to know, their level of comfort with data

Accessible- build for everyone- be aware of the public that is color blind or needs the data in alternative formats and think ahead of how to build that in...

# Plans for the future state of data driven CQI

- Row level data for agencies for each measure, increase responsiveness to agency needs
- Committing more time to direct work with local agencies and state staff
- Continuing to develop additional measures, dashboards
- Collaborative data projects
  - between state agencies and divisions, and with local child welfare agencies and regions

# Thank you!

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