

Using Data as a Road Map for Data Driven Decision Making

Center for Drug and Health Studies

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State Epidemiological Outcomes Workgroup

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Welcome & Thank You!

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Participant Introduction

Please type your name and professional affiliation in the chat box.

As we get to know one another, please also answer the following question...

“What is the best road trip you have ever taken? If it has not happened yet, what would we be your dream road trip?”



Learning Objectives

- Find and interpret data that will help to identify and monitor challenges and assets.
- The impact and role of data on decision making.
- Explore how selected data can be translated into action to maximize outcomes.



FINDING AND SELECTING DATA

DATA

For today's purpose, data is that information which can be measured and analyzed.



Sources of Data

School Level

- Early Warning System Data
- Assessments and Screening Instruments
- School Climate Data
- School Health Profiles
- School Nurse, Wellness Center, etc

Community Based Organization Level

- Program Attendance
- Evidence Based Program Pre/Post Tests
- Youth, Parent, & Staff Focus Groups

Sources of Data

Local & State Levels

- School Surveys - Delaware School Survey & Youth Risk Behavior Survey
- Community Needs Assessment
- Environmental Scan
- Data Portals: Kids Count & My Healthy Community
- Community Focus Groups
- September 30th Student Enrollment and Unit Allotment Reports & DOE School/District Report Cards
- Census

Sources of Data

National Level

- Youth Risk Behavior Survey
- Monitoring The Future
- National Survey of Children's Health
- Kids Count
- National Survey on Drug Use and Health
- Census
- Healthy People 2020

Case Studies/Journal Articles

“Good Data” vs “Bad Data”

Good Data is ...

- Accessible
- Adds to your understanding of the topic
- Builds on our human capacity to take in information and look for patterns
- Consistent
- Valid & Reliable

All data is “good data” except when...

“Good Data” vs “Bad Data”

“Bad Data”

...does not answer the question you are asking!

What data isn't...

- a replacement for the “unquantifiable”
-relationships, motivation, etc.
- a substitution for comprehensive training and professional development



INTEGRATION

Data as a Resource

Data allows for a level of precision not present with intuition.

What is the phenomenon?

– Parameters

- How big is it?
- Who is affected?
- Frequency?

What is the gap in our understanding of the problem?

Where are the gaps in our resources/services?

Key Reminders When Considering Available Data

- The instrument and data you are looking for may already exist.
- Prioritize High Quality Sources
 - Validated and Reliable Instruments
 - Consider the Source
- There are limitations to every question and instrument.
 - Inadequate response options
 - Bias present in instruments and analysis.



Speedbumps When Considering Data

- Study Sample vs Real Life Population
 - What differences exist?
- Trends & Comparisons
 - How has the rate changed over time?
 - How does rate compare with other groups (ex. State and National)?
- Dig Deeper
 - Avoid using only one source of information to understand the full scope of the situation

Projection or Explanation

Strawberry Poptarts -
Walmart

(Dr. Seth Stephens-
Davidowitz)



Bullying & Absenteeism -
West Side High

(Principal Akbar Cook)



.....
.....

Rest Stop: Checking In (Q&A)





APPLICATION

What is Data Driven Decision Making (DDDM)?

- a systematic process using analytics to inform policy and action

We make data driven decisions all the time...

- Grocery Shopping
 - budget, dietary restrictions, coupons and sales, events during the week, etc.
- Driving
 - destination, adjusting route due to congestion or roadwork, stops along the way, etc.
- Planning a party, holiday event, or office luncheon
 - # of people, dietary restrictions, traditions, budget, space, music, needed equipment, etc.

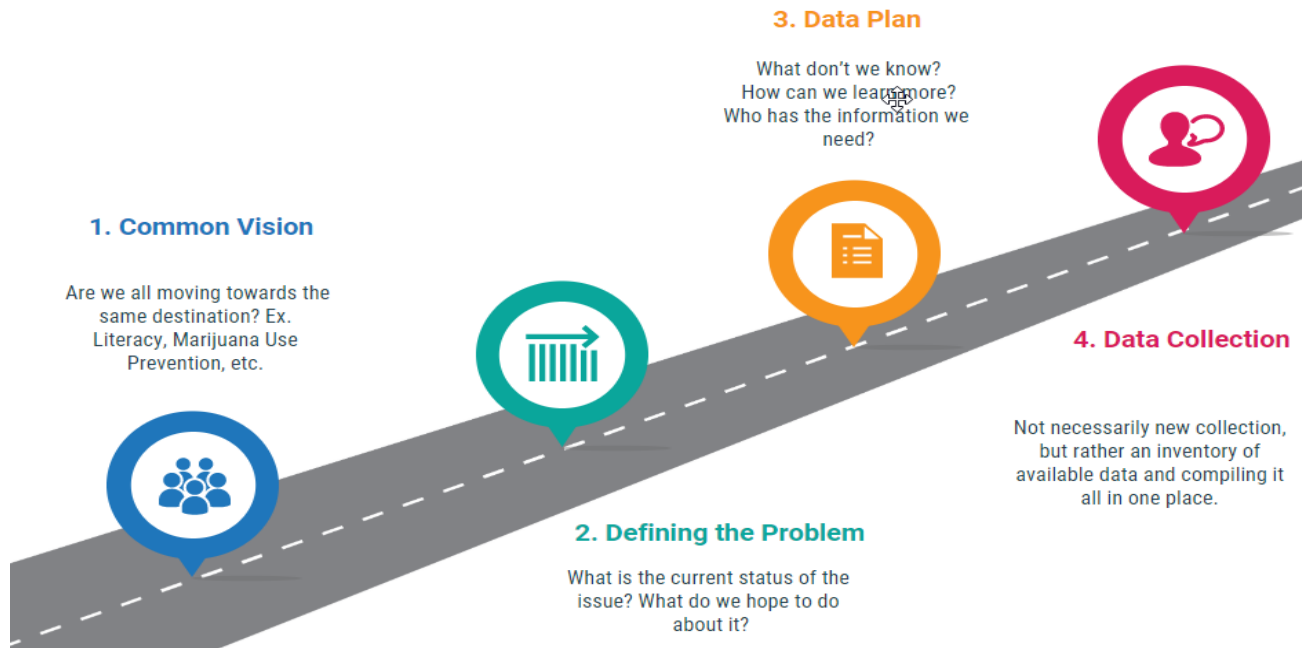
Question

Can you think of a time when you have made data driven decisions in your work or in other areas of your life?

Benefits of DDDM

- Action Oriented/Proactive
- Logical & Focused
- Consistent
- Increased stakeholder confidence/buy in
- Refining & Improving Implementation
- Measurable

Data Driven Decision Making Process



Data Driven Decision Making Process

5. Analyzing Available Data

Do we have the information that we need? What is the full picture of the data?



6. Developing a Data Informed Solution

Using SMART objectives, how can we address the issue?



7. Evaluate/Reassess

What have we learned? What is working well? Where are the opportunities for improvement?



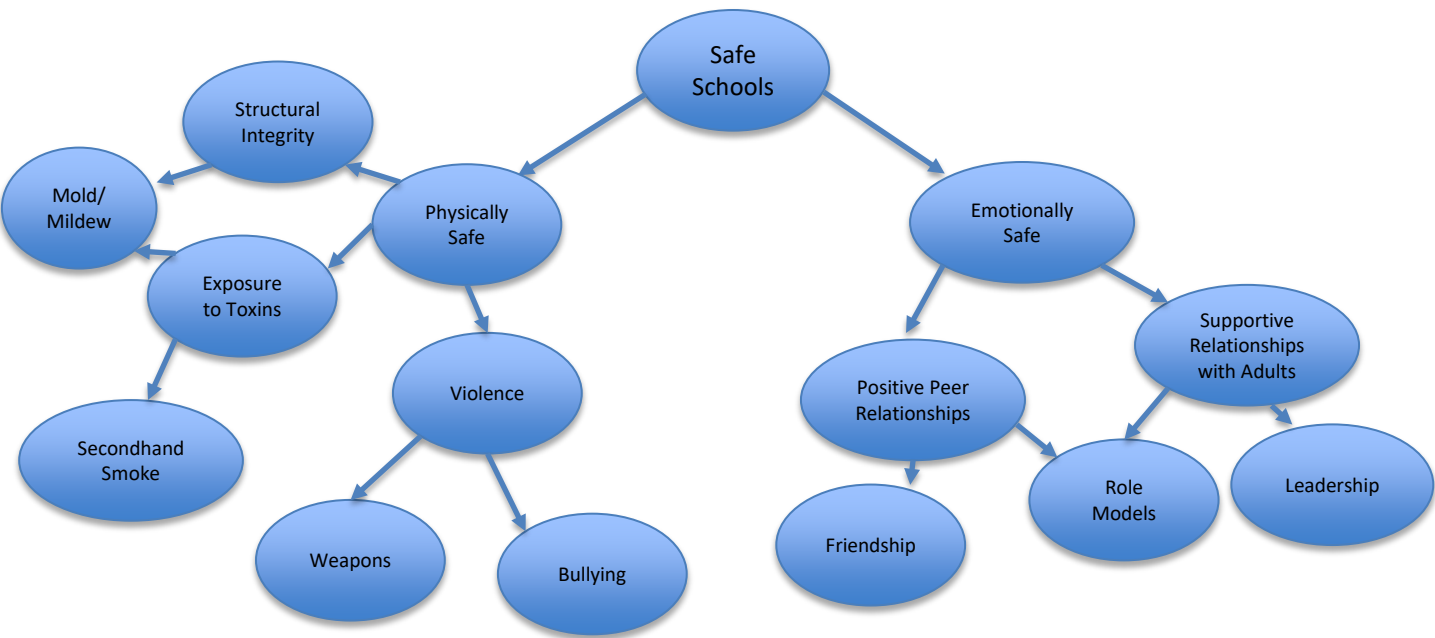
Poll

What aspect of Data Driven Decision Making could be the most challenging for your team?

DDDM Tools

- Concept Mapping: Brainstorming & Planning
 - Grounded in Ausubel's theory of building new knowledge
 - What conceptual connections exist?

DDDM Tools: Concept Mapping



DDDM Tools

- Logic Model: Planning, Implementation, and Evaluation
 - Based on a theory of change
 - How are we going to get from here to there?
 - Core: inputs, activities, outputs, and outcomes (impacts)
 - Additional: assumptions, external factors, situation, and priorities

DDDM Tools: Logic Model

APPENDIX A: FOOD FOR ALL LOGIC MODEL

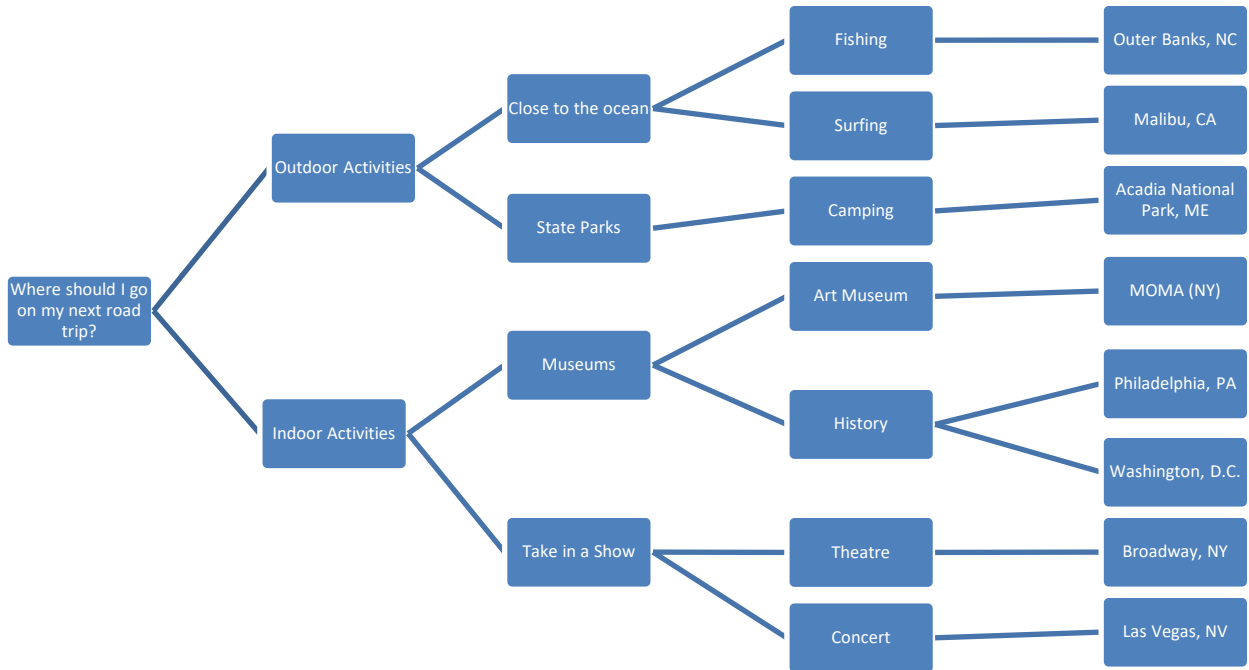
Project Resources	Core Project Components	Evidence of Project Implementation and Participation	Evidence of Change		
INPUTS	ACTIVITIES	OUTPUTS	OUTCOMES		
<i>What we invest</i>	<i>What we do</i>	<i>Direct products from program activities</i>	<i>Short-Term</i> <i>Changes in knowledge, skills, attitudes, opinions</i>	<i>Medium-Term</i> <i>Changes in behavior or action that result from participants' new knowledge</i>	<i>Long-Term</i> <i>Meaningful changes, often in their condition or status in life</i>
Food for All Local Partners Professional Volunteers <ul style="list-style-type: none"> • Chefs • Nutritionists • Financial Professionals AmeriCorps Funding <ul style="list-style-type: none"> • National • Local • Host sites Culinary and Nutrition Education Communities <ul style="list-style-type: none"> • National • Local 	Volunteer Management Curricula and material development Training <ul style="list-style-type: none"> • Staff • Volunteer Course Coordination Other Food for All-related educational events Program promotion Partnership development and maintenance	# volunteers # courses held # of Food for All-related educational events held # of thriving programs operating through local partners # beneficiaries	Participants <u>increase knowledge of</u> : <ul style="list-style-type: none"> • Food resource management practices • Food safety practices • Healthy nutrition practices • Cooking techniques Participants <u>increase skills in</u> : <ul style="list-style-type: none"> • Cooking • Food resource management Participants <u>increase self-efficacy for</u> : <ul style="list-style-type: none"> • At-home meal prep • Ability to manage food resources • Making healthy family food decisions Participants <u>improve attitudes towards</u> : <ul style="list-style-type: none"> • Healthy foods • Trying new foods 	Participants increase food resource management practices <ul style="list-style-type: none"> • Meal planning • Price comparison • Making grocery lists Participants increase food safety practices Participants improve nutrition practices <ul style="list-style-type: none"> • F/V consumption • LF dairy consumption • Whole grain consumption • Low-sodium • Low-fat • Healthy choices when eating out • Healthy beverages Participants increase at-home meal preparation	Improve food security for families Increase number of families eating healthy foods Improve healthy food environment for children

Source: Corporation for National and Community Service

DDDM Tools

- Decision Trees: Consistency and Understanding
 - Flow chart model
 - Support tool visualizing if-then based decisions

DDDM Tools: Decision Tree



DDDM Tools

- Gantt Project Planner: Planning and Project Management
 - Project timeline and, in some cases, dependency

Project Tracker

Start date:	8/1/2020
End date:	12/31/2020

Enter a sequential set of numbers in the column below.

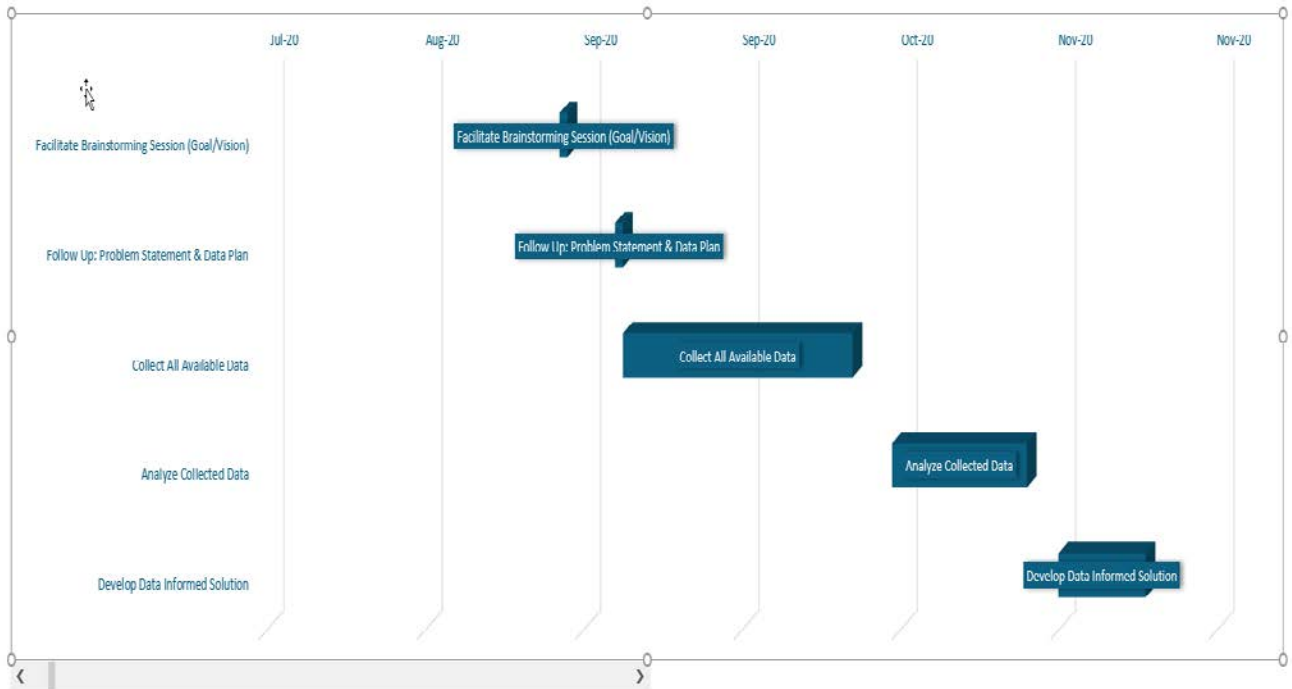
Enter the start date for the milestone or activity in the column below.

Enter the end date for the milestone or activity in the column below.

Enter the milestone and/or activity description in the column below. This description will appear in the Project Chart.

Position	Start Date	End Date	Milestone/Activity
1	8/1/2020	8/3/2020	Invite Potential Team Members
2	8/5/2020	8/9/2020	Schedule Brainstorming Session
3	8/5/2020	8/31/2020	Gather Materials
4	9/3/2020	9/3/2020	Facilitate Brainstorming Session (Goal/Vision)
5	9/10/2020	9/10/2020	Follow Up: Problem Statement & Data Plan
6	9/11/2020	10/9/2020	Collect All Available Data
7	10/15/2020	10/31/2020	Analyze Collected Data
8	11/5/2020	11/15/2020	Develop Data Informed Solution
9	11/20/2020	11/20/2020	Share Proposal with Stakeholders
10	12/1/2020	1/31/2021	Implement New Strategy
11	4/30/2021	5/15/2021	Evaluate Impact

DDDM Tools: Gantt Chart



Translating DDDM into Action

Eating the elephant one bite at a time



Socioecological Model



Source:

<https://www.cdc.gov/violenceprevention/publichealthissue/social-ecologicalmodel.html>

Translating DDDM into Action

- Ensure that data is accessible and meaningful
 - Professional Development
 - Ongoing and Consistent Communication
- Community of Practice
 - Team Effort
- Building a Data Informed Culture
 - Note: Some folks may be in “data denial” or “data averse”

Discussion



How can DDDM inform your work?

What resources do you need to move forward with DDDM?

What is the first step you will take towards DDDM?

Evaluation Poll

THANK YOU!

Resources

A Conceptual Framework for Data-Driven Decision Making

Brigham Young University Center for Teaching and Learning – Concept Mapping

<https://ctl.byu.edu/tip/concept-mapping>

Community Toolbox: Logic Models

<https://ctb.ku.edu/en/table-of-contents/overview/models-for-community-health-and-development/logic-model-development/main>

Data-Based Planning for Effective Prevention

Excel Resources (Introduction, Pivot Tables, Charts, etc.)

<https://www.youtube.com/watch?v=k1VUZEVuDj8>

<https://www.youtube.com/channel/UCSxX7Vgyu9iThxPE1jSDFdw>

Resources

PTTC: Demystifying Data Webinar 1 & 2 Recordings

<https://pttcnetwork.org/centers/pacific-southwest-pttc/product/webinar-demystifying-data-gathering-and-using-local-risk-and>

<https://pttcnetwork.org/centers/pacific-southwest-pttc/product/webinar-demystifying-data-gathering-and-using-local-risk-0>

State Epidemiological Outcomes Workgroup (Center for Drug and Health Studies)

<https://www.cdhs.udel.edu/seow/what-is-seow>

References

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Stephens-Davidowitz, S. (2018). Everybody lies: Big data, new data, and what the Internet reveals about who we really are. New York, NY: Dey St./William Morrow.

Wheelan, C. J. (2014). Naked statistics: Stripping the dread from the data. New York, NY: W.W. Norton & Company.