Building a Story With Data

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State agencies have access to a wide range of data on student health, including surveys like the Youth Risk Behavior Survey (YRBS), various surveillance data (e.g., data on reportable infections), and administrative data from programs they fund. They may also have access to data collected by partners. These data are a valuable tool for building people's interest and guiding decisions related to student health efforts. The data can also highlight health challenges students are facing, how widespread those challenges are, how these challenges have changed over time, what systems or practices are affecting those challenges, and even potential solutions.

As producers and owners of data, state agencies play a critical role in sharing information with policymakers, practitioners, and communities about student health issues. Effectively connecting data points in a clear, accurate, and compelling story depends on context and requires strategic reflection.

This resource provides state agency leaders and their partners with a process for developing a story around their data, including key considerations at each phase. It also provides an example of a LEAHP state team's efforts to share its data with questions for reflection and a planning worksheet.

The Leadership for Adolescent Health Promotion (LEAHP) was funded by the Centers for Disease Control and Prevention Division of Adolescent and School Health (CDC-DASH) to provide training *and* support to multi-sector state teams working on adolescent school health. LEAHP state teams included representatives from state health departments, state education agencies, and their partners. Their work focused on supporting components of CDC-DASH's What Works in Schools program: health education, health services, and safe and supportive environments.

The Process of Building Your Story

The process of developing stories (clear narratives with a logical flow of ideas) with data can be divided into two phases: 1) Defining the messages and 2) Refining messages and designing the products for impact. Several considerations can influence decisions within these phases. These considerations can largely be organized into the categories of data, audience, purpose, format, and capacity. Figure 1 summarizes this process and the relationship between these categories.

Figure 1. Process and Considerations for Developing Stories

Phase 1: Define messages   **Phase 2: Refine messages & design products for impact**
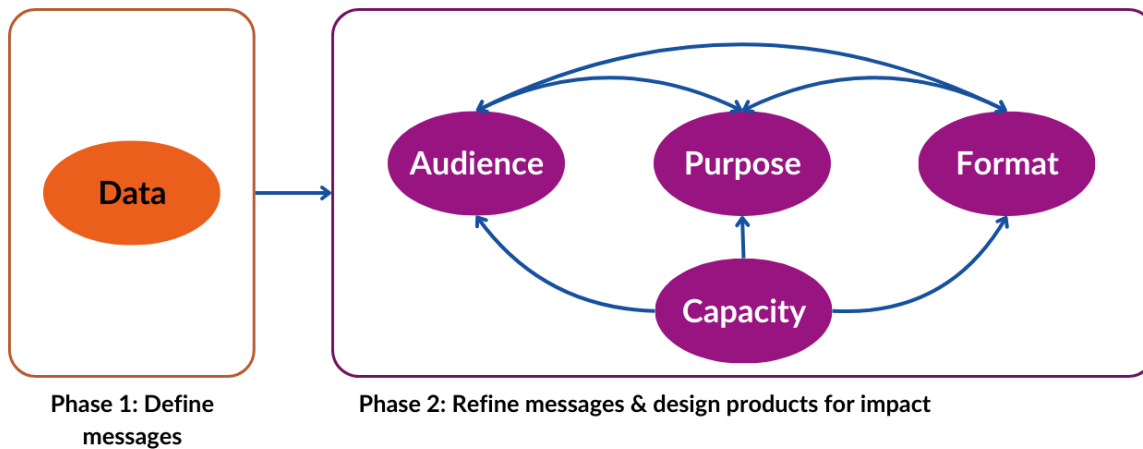
Phase 1: Defining messages

> **What can we say with the data we have? What is not possible to say at this time? What data are we focused on?**

The first step represents the transition from data analysis to data translation. During data analysis, state agencies have gone through the process of making sense of their data internally. Not every finding uncovered by data analysis will make sense for every story, and including too many points may even detract from key messages. Telling a clear story involves setting priorities about which data to cover. The data that are prioritized can then inform the key messages for communications efforts.

Equally important during this phase is to clearly articulate the limitations of the data points and data sources being used to tell the story. Data are often collected for specific purposes, which dictate what information is gathered. For example, the YRBS is collected by the Division of Adolescent and School Health within the Centers for Disease Control and Prevention and is focused on adolescent health. Since it focuses on adolescent health, the data are gathered from high school students. Data from the YRBS can share information about a large group of young people, but cannot speak to the experiences of all students (e.g., elementary school students are not covered, some states do not participate in the survey) or all adolescents (e.g., those not in schools are not covered). Again, these limitations were likely identified during the data analysis phase. Clearly stating those limitations allows state agencies and their partners to decide whether to add other data sources and/or identify areas to use precise language or offer extra explanations to avoid misinterpretation or reinforcing harmful stereotypes.

How Stigma Can Shape Data Analysis and Storytelling

Stigma is a complex social phenomenon. It involves negative attitudes or beliefs about other people based on a trait or health condition that is seen as contagious, dangerous, weak, incurable, or a moral failing. These negative attitudes and beliefs are built over time through different stories and messages. Stigma creates a dynamic of "us" and "them" that dehumanizes people and can lead to discrimination and/or loss of power for those experiencing a health condition or challenges. Treating health as a morally neutral concept and highlighting the role of systems can help state agencies build trust with their audiences and decrease stigma around a topic.

Part of data analysis and interpretation is disaggregating data to look across subgroups. Breaking data apart can reveal disparities that are important to address in stories. To reduce stigma, state agencies can take time to explain some root causes behind a disparity. Explaining these root causes may require a deeper dive into the data, looking at other sources of data, or engaging with communities. State agencies can also work with affected communities to understand how they want their stories to be told.

Federal resources:

- Resources & Style Guides for Framing Health Equity & Avoiding Stigmatizing Language (CDC)
- Tips for Stigma-Free Communication about Mental Health (CDC)
- National Institute of Allergy and Infectious Diseases HIV Language Guide (NIAID)
- Guide to Equity Terminology: Promoting Behavioral Health Equity through the Words We Use (Substance Abuse and Mental Health Services Administration, SAMHSA)

Phase 2: Refining messages and designing products for impact

Who needs this information and why? What do we hope they do with the information? What format(s) allow them to best take in the information? What, if any, adjustments to our communications activities must be made with the resources we have?

Once state agencies have determined which data sources they are using (e.g., federal survey, state-collected data, a school climate survey) and what they want to say based on those data, they can begin the process for refining their messages and designing products. To effectively plan products, state agencies must consider audience, purpose, format, and internal capacity.

Audience, purpose, and format are closely intertwined. Decisions around one will affect the others. As public entities, state agencies have a variety of partners and constituents who support or are affected by their work. Public-facing stories and products can be viewed by anyone, but trying to speak to everyone at once can dilute a story's impact. People have different levels of knowledge and experience with a topic, which means that presentations of information should also differ. Defining an audience means narrowing the focus from who a product *can* reach to who a product *should* reach.

As state agencies narrow their audience, they can define their product's purpose or what will change once people have heard the story being shared. Stories can:

- Increase people's awareness about a new topic
- Build or correct people's existing knowledge
- Affect people's attitudes, making them feel more positively or negatively about a topic
- Encourage people to take action

Just as a single product cannot speak to every person, it also has limitations on what it can accomplish. Those limitations are defined by the target audience's larger goals and pre-existing understanding of the topic. A single product's impact can also be affected by how complicated an action is and any systemic barriers or facilitators to taking that action.

How a story is structured, or its format, serves as the bridge between the content, the audience, and the purpose. Formats differ in their strengths and limitations, which results in tradeoffs and/or adjustments to content, audience, and purpose. One major difference between formats is how much information can be shared. For example, a social media post will be able to cover less information than a blog or brief. Videos can provide a lot of information in an engaging way but do not allow for skimming in the way a written product might. Audiences also have preferred methods for finding information and/or differing levels of trust in specific sources. If a state agency is looking for audiences to take a specific action, some actions can be facilitated by a product's format. For example, social media assets or newsletters where materials can easily be forwarded or reshared make sense for awareness-raising campaigns. In contrast, if a story needs to generate discussion or elicit feedback, the state agency might use a format like a community forum or panel presentation to share the information.

Underlying the considerations of audience, purpose, and format is the internal capacity of the state agency and/or team developing the story. Capacity encompasses staff availability and existing resources (including currently existing channels and funding). This capacity must be matched against any existing processes within the state agency (e.g., whether products need to go through specific reviews) and any external deadlines (e.g., a specific event that can either drive interest or when the information may be most useful). For example, state agencies often have to go through approvals to launch a new account on a social media platform and will need time to build a following. Even if many students or parents are on a platform like TikTok, if the state agency is not already on there, it will not be an effective tool for sharing time-sensitive content quickly. As noted above, it can be difficult for a single product format to reach every audience or achieve every purpose effectively. Being honest and aware about the agency's capacity can guide the prioritization of audiences, purpose, and format of communications efforts.

> ### *Matching Audience and Purpose Example: Narratives About School Health*
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> One example of how different audiences affect the goals for a product is the narrative around school health. Parents and caregivers want their children and teens to go to schools that support their learning. Some parents and caregivers may look at "supporting learning" as the academic rigor of the school. Others may look at how the school interacts with their student and/or their family (i.e., the school climate). A story about school health programs directed toward parents and caregivers who emphasize academic rigor and are unaware of the link to health may focus more on raising awareness about that connection. In contrast, a story directed toward parents and caregivers who already focus on how schools support their students' health might focus more on specific details of how the school health program works and/or how to engage with the program.

Story From the Field: Maryland LEAHP Team

The Maryland LEAHP team consists of representatives from the Maryland Department of Health (MDH), Maryland State Department of Education (MSDE), and Johns Hopkins University. MDH collects data on sexually transmitted infection (STI) rates across Maryland counties and the city of Baltimore. This data reporting

structure of counties and the city of Baltimore also generally aligns with the state's local school district structure. The state also participates in the YRBS. MDH and MSDE have collaborated in the past to develop one-pagers sharing STI and YRBS data, with each one-pager covering one county. While updating the one-pagers with the latest data, the Maryland LEAHP team wanted to revisit the original data points to ensure they were presenting salient points that could help young people understand their risk for an STI. While the data were available for most counties, some had small enough numbers that they could not be reported, which could be misinterpreted by those who saw the one-pagers. The Maryland LEAHP team also wanted to make sure that the data points and supporting narrative they included did not stigmatize STIs or young people's health decisions.

One key discussion for the Maryland LEAHP team was defining their audience. Historically, health educators used the one-pagers in their classrooms when covering sexual health units. The Maryland LEAHP team also wondered whether the one-pagers could be used to start discussions between adolescents and their parents or caregivers. In particular, they thought that the one-pagers could highlight for parents that attention to sexual health is an age-appropriate concern for this group. They wanted to stick to the existing layout and graphics of the one-pager template since it had already gone through accessibility reviews and was approved for use by the respective agencies' communications departments. This process began in Spring 2023 and their goal was to finish by Summer 2023 so that the information could be shared with health educators. The LEAHP TA team worked with the Maryland LEAHP team on defining priorities related to audience and purpose so that they could make the most use of the one-page format.

Ultimately, the Maryland LEAHP team chose to develop a one-pager containing all Maryland data, and a version translated into Spanish. They also created fact sheets for each local health department, providing valuable resources for health education. After much discussion, the team kept specific data points that they believe will be beneficial for health education and raising awareness among teens. They also provided resources such as a QR code to guide teens to a directory of local health departments and more information on STIs, along with other resources—empowering youth to take charge of their health. They uploaded all materials to the Center for STI Prevention website. Additionally, each LEAHP team member shared the materials to provide context for the data.

Reflection questions for state agencies

- The Maryland LEAHP team used YRBS and STI data to tell the story of their counties. What data are available in your state? These two data sources were largely quantitative: How might the availability of qualitative data have changed the story?
- In this example, the one-pagers not only shared data about communities, but were also a tool to support health education classes. How can sharing your state data support goals across agencies?
- What resonates with you about this example? What can you take away from their experience? What might you approach differently?

Wrap-Up

State agencies play an important role in informing the public by sharing data on people's experiences within their state. Presenting data in a story or logical narrative can help data-sharing efforts be more effective. As they plan their efforts, state agencies should consider which data are appropriate to share, the audiences that must be reached, the purpose behind communication efforts, the formats of the information, and how those formats intersect with the agency's capacity for activities.

For additional support, check out the following resources:

- [Health Communication Playbook: Resources to Help You Create Effective Materials](#) (CDC)

- [Gateway to Health Communication](#) (CDC)
- Seven Strategies for Telling Stories With Data (LEAHP)

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Organizing Worksheet: Planning Your Story

You can use this worksheet when planning a story with the data from your state.

Phase 1: Define messages

Pick up to three data sources that you are interested in sharing and reflect on what you can share and the limitations of each data source. It may help to answer these questions in tandem with your data analysis team.

Data Source What are the data we are using?	Findings What do these data tell us?	Limitations What can't we say at this time? What might need more context?

Based on the findings above, what are 3-5 ideas or key messages you want people to take away?

1.

2.

3.

4.

5.

Phase 2: Refine and tailor messages

Now that you know your key messages, think about 1-3 audiences who you feel need these messages.

Audience What are the audience's key demographic features and cultural considerations? What do we know of their existing knowledge and attitudes? What is our relationship with this group?	Purpose What do we want this audience to know, feel, do, or be able to do based on this information? Is there any time-sensitivity to this purpose?	Format What formats (e.g., channels and/or styles of products) might this audience prefer? What formats will work with the data you have? Do any formats offer opportunities to more easily achieve the purpose?

Capacity considerations

1. How much staff time and resources will your state agency have to support communications efforts in this topic?

2. Is there a time constraint on your dissemination efforts?

3. Focusing on the audience and format columns and based on your response to the previous questions, how many different audiences and formats can your team tackle, given your capacity? How does overlap on formats between audiences affect your answer?