



Measured Mission

Using Data to Tell the Story of Your Impact





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A Data Person, Health and
Hope Clinic

The background features a series of wavy, concentric lines in various shades of grey, creating a sense of depth and movement. Overlaid on this is the text 'INTERACTIVE DATA SESSION' in a bold, stylized font. The letters are filled with a vibrant, multi-colored pattern of orange, teal, and dark red, and are outlined in white.

INTERACTIVE DATA SESSION



You Want to Know if **The Numbers** **Add Up and How You Get There**

A Feeling



The Action



The Strategy



An Opportunity



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The 5 Stages of Data Grief (Contribution to Elizabeth Kubler-Ross)

"One Must Understand All Data Elements and Structures Before They Can Understand Measurable Impact And Assessment"

Data Anger

Many do not understand their data, or lack thereof, which leads to extreme anger and confusion.



Data Depression

They look at their data, either complete or incomplete, and feel lost without hope.



Denial

Data Denial

Many will live in a consistent state of denial over their data structures or lack thereof. They state "this can't be our data".



Anger

Bargaining

Data Bargaining

Some will believe that compromises over inefficient data can be made. Many recognize incongruences in their data but decide not to analyze, present, or evaluate those data elements.

Depression



Acceptance

Data Acceptance

Many will open data discussions to work and talk through the data. Eventually they will accept new processes to evaluate and assess their outcomes.

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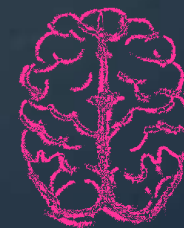
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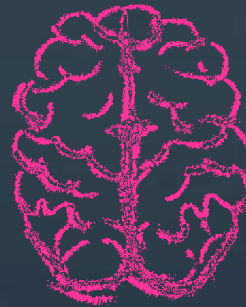
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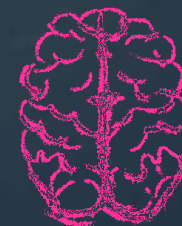
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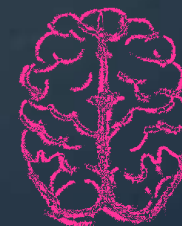
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Strategies **for Data Collection**



Testing

Pre- and post-testing provides opportunities to measure gains. Educational and medical gains have heavy utility.



Surveys and Polling

Surveys can be administered in waiting rooms or required prior to being offered services.



Internal Data

Reflect on what your organization currently has. What data do you collect and where is it stored? Do you take appointments? Do you track phone calls, emails, or social media inquiries?

Strategies **for Data Collection**



Testing

Pre- and post-testing provides opportunities to measure gains. Educational and medical gains have heavy utility.

A Little **Test**

Testing a subject before or after an experience allows you to measure gains.

- Testing the same subject before and after is not always easy. If this is not possible (no common identifier), evaluating all pre-tests and all post-tests are sufficient. Trend them over consistent periods of time.
- Do not administer paper tests. All tests need to be electronic.
- Is your organization educating in any way, could they possibly measure learning gains?
- Not all gains have to be accomplished via lab results.



A Class of 20 Patients Pretest
Average Score: 60

A Class of 20 Patients Posttest
Average Score: 71

A Little **Test**

A Class of **20** Patients Pretest
Average Score: **60**
Standard Deviation: 11.6
Patients Enrolled March 2025



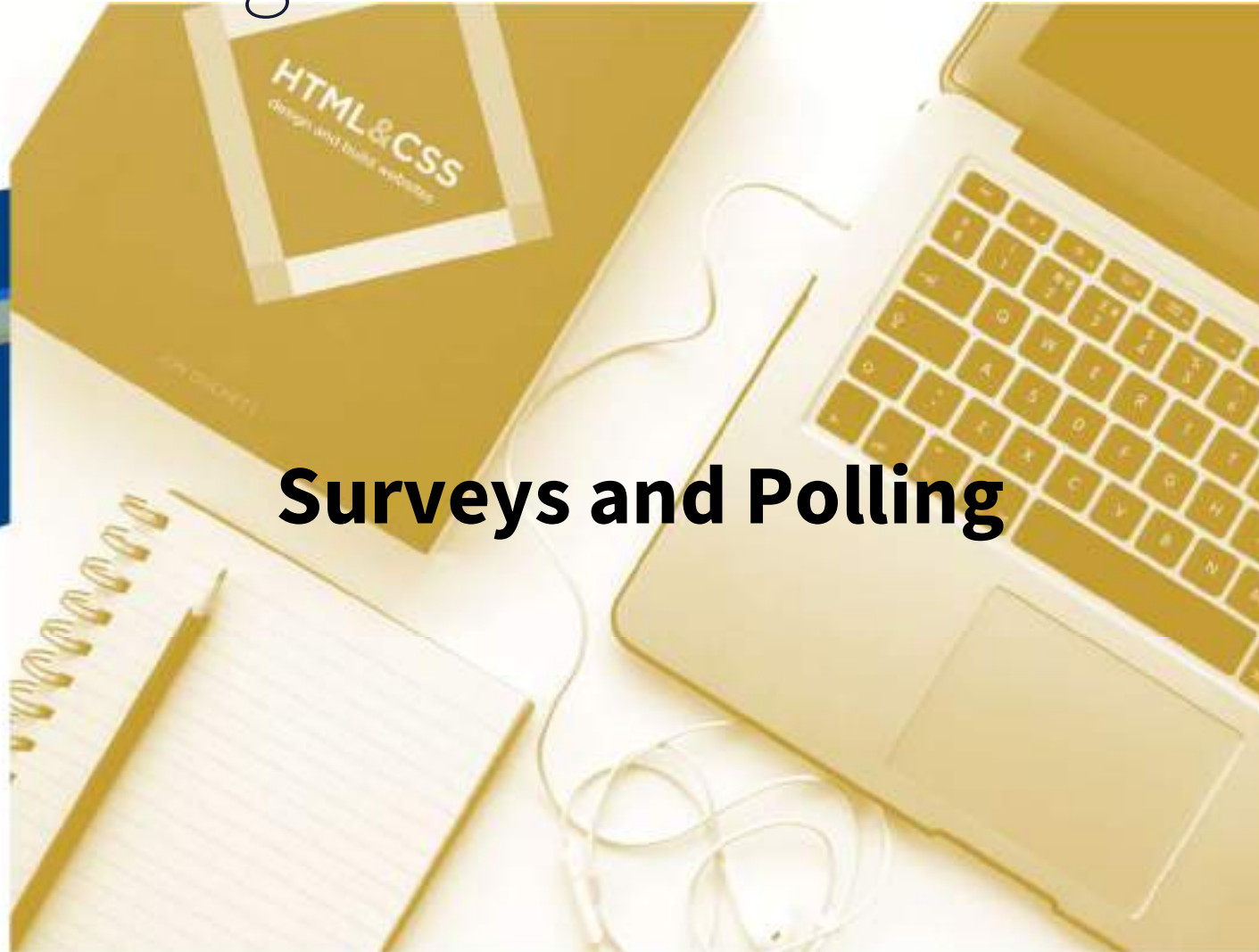
- If an organization cannot track, by patient, a pre and post test outcome, do not fret.
- Averages and means measure central tendency and estimate outcomes for a sample.
- Many organizations struggle testing and identifying unique patient testing outcomes.

A Class of **16** Patients Posttest
Average Score: **91**
Standard Deviation: 3.6
Patients Enrolled April 2025



- In this example, the average score increased even though the sample decreased.
- Determine the standard deviation.
- Now your organization can determine where patients rank via percentile.
- Remember, the organization is not trying to publish to a medical journal. Testing samples without tracking by patient is better than not testing populations.

Strategies **for Data Collection**



Surveys and Polling

Surveys can be administered in waiting rooms or required prior to being offered services.

A Little **Survey**

Surveys are fantastic ways to measure social sentiment and obtain data **specific** to your subjects.

- There are many grants focused on social and mental health. Asking questions about well-being, pain, and mood may allow an organization to track data never expected.
- Longitudinal evaluation over periods can allow you to determine if the demographics of your population served are changing.
- Do not administer a paper survey. Limit open-ended responses.
- Make the surveys fun!
- Work with a data scientist before publishing the survey to test and confirm valid designs.



Google Forms **Are Free**

Google Forms allows you to create and administer surveys and polls.



Unlimited
Unlimited Surveys
and Respondents



Data Collection
All Outcomes are
collected in Google
Spreadsheets.

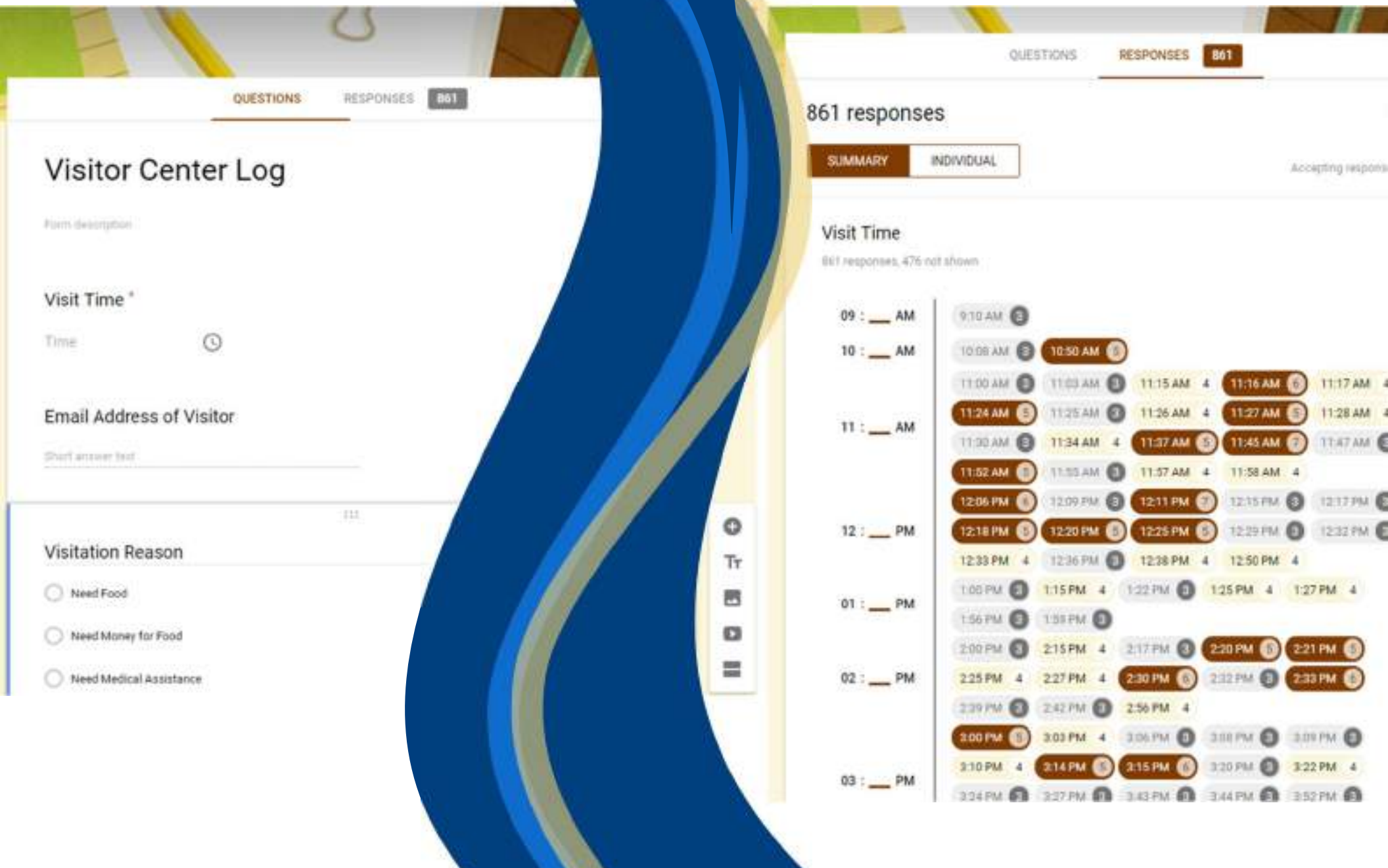


Embed
Embed surveys into
emails, websites, or
load in tablets. Use a
QR code and have
people take them
from their phones.



Visualization Tools
Many Visualization
Tools Can Connect
and Display
Outcomes.

A Little Survey Response



Survey Fatigue Is Real

STARBUCKS®

Hi Michael,

Thanks so much for stopping by Friday June 6, 2025 at 1025 Talbot Street in St Thomas, ON.

How was your visit? We want you to have a great experience every time, and your feedback can help. If you have a couple of minutes to spare for a quick survey, we'd love to hear your thoughts.

Take the survey

For a little extra incentive, we'll be randomly awarding a **\$100 Starbucks gift card** to 100 participants each month. After you complete the survey, you can enter the Starbucks Customer Experience Sweepstakes for your chance to win. **Survey** is available only for a limited time.

forward to hearing from you!

Domino's

Please tell us about your recent experience with us so that we can better serve you. Thanks!

How likely are you to recommend Domino's to a friend?

0 1 2 3 4 5 6 7 8 9 10
Not likely Very likely

Survey available 7 days

LEGAL STUFF: This email address is not monitored, so replies to this email address are not. To provide additional feedback contact Domino's Customer Service.

We are committed to your privacy and your information will not be shared with any third party without your consent.

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Domino's Pizza LLC
30 Frank Lloyd Wright Dr.
Ann Arbor, MI 48106

We would appreciate your feedback in our survey. YOUR feedback is critical to helping us improve our service and your participation in this survey will help us make decisions that benefit our customers. Your participation in the survey is voluntary and greatly appreciated. Completing the survey should take no more than approximately 10-15 minutes, and all responses will be kept confidential and anonymous.

We have contacted with Qualtrics, an independent research firm, to help your confidential survey responses. We have also collaborated with Institutional Research at Pennsylvania State University. Please visit www.qualtrics.com for more information.

Start Survey

Should you have any questions or comments, please do not hesitate to contact Mary Helen Zwickert (Marketing and Communications for IRSH), at mzwickert@psu.edu or (814) 494-1211. You may also contact David Fickens, Senior Researcher's director of Institutional Research for PSU, at dfickens@psu.edu or (814) 494-1110.

Thank you again for your time and support at PSU!

Thank You



The Starbucks logo, consisting of the word "STARBUCKS" in white, bold, sans-serif capital letters, is centered within a dark green, rounded rectangular background.

Survey

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2



Make Surveys Fun and Avoid Open-Ended Responses

Are you a new patient?



I am a New Patient!

I Have Been Here Before!

Tracking new versus returning patients is extremely helpful for trend analysis. Often tracking unique patients (by patient ID or name) is difficult. This question allows an organization to analyze two critical populations.

Make Surveys Fun and Avoid Open-Ended Responses

How are you feeling today?

 Pretty Bad

 Not well, but can get better

 I have no idea

 I smile pretty often

 Life is Amazing

Which question do you prefer?

How are you feeling today?

Physically

Mentally

Socially

Pretty Bad Not well, but can get better I have no idea I smile pretty often Life is Amazing

Make Surveys Fun and Avoid Open-Ended Responses

What state were you born?



What is your favorite social media platform?



Instagram



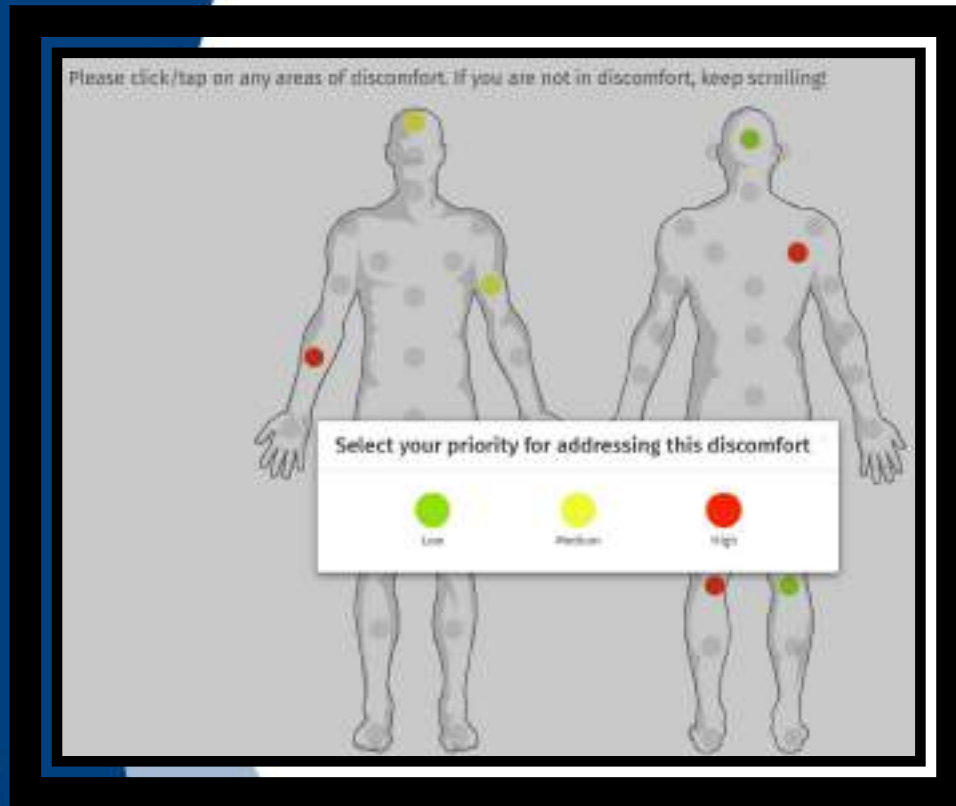
Facebook



I am not from social media!

Images that allow a respondent to point and answer reduce survey stop outs.

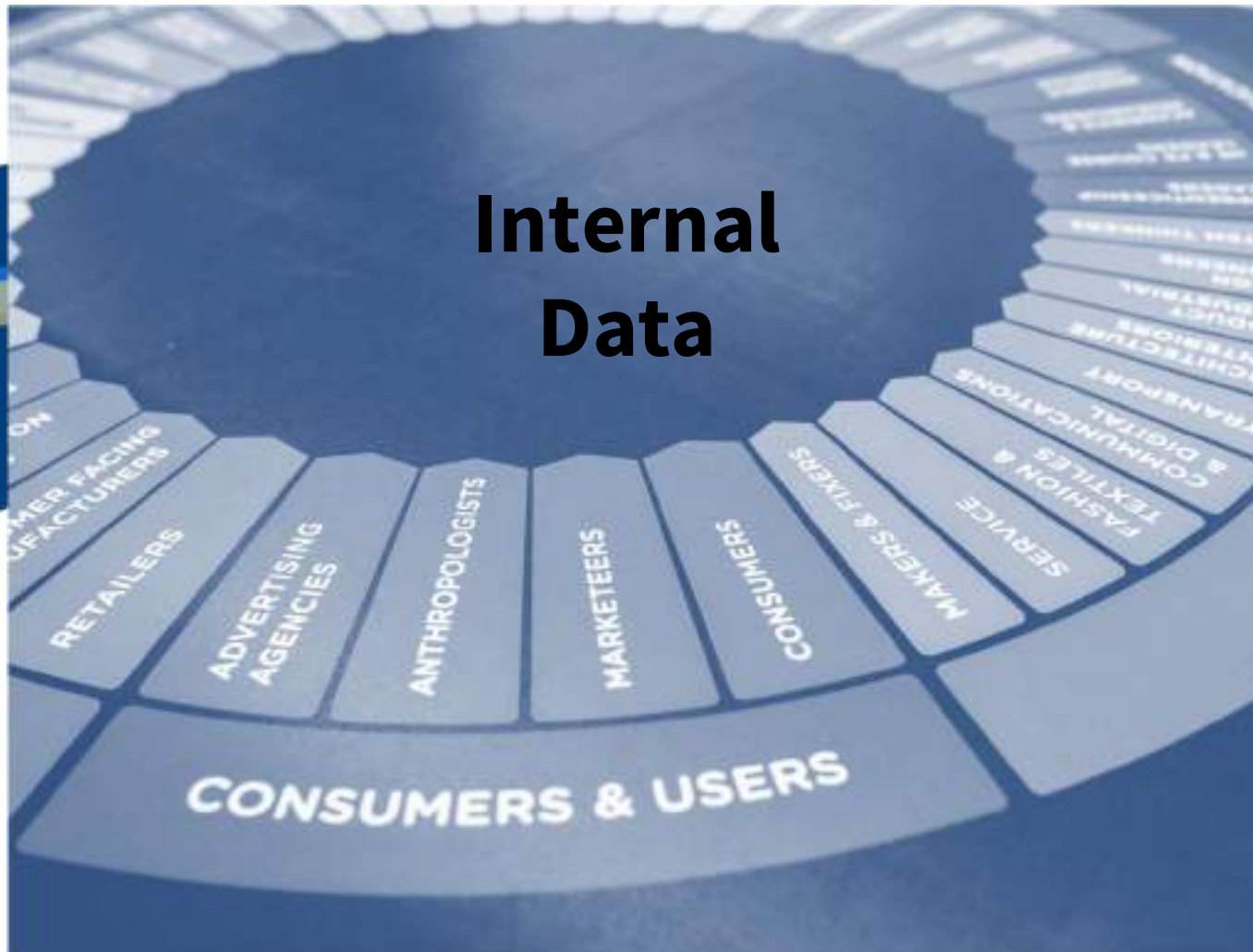
The Homunculus allows a patient to identify discomfort areas with intensity.



What part (or parts) of your body is experiencing pain and discomfort?

Images that allow a respondent to point and answer reduce survey stop outs.

Strategies **for Data Collection**



Reflect on what your organization currently has. What data do you collect and where is it stored? Do you take appointments? Do you track phone calls, emails, or social media inquiries?

Internal Data Structures

Creating internal reports using your Electronic Health Records (EHR) or Electronic Medical Record (EMR) is a strategic way to be able to monitor trends within your patient populations. The following reports are crucial to develop and run on a consistent basis.

Patient Demographics

A Report of common patient demographics like age, race, gender, sex, zip code, and educational level (there are more).

Diagnosis and ICD Code Report

A Report of all patients and their diagnosis. Extremely useful for trending services and grant applications.

Patient Visit Report

A Report of patient visits with their provider, department, visit types (medical, dental, behavioral health etc.).

Encounter or Service Report

A report of services provided to your patients like labs, physical exams, vaccinations, etc.

These reports should be run on a cadence and saved to a secure location. Do not use patient names in the reports (PII), and run the reports even if they are not being used. Access to historical data as snapshots in time could be helpful for grants and awards not yet known. Many times, your enterprise cannot go back in time and produce reports as of an effective date.

Data Warehousing

A data warehouse is a centralized system used to store, organize, and analyze large amounts of structured data from different sources. These typically are designed to support reporting, business intelligence (BI), and decision-making.

A Simple and Cost-Effective Warehouse

- Run Reports at least once a week at approximately the same time. You could potentially schedule them to run depending on your medical enterprise.
- Confirm your reports have a common file naming system.
 - i.e. R_25_PatientDem_06_01_25
 - i.e. R_22_PatientLab_06_01_24
- Make sure your reports are stored in a common location like a shared drive or on a server.
- If there is no name, DOB, or SSN in the report, your organization substantially reduces risk.

Data Governance

Data governance is the framework of policies, processes, standards, roles, and responsibilities that ensure the effective and efficient use of data in enabling a clinic to achieve its goals. Data Governance defines how data is managed, accessed, and protected to ensure its quality, consistency, security, and availability throughout its lifecycle.

Calculated Fields

Report Writers are workers that must interpret and understand data definitions. They often are extremely literal. Confirm your understanding of definition and their definition is the same.

Metadata Management

Ask the two questions for every data source. “Who is responsible for managing [meta]data?” Where is this data stored?

[Un]Duplicated Reporting

Reports can either be duplicated or unduplicated meaning a patient can exist on multiple row lines. Confirm your understanding of what can exist where.

Form a Data Governance Committee

Form a data committee to review data structures and definitions, looking at common reports.

A Little **Data**

Data is the core information and content related to your organization.

- Medicine
 - Patient's Blood Sugar is 128/76 mgHg
 - Diagnosis: DM Type II
 - Medication: Metformin 500mg
- Lab Results
 - Glucose Level: 180mg/dL
 - HbA1c: 8.1%
- Medical Imaging
 - The actual MRI

A Little **Metadata**

Metadata is data about data.

- Medicine:
 - Date and Time of Entry: June 5, 2025
 - Entered by: Dr. Anderson
 - Clinic Location: Primary Care, Health Clinic of Florida
- Lab Results
 - Test Date and Time: June 6, 2025.
 - Lab Tech ID: 6824
 - Analyzer: Abbott Architect ci8200
 - Sample Type: Fasting Blood Draw
- Medical Imaging
 - Patient ID: 3129
 - Scan Type: MRI with Contrast
 - Date: 6/6/2025
 - Resolution: 512x512

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Data Structure



Unduplicated Data

Each line in a report will only list a patient once.

REPORT NAME: Patients Not Registered for Portal (formerly Portal Adoption)

[Back to Patients Not Registered for Portal \(formerly Portal Adoption\)](#)
[Back to Report Library](#)

Patient ID	Patient Firstname	Patient Lastname	Email	Provider
15599				BONNIE RIELAND
15564				BONNIE RIELAND
15786				BONNIE RIELAND
16017				BONNIE RIELAND
15781				BONNIE RIELAND
15698				BONNIE RIELAND
14697				BONNIE RIELAND
15901				BONNIE RIELAND
15944				BONNIE RIELAND
15702				BONNIE RIELAND
16253				BONNIE RIELAND
15746				BONNIE RIELAND
15618				BONNIE RIELAND
13823				BONNIE RIELAND
15622				BONNIE RIELAND
14003				BONNIE RIELAND
15628				BONNIE RIELAND
13770				BONNIE RIELAND
16857				BONNIE RIELAND
15840				BONNIE RIELAND
16094				BONNIE RIELAND
13355				BONNIE RIELAND
14816				BONNIE RIELAND
14272				BONNIE RIELAND
15626				BONNIE RIELAND
14868				BONNIE RIELAND
15568				BONNIE RIELAND
14567				BONNIE RIELAND
16589				BONNIE RIELAND
8425				BONNIE RIELAND

REPORT NAME: Patients Not Registered for Portal (formerly Portal Adoption)

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Patient ID	Patient Firstname	Patient Lastname	Email	Provider
15539				BONNIE RIELAND
15564				BONNIE RIELAND
15786				BONNIE RIELAND
16017				BONNIE RIELAND
15781				BONNIE RIELAND
15698				BONNIE RIELAND
14697				BONNIE RIELAND
15901				BONNIE RIELAND
15944				BONNIE RIELAND
15702				BONNIE RIELAND
16253				BONNIE RIELAND
15746				BONNIE RIELAND
15618				BONNIE RIELAND
13823				BONNIE RIELAND
15622				BONNIE RIELAND
14003				BONNIE RIELAND
15628				BONNIE RIELAND
13770				BONNIE RIELAND
16857				BONNIE RIELAND
15840				BONNIE RIELAND
16094				BONNIE RIELAND
13355				BONNIE RIELAND
14816				BONNIE RIELAND
14272				BONNIE RIELAND
15626				BONNIE RIELAND
14868				BONNIE RIELAND
15568				BONNIE RIELAND
14567				BONNIE RIELAND
16589				BONNIE RIELAND
8425				BONNIE RIELAND

Data Structure

Duplicated Data

Patients can exist multiple times on different row lines in **the same** report.

A	B	C	D	E	F	G	H	I	J	K	L	M		
1	Report Name: Patient visits with Demographics													
2	Run Date:		6/5/2025											
3	DataSource:		Patient Visits Business Object											
4	Appt Date	Patient ID	Appt Check In Time	Appt Check Out Time	Appt Date	Appt Duration	Department	Appt Type	Appt Class	Patient Age (as of Appt Date)	Sex	Veteran Status	County	Home
5	1/2/2024	14877	4:04 PM		1/2/2024		INTAKE	INITIAL CERTIFICATION	Office Visit	45 M		No	Escambia	(No
6	1/2/2024	14865	5:12 PM	11:49 AM	1/2/2024	66:37:00	PRIMARY CARE PROVIDERS	NEW PATIENT 45	Office Visit	43 M		No	Escambia	(No
7	1/2/2024	14832	8:01 AM	9:05 AM	1/2/2024	1:03	PRIMARY CARE PROVIDERS	NEW PATIENT 45	Office Visit	46 F		No	Santa Rosa	No
8	1/2/2024	14817	8:56 AM	9:48 AM	1/2/2024	0:52	PRIMARY CARE PROVIDERS	NEW PATIENT 45	Office Visit	32 F		Yes	Escambia	(No
9	1/2/2024	14710	4:02 PM	7:35 PM	1/2/2024	3:33	PRIMARY CARE PROVIDERS	NEW PATIENT 45	Office Visit	38 M		No	Escambia	(No
10	1/2/2024	14684	10:14 AM	7:35 PM	1/2/2024	9:22	GASTROENTEROLOGY (GI)	GASTROENTEROLOGY 20		40 F		No	Escambia	(No
11	1/2/2024	14573	3:48 PM	5:13 PM	1/2/2024	1:27	MENTAL HEALTH	F/U COUNSELING 60		24 M		No	Escambia	(No
12	1/2/2024	14497	4:01 PM	4:01 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT	Office Visit	46 M		No	Escambia	(No
13	1/2/2024	14497	9:56 AM	11:46 AM	1/2/2024	1:51	PRIMARY CARE PROVIDERS	FOLLOW UP 30	Office Visit	46 M		No	Escambia	(No
14	1/2/2024	14488	4:05 PM	4:05 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT	Office Visit	52 M		No	Escambia	(No
15	1/2/2024	14484	8:39 AM	7:35 PM	1/2/2024	8:56	GASTROENTEROLOGY (GI)	GASTROENTEROLOGY 20		37 F		No	Escambia	(Yes
16	1/2/2024	14406	4:49 PM	7:35 PM	1/2/2024	2:45	PRIMARY CARE PROVIDERS	FOLLOW UP 30	Office Visit	49 F		No	Escambia	(No
17	1/2/2024	14402	2:36 PM	7:34 PM	1/2/2024	4:58	PRIMARY CARE PROVIDERS	FOLLOW UP 30	Office Visit	59 F		No	Escambia	(No
18	1/2/2024	14402	3:52 PM	3:59 PM	1/2/2024	0:07	PHARMACY	PHARMACY CONSULT	Office Visit	59 F		No	Escambia	(No
19	1/2/2024	14391	4:04 PM	4:14 PM	1/2/2024	0:10	PHARMACY	PHARMACY CONSULT	Office Visit	40 F		No	Escambia	(No
20	1/2/2024	14389	8:34 AM	8:58 AM	2/20/2024	0:24	PRIMARY CARE PROVIDERS	FOLLOW UP 30	Office Visit	55 F		No	Escambia	(No
21	1/2/2024	14142	4:02 PM	4:02 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT	Office Visit	53 F		No	Escambia	(No
22	1/2/2024	14031	3:58 PM	4:00 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT	Office Visit	51 M		No	Santa Rosa	No
23	1/2/2024	14031	9:48 AM	11:46 AM	1/2/2024	2:00	PRIMARY CARE PROVIDERS	NEW PATIENT 30	Office Visit	51 M		No	Santa Rosa	No

Data Structure

	A	B	C	D	E	
1	Report Name: Patient visits with Demographics					
2	Run Date:	6/5/2025				
3	DataSource:	Patient Visits Business Object				
4	Appt Date	Patient ID	Appt Check In Time	Appt Check Out Time	Appt Date	Ap
5	1/2/2024	14877	4:04 PM		1/2/2024	
6	1/2/2024	14865	5:12 PM	11:49 AM	1/2/2024	
7	1/2/2024	14832	8:01 AM	9:05 AM	1/2/2024	
8	1/2/2024	14817	8:56 AM	9:48 AM	1/2/2024	
9	1/2/2024	14710	4:02 PM	7:35 PM	1/2/2024	
10	1/2/2024	14684	10:14 AM	7:35 PM	1/2/2024	
11	1/2/2024	14573	3:46 PM	5:13 PM	1/2/2024	
12	1/2/2024	14497	4:01 PM	4:01 PM	1/2/2024	
13	1/2/2024	14497	9:56 AM	11:46 AM	1/2/2024	
14	1/2/2024	14488	4:05 PM	4:05 PM	1/2/2024	
15	1/2/2024	14464	9:39 AM	7:35 PM	1/2/2024	
16	1/2/2024	14406	4:49 PM	7:35 PM	1/2/2024	
17	1/2/2024	14402	2:36 PM	7:34 PM	1/2/2024	
18	1/2/2024	14402	3:52 PM	3:59 PM	1/2/2024	
19	1/2/2024	14391	4:04 PM	4:14 PM	1/2/2024	

e: Patient visits with Demographics

6/5/2025

Patient Visits Business Object

	Patient ID	Appt Check In Time	Appt Check Out Time	Appt Date	Appt Duration	
24	14877	4:04 PM		1/2/2024		INTAKE
24	14865	5:12 PM	11:49 AM	1/2/2024	66:37:00	PRIMA
24	14832	8:01 AM	9:05 AM	1/2/2024	1:03	PRIMA
24	14817	8:56 AM	9:48 AM	1/2/2024	0:52	PRIMA
24	14710	4:02 PM	7:35 PM	1/2/2024	3:33	PRIMA
24	14684	10:14 AM	7:35 PM	1/2/2024	9:22	GASTR
24	14573	3:46 PM	5:13 PM	1/2/2024	1:27	MENTA
24	14497	4:01 PM	4:01 PM	1/2/2024	0:00	PHARM
24	14497	9:56 AM	11:46 AM	1/2/2024	1:51	PRIMA
24	14488	4:05 PM	4:05 PM	1/2/2024	0:00	PHARM
24	14464	9:39 AM	7:35 PM	1/2/2024	9:56	GASTR
24	14406	4:49 PM	7:35 PM	1/2/2024	2:45	PRIMA
24	14402	2:36 PM	7:34 PM	1/2/2024	4:58	PRIMA
24	14402	3:52 PM	3:59 PM	1/2/2024	0:07	PHARM
24	14391	4:04 PM	4:14 PM	1/2/2024	0:10	PHARM
24	14389	8:34 AM	8:58 AM	2/20/2024	0:24	PRIMA
24	14142	4:02 PM	4:02 PM	1/2/2024	0:00	PHARM
24	14031	3:59 PM	4:00 PM	1/2/2024	0:00	PHARM
24	14031	9:46 AM	11:46 AM	1/2/2024	2:00	PRIMA

Check In Time	Appt Check Out Time	Appt Date	Appt Duration	Department	Appt T
4:04 PM		1/2/2024		INTAKE	INITIAL CERTIFI
5:12 PM	11:49 AM	1/2/2024	66:37:00	PRIMARY CARE PROVIDERS	NEW PATIENT 4
8:01 AM	9:05 AM	1/2/2024	1:03	PRIMARY CARE PROVIDERS	NEW PATIENT 4
8:56 AM	9:48 AM	1/2/2024	0:52	PRIMARY CARE PROVIDERS	NEW PATIENT 4
4:02 PM	7:35 PM	1/2/2024	3:33	PRIMARY CARE PROVIDERS	NEW PATIENT 4
10:14 AM	7:35 PM	1/2/2024	9:22	GASTROENTEROLOGY (GI)	GASTROENTER
3:46 PM	5:13 PM	1/2/2024	1:27	MENTAL HEALTH	F/U COUNSELIN
4:01 PM	4:01 PM	1/2/2024	0:00	PHARMACY	PHARMACY CO
9:56 AM	11:46 AM	1/2/2024	1:51	PRIMARY CARE PROVIDERS	FOLLOW UP 30
4:05 PM	4:05 PM	1/2/2024	0:00	PHARMACY	PHARMACY CO
9:39 AM	7:35 PM	1/2/2024	9:56	GASTROENTEROLOGY (GI)	GASTROENTER
4:49 PM	7:35 PM	1/2/2024	2:45	PRIMARY CARE PROVIDERS	FOLLOW UP 30
2:36 PM	7:34 PM	1/2/2024	4:58	PRIMARY CARE PROVIDERS	FOLLOW UP 30
3:52 PM	3:59 PM	1/2/2024	0:07	PHARMACY	PHARMACY CO
4:04 PM	4:14 PM	1/2/2024	0:10	PHARMACY	PHARMACY CO
8:34 AM	8:58 AM	2/20/2024	0:24	PRIMARY CARE PROVIDERS	FOLLOW UP 30
4:02 PM	4:02 PM	1/2/2024	0:00	PHARMACY	PHARMACY CO
3:59 PM	4:00 PM	1/2/2024	0:00	PHARMACY	PHARMACY CO
9:46 AM	11:46 AM	1/2/2024	2:00	PRIMARY CARE PROVIDERS	NEW PATIENT 3

Data Structure

B	C	D	E	F	G
with Demographics					
6/5/2025					
Business Object					
Patient ID	Appt Check In Time	Appt Check Out Time	Appt Date	Appt Duration	Department
14877	4:04 PM		1/2/2024		INTAKE
14865	5:12 PM	11:49 AM	1/2/2024	66:37:00	PRIMARY CARE PROVID
14832	8:01 AM	9:05 AM	1/2/2024	1:03	PRIMARY CARE PROVID
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14573	3:46 PM	5:13 PM	1/2/2024	1:27	MENTAL HEALTH
14497	4:01 PM	4:01 PM	1/2/2024	0:00	PHARMACY
14497	9:56 AM	11:46 AM	1/2/2024	1:51	PRIMARY CARE PROVID
14488	4:05 PM	4:05 PM	1/2/2024	0:00	PHARMACY
14464	9:39 AM	7:35 PM	1/2/2024	9:56	GASTROENTEROLOGY
14406	4:49 PM	7:35 PM	1/2/2024	2:45	PRIMARY CARE PROVID
14402	2:36 PM	7:34 PM	1/2/2024	4:58	PRIMARY CARE PROVID
14402	3:52 PM	3:59 PM	1/2/2024	0:07	PHARMACY

Data Structure

	D	E	F	G	H
Appt In Time	Appt Check Out Time	Appt Date	Appt Duration	Department	Appt Type
4:04 PM		1/2/2024		INTAKE	INITIAL CERTIFICATION
5:12 PM	11:49 AM	1/2/2024	66:37:00	PRIMARY CARE PROVIDERS	NEW PATIENT 45
8:01 AM	9:05 AM	1/2/2024	1:03	PRIMARY CARE PROVIDERS	NEW PATIENT 45
8:56 AM	9:48 AM	1/2/2024	0:52	PRIMARY CARE PROVIDERS	NEW PATIENT 45
4:02 PM	7:35 PM	1/2/2024	3:33	PRIMARY CARE PROVIDERS	NEW PATIENT 45
0:14 AM	7:35 PM	1/2/2024	9:22	GASTROENTEROLOGY (GI)	GASTROENTEROLOGY
3:46 PM	5:13 PM	1/2/2024	1:27	MENTAL HEALTH	F/U COUNSELING 60
4:01 PM	4:01 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT
9:56 AM	11:46 AM	1/2/2024	1:51	PRIMARY CARE PROVIDERS	FOLLOW UP 30
4:05 PM	4:05 PM	1/2/2024	0:00	PHARMACY	PHARMACY CONSULT
9:39 AM	7:35 PM	1/2/2024	9:56	GASTROENTEROLOGY (GI)	GASTROENTEROLOGY
4:49 PM	7:35 PM	1/2/2024	2:45	PRIMARY CARE PROVIDERS	FOLLOW UP 30
2:36 PM	7:34 PM	1/2/2024	4:58	PRIMARY CARE PROVIDERS	FOLLOW UP 30
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4:04 PM	4:14 PM	1/2/2024	0:10	PHARMACY	PHARMACY CONSULT

Data Structure

H	I	J	K	L	M	
Appt Type	Appt Class	Patient Age (as of Appt Date)	Sex	Veteran Status	County	Homele
INITIAL CERTIFICATION	Office Visit	45	M	No	Escambia C	No
NEW PATIENT 45	Office Visit	43	M	No	Escambia C	No
NEW PATIENT 45	Office Visit	46	F	No	Santa Rosa	No
NEW PATIENT 45	Office Visit	32	F	Yes	Escambia C	No
NEW PATIENT 45	Office Visit	38	M	No	Escambia C	No
GASTROENTEROLOGY 20		40	F	No	Escambia C	No
U COUNSELING 60		24	M	No	Escambia C	No
PHARMACY CONSULT	Office Visit	46	M	No	Escambia C	No
FOLLOW UP 30	Office Visit	46	M	No	Escambia C	No
PHARMACY CONSULT	Office Visit	52	M	No	Escambia C	No
GASTROENTEROLOGY 20		37	F	No	Escambia C	Yes
FOLLOW UP 30	Office Visit	49	F	No	Escambia C	No
FOLLOW UP 30	Office Visit	59	F	No	Escambia C	No
PHARMACY CONSULT	Office Visit	59	F	No	Escambia C	No

Data Structure

H	I	J	K	L	M	

Strategies **for Data Collection**



Testing

Pre and Post testing provides opportunities to measure gains. Educational gains have heavy utility.



Surveys and Polling

Surveys can be administered in waiting rooms or required prior to being offered services.



Internal Data

Reflect on what your organization currently has. What data do you collect and where is it stored? Do you take appointments? Do you track phone calls, emails, or social media inquiries?

The Foundation of a **Successful Project.**

We don't have a data scientist or statistician on staff, what can I do?

Graduate Research Opportunities

Graduate Schools are looking for experiences for their students, engage with department chairs, deans, and faculty.



YouTube, Mooks, Udemy

There are many free courses online that will allow you to learn software like Excel, PowerBi, and Tableau. Use them!



Student Interns

The beautiful State of Florida has multiple colleges and universities with students majoring in statistics, data science, and computer science. Advertise for interns!



You Want to Know if **The Numbers Add Up and How You Get There**

The Action



A Feeling



The Strategy



An Opportunity



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A Little **Assessment**

Assessment is the process that is needed to demonstrate Measurable Impact – to measure change.

- Assessment is **Process Oriented**
- Assessment is designed to evaluate a process.
 - How are patients served at a clinic?
 - What is the average time from start-to-finish of the intake process of a new patient?

A Little **Evaluation**

Evaluation is Descriptive and is designed for process measurement.

- Evaluation is **Product Oriented**, the measurement of an outcome
- Evaluation is descriptive, often synonymous with results.
 - How many patients did we see today?
 - How many medications did we dispense?
 - How many social worker visits did we have in October?

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A Little **Measurable Impact**

Impact measurement evaluates outcomes beyond evaluation.

- Impact Measurement must be strategic since the measurement is not always as readily obtainable.
- Impact Measurement is longitudinal and the results may be unexpected, but they frequently correlate well.
- Impact Measurements are often topics that win grant awards.
 - i.e. Since the Healthy Clinic has established dental, 83% are actively working versus 61% of all other patients not using dental.

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Impact **Measurement** examples

- Did our diabetic patients consume more glasses of water last month?
- What is the average length of employment of our patients?
- How many of our patients tested positive for the flu last year?
- How many times does each patient report going to an Emergency Department in the past month?

A Little **Evaluation**

- How many diabetic patients did we educate last month?
- How many sick days did each patient have last week?
- How many free flu-shots did we provide last year to our patients?
- How many patients did we see last month?



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When it's **Time to Measure Impact**

Patient Outcomes

Chronic disease management, hospitalizations, medications, homelessness.

EMR Configuration

Add Additional Data Fields

Financial Performance

Cost per Case, Cost Per Encounter, or ROI.

Patient Experience

Measure patient satisfaction.

Operational Efficiency

Wait times, conversion rates, internal process evaluation.

Volunteers and Employees

Self-Assessment of the workforce is important. How many volunteers go to medical school, nursing school, or pharmacy school?

You Want to Know if **The Numbers Add Up and How You Get There**

The Strategy



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Our Secret to a **Successful Campaign.**

The Non-Profit Group, The Healthy Clinic, plans on writing a grant application to fund a future project. The clinic plans on identifying an opportunity for restructuring the **intake** and **recertification process** and then measuring three outcomes.

Question 2

Are patients consuming more water after visiting The Healthy Clinic?



Question 3

Are returning patients visiting the clinic less frequently after their initial treatment?



Question 1

How many days of work, on average, do new patients miss due to sickness or illness versus due to transportation issues?

Oh, You Want to **See Results?**

I performed an experiment where I left two tablets in my lobby with an open survey created in Google Forms. I asked the question, “How many glasses of water did you drink yesterday?”

Data analytics is both a science and an art. If the results are not visually stimulating, the organization may lose the focus of the constituent.

Data Presentation

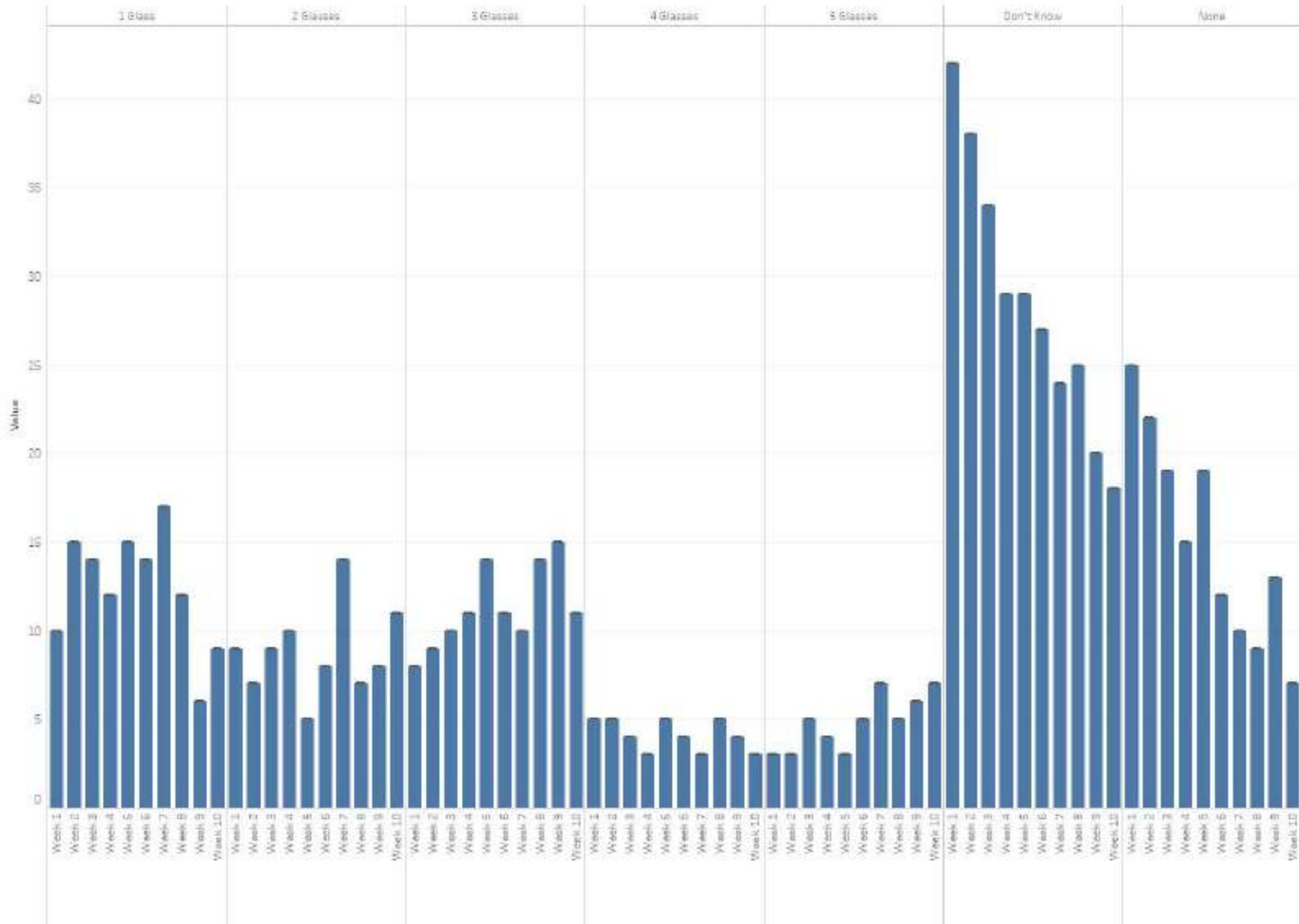
Would I want to submit data like this in a grant application or as results to a constituent?

Data Visualization

What structure can be seen in this data?

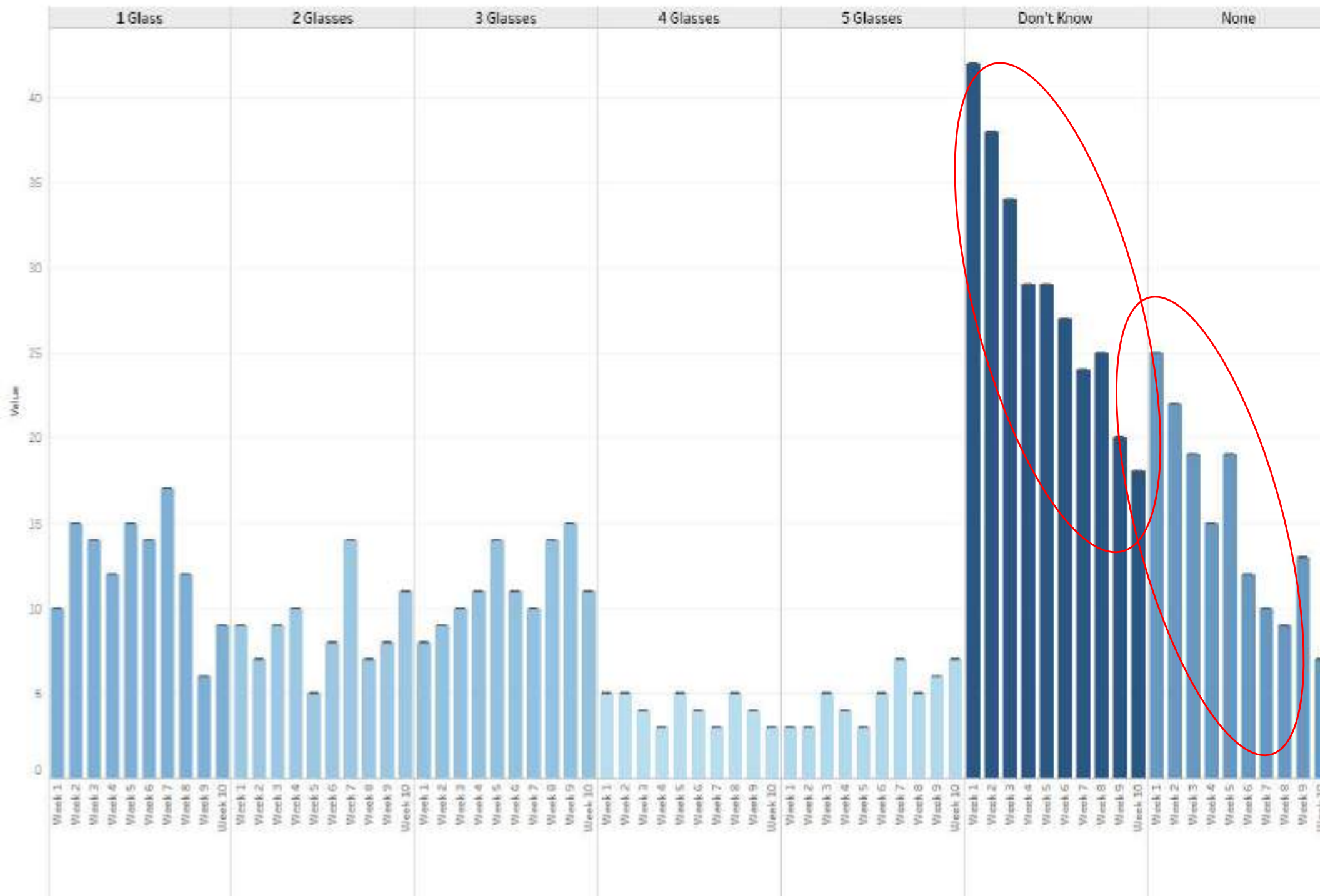
How Many Glasses of Water Did you Drink Yesterday?										
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8	Week 9	Week 10
None	25	22	19	15	19	12	10	9	13	7
1 Glass	10	15	14	12	15	14	17	12	6	9
2 Glasses	9	7	9	10	5	8	14	7	8	11
3 Glasses	8	9	10	11	14	11	10	14	15	11
4 Glasses	5	5	4	3	5	4	3	5	4	3
5 Glasses	3	3	5	4	3	5	7	5	6	7
Don't Know	42	38	34	29	29	27	24	25	20	18
Total Glasses	87	91	103	97	102	104	122	113	113	111

Vertical Bar Chart ?



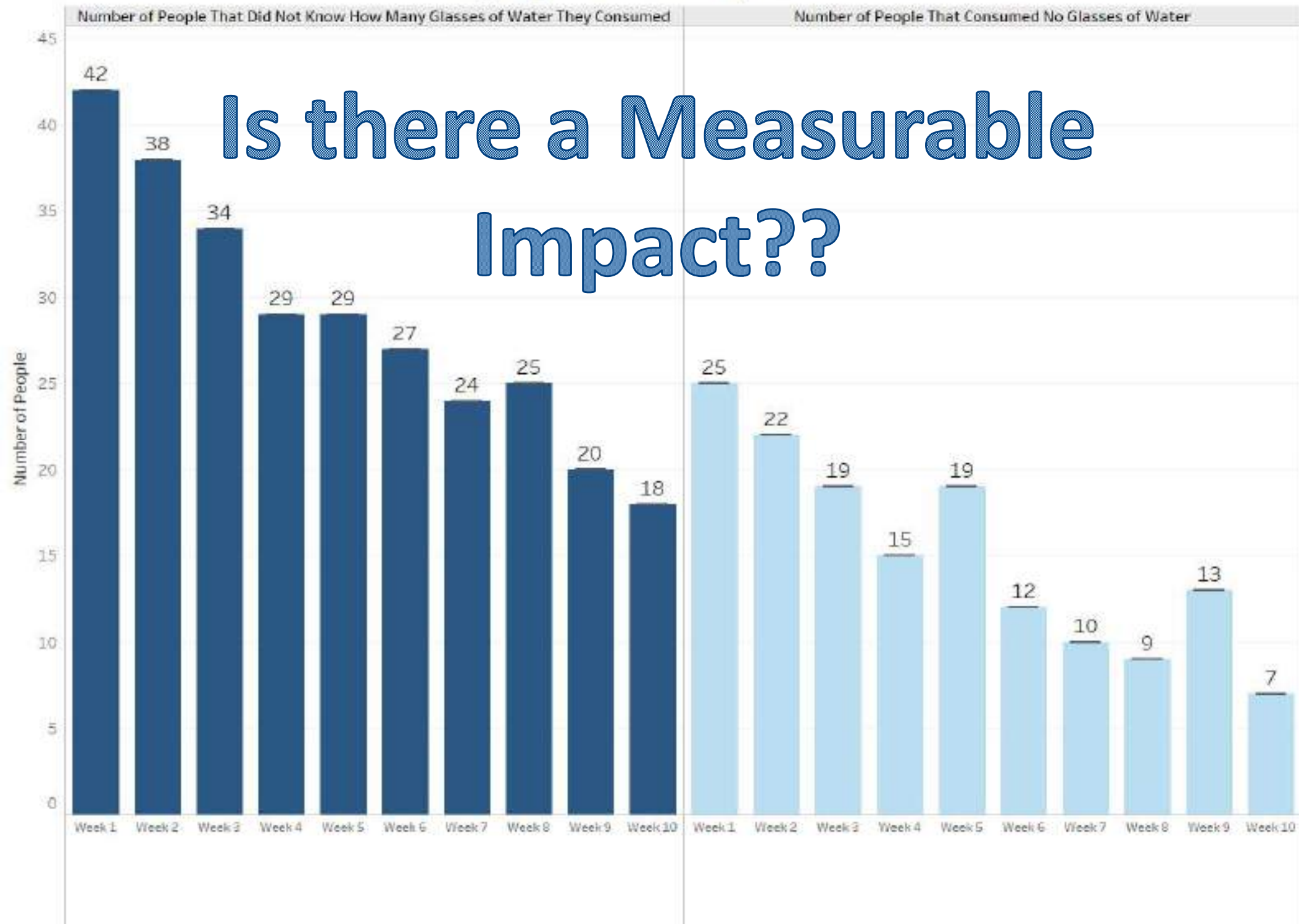
Add Color and Density ?

****Do You See A Trend****



Highlight What Is Important!

Is there a Measurable Impact??



A Little **Tableau**

Tableau is a powerful data visualization tool that helps turn raw data into interactive and shareable dashboards.

Key Features:

- Easy-to-use interface
- Drag-and-drop functionality
- Wide variety of chart types
- Integration with multiple data sources

Data-Driven Decisions:

Track patient performance and attendance. Identify program success rates.

Engagement

Create visually compelling presentations for stakeholders.

Accessibility

Simplifies complex data for easier understanding.

A Little **Tableau**

<https://www.tableau.com/foundation/license-donations>

To qualify for reduced licensing, a non-profit must:

- Be officially recognized tax-exempt organization in one of the countries listed on their website (US Included)
 - Operate with an annual budget under \$5 million (or equivalent in local currency)
 - Not be a school, college, healthcare organization, or government agency
 - Not be a religious organization incorporated exclusively for the promotion of the religion
-
- Publishing your Dashboard are Free on Tableau Public
 - Tableau Reader is Free



A Little **Power BI**

A business analytics tool by Microsoft that lets users visualize data and share insights across an organization.

Download Power BI Desktop:

<https://powerbi.microsoft.com/desktop>

To qualify, a non-profit must:

- Power BI Desktop is free for individual use.
- There is special non-profit pricing for Power BI Pro which is extremely reasonable.
- An application is available via the Microsoft Nonprofit Hub

<https://nonprofit.microsoft.com/en-us/getting-started>

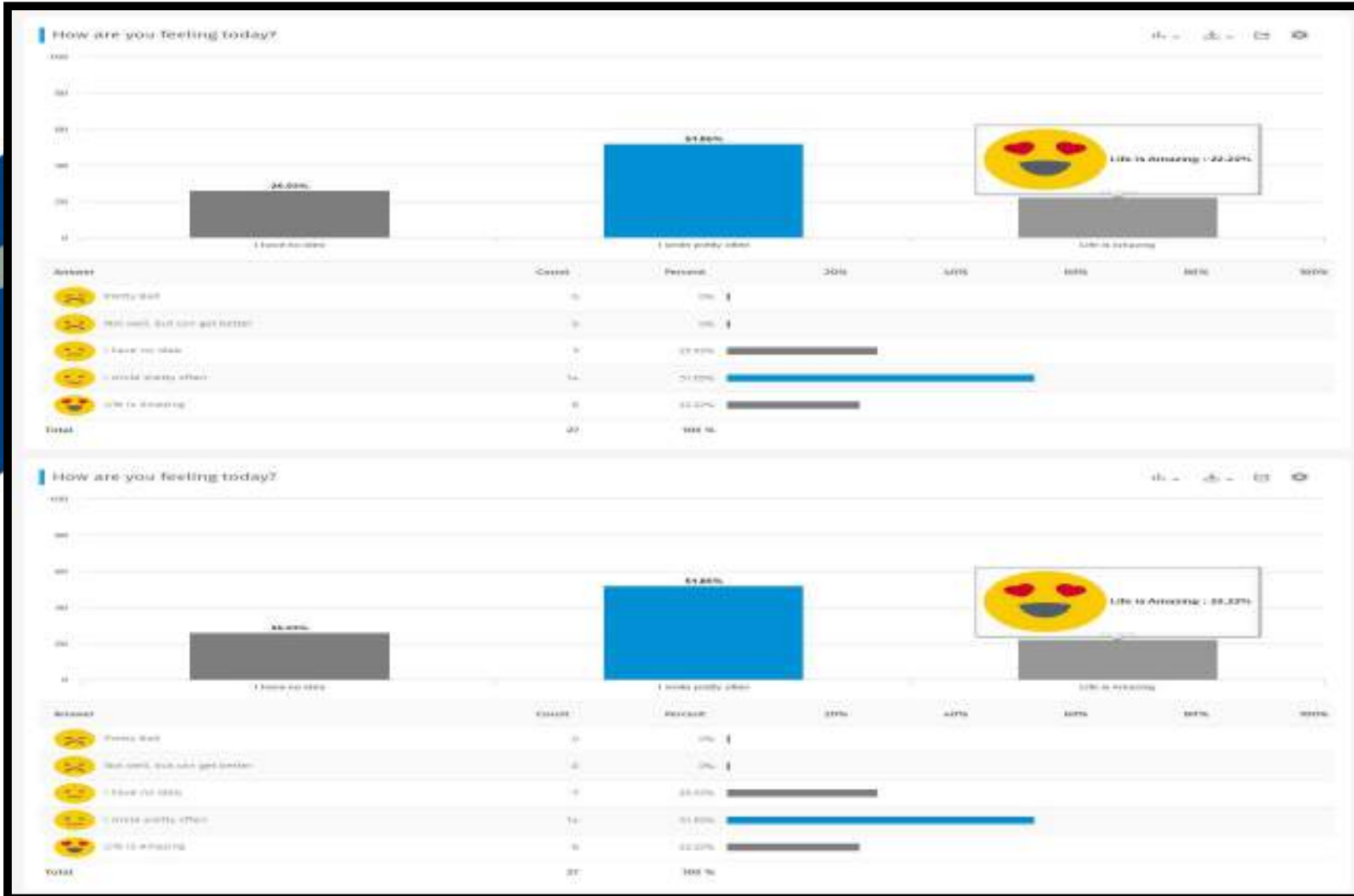




Let's evaluate the survey dashboard put together from the initial survey."



Data Visualization

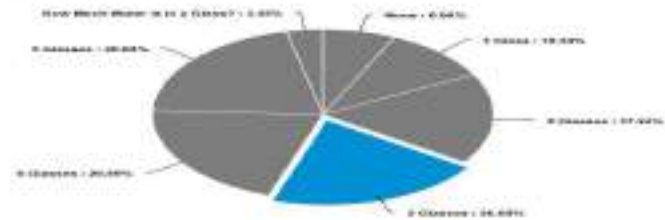


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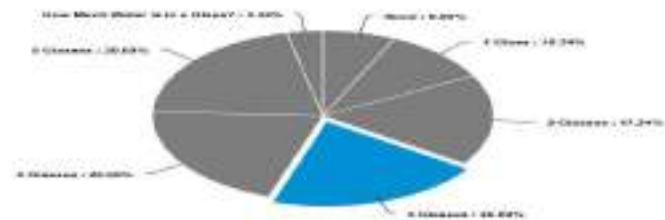
[illegible]


Data Visualization

How Many Glasses of Water Did you Drink Yesterday?



How Many Glasses of Water Did you Drink Yesterday?





a presentation by michael johnston