

NJ SOPHE Mid-Year Program

*Combating Misinformation in Public Health
and Career Development for Public Health Professionals*



Mid Year Meeting Session #2

"Storytelling as a strategy for combating misinformation"

Presented by: Dr. Lisa Lieberman, PhD, CHES

Wednesday, June 15th, 2022

12:00-1:00PM EST

CHES/MCHES credits: 1.0



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<https://www.linkedin.com/groups/12373002/>



Storytelling as a strategy for combating misinformation

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Professor & Chair, Department of Public Health
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**MONTCLAIR STATE
UNIVERSITY**



*If you would persuade,
you must appeal to interest
rather than intellect*





Data make you credible...

But STORIES make you memorable!

(Although, unfortunately, stories can be used to confuse the issue)

**Stories are often the source of misinformation
Data may be a poor match for the stories that
drive public discussion, beliefs, and
misinformation**

**So how do we use stories just as effectively to
combat it?**

**(a question that applies to clients, patients,
learners, friends AND to professionals and
policymakers)**





Colloquial Evidence



- From a scientists' perspective, evidence has a very specific data-driven meaning. From an educator's or policy maker's perspective, any information that informs choices can be considered evidence.
- Colloquial evidence often includes vignettes or anecdotes from individuals or families with a health condition, expert testimony, etc.
- Decisions are often shaped more by such colloquial evidence than by quantitative evidence of harms and benefits arising from traditional scientific investigations



Using Stories for Policy Development

Rule #1: We depend upon data to drive the work we do, the decisions we make as a health professional, and the policies we develop or support.

Rule #2: Data, by itself, is seldom sufficient to sway anyone and, as we have clearly seen during the pandemic, data is insufficient to combat misinformation.

Stories, on the other hand, engage people emotionally and directly, may lead them to a deeper understanding of how an issue is relevant to their lives, or in the case of policy-makers, to their constituents' lives





From: How change happens, Why Some Social Movements Succeed While Others Don't Leslie Crutchfeld, Wiley (2018)



- **Change hearts and then policies-** focus on how people think and feel about an issue (Tobacco companies marketing to children)
- **Break from business as usual** (recognizing one aspect of a story about someone who is affected by something, even if the listener doesn't agree with all of the potential beneficiaries)
- **Create compromise, or at least understanding (from adversaries to try to get them to be allies)** (Young Lungs at Play, well we certainly don't want kids breathing our smoke in public)
- **It's not up to fate-** be deliberate in the stories you tell



Narrative:

- Is inherently persuasive and subjective
- Portrays a series of events through the experience of specific characters
- Differs from science in how it evaluates truth (*Scientific truth: aligns with external reality. Narrative truth: presents the lifelikeness of its internal connections, i.e. what you think or feel*)
- Is both a cause of, and a remedy for, scientific misinformation, depending on how a narrator incorporates science into a particular narrative message

Science searches for broad patterns that capture general truths about the world.

Narratives search for connections through human experience that assign meaning and value to reality.

Narrative can indeed lead to scientific misinformation, but can also help science counter misinformation by providing meaning to reality that incorporates accurate science knowledge into human experience.

(Dahlstrom, M, 2020) https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3497784





Self-focused vs Other focused approaches

The literature suggests that:

- a person's orientation of self vs. relational focus will help determine what type of message is more effective.
- "character identification" is considered a powerful predictor of message acceptance
- "message framing" can be either gain-framed (highlighting positive consequences) or loss-framed (highlighting a reduction of negative consequences).
- Together these argue for no one size fits all approach, thus the stories need to vary with the audience.

Christopher J. McKinley & Yam Limbu (2021) The role of conditional factors in testimonial health messaging: re-examining the influence of self vs. relational goals, Atlantic Journal of Communication, DOI: [10.1080/15456870.2021.1890593](https://doi.org/10.1080/15456870.2021.1890593)



Gain-framed vs. Loss-framed messages

- Message framing reflects a common persuasive strategy employed in health communication research.
- Gain-framed messages highlight positive consequences resulting from performing a health behavior or avoiding an unhealthy action.
- Conversely, loss-framed messages stress the consequences resulting from an unhealthy behavior or failing to perform a healthy action.
- Researchers argue that people are more motivated to engage in prevention behaviors when exposed to gain-framed appeals but are more inclined to engage in early-detection behaviors when exposed to loss-framed messages.

(Gain-framed/Self-framed)

“I finally came to realize all of the personal benefits that come with quitting smoking. Once I finally quit, I really started to feel healthier. Just recently I started exercising again and my appetite is stronger ... I feel great!



(Gain-framed/Relational-framed)

“I finally came to realize how much quitting smoking benefits those closest to me. Once I finally quit, I really started to feel healthier. Now, I notice how proud these people are of me. They seem really impressed!

(Loss-framed/Self-framed)

“I finally realize all of the personal challenges that come with smoking. Unfortunately, I’m not putting in the effort to quit, which upsets me. I’ll be honest, I smoke way too often. It’s tough.

(Loss-framed/Relational-framed)

“I finally realize the negative impact of smoking on those closest to me. Unfortunately, I am not putting in the effort to quit, which upsets them. I’ll be honest, I smoke way too often

HOW CAN SCIENTISTS TELL BETTER STORIES ABOUT THEIR RESEARCH?



1. Use a THROUGHLINE:

In a written paper: introduction, methods, data/results and conclusion. Scientists don't usually communicate verbally with a throughline. We tend to throw data at an audience and expect the audience to "get it." Audience needs context to care about the problem. (Why would an audience care about fibroblast growth factor signaling? It's increasingly detected in ovarian). I add an anecdote, For instance, I might have had a family member with ovarian cancer; then the audience can relate to me on this topic and will care more about my research in zebrafish

2: "ABT"

Narrative is extremely important in storytelling. Randy Olson, author of *Don't Be Such a Scientist*, **And, But, Therefore (ABT) method**

And: *The protagonist lived in a peaceful AND happy world.* (Applied to my work: fibroblast growth factor signaling has a function in many developmental contexts AND has been well studied in contexts such as limb development.). What's known about the field? Why will the audience care? **But: *The protagonist lived in a peaceful and happy world BUT a problem arose.*** (Fibroblast growth factors signaling is important in development BUT we don't know what role it is playing in ovary and testis development.) "But" introduces the problem and leads to the research question/hypothesis

Therefore: *The protagonist lived in a peaceful and happy world but a problem arose, THEREFORE she set out on a journey to find a solution.* (Fibroblast growth factor signaling is important in development, but we don't know its role in ovary and testis development; THEREFORE we conducted research to investigate our hypothesized role.) There's a lot to pack into the "therefore" segment: your results, discussion and conclusion.

MOMS WHO VAX



With little or no evidence-based information to back up claims, anti-vaccine activists have relied on the power of storytelling to infect an entire generation of parents with fear of and doubt about vaccines. These parent accounts of perceived vaccine injury, coupled with Andrew Wakefield's fraudulent research study linking the MMR vaccine to autism, created a substantial amount of vaccine hesitancy in new parents.

The tools used by the medical and public health communities to counteract the anti-vaccine movement include statistics, research, and other evidence-based information, often delivered verbally or in the form of the CDC's Vaccine Information Statements.

Utilizing some of the storytelling strategies used by the anti-vaccine movement, in addition to evidence-based vaccine information, could potentially offer providers, public health officials, and pro-vaccine parents an opportunity to mount a much stronger defense against anti-vaccine messaging.

The anti-vaccine movement has long understood the power of Internet storytelling, and its members have created virtual communities in which stories become facts that drive beliefs and inform medical decisions.

Pro-vaccine providers, healthcare workers, and parents can and must utilize this same paradigm.

Since 2011, Moms Who Vax blog was created, a zero-profit site (no advertisers or funding) that features first-person stories from parents; (AND spoken at the Minnesota Department of Health Immunization Conference; become members of the MIPAC Vaccine Hesitancy subgroup,; worked with the Minnesota Department of Health in developing better state immunization rules, and resurrected and reimagined the pro-vaccine organization Voices for Vaccines, which relaunched as a parent-driven advocacy group in January 2013.))

"We are not vaccine experts, providers, scientists, or public health professionals; just parents who care about immunization and the health of our communities, and feel passionate about combating anti-vaccine messages—and we know of many more parents like us who would like to help. It's time for providers and others in the medical and public health community to realize they have partners waiting in the wings. With stories and science, this is a partnership that can make a real difference."

Ashley Shelby & Karen Ernst (2013) Story and science, Human Vaccines & Immunotherapeutics, 9:8, 1795-1801, DOI: [10.4161/hv.24828](https://doi.org/10.4161/hv.24828)

We believe in using science honestly, telling the truth, living by the social contract, and protecting our kids and yours.

Monday, April 10, 2017

Blame Outbreaks on Vaccine Avoidance, Not Refugees

Editor's Note: This piece originally appeared on Medium.

By Layla Katiraei

Mumps has been spreading throughout Europe, particularly in Romania. According to [this recent article](#) from the World Health Organization, Romania has "reported over 3400 cases and 17 deaths since January 2016". Unfortunately, [these deaths mostly occurred](#) among individuals "who were immunocompromised or had other co-morbidities."

I recently shared [an article about this outbreak](#) on Facebook, and several

Links

- Voices for Vaccines: Speaking Up for Im
- Immunize for Good
- Catching Up on Vac
- Families Fighting FI
- Autism Science Fou
- Vaccine Injury Com
- Programs: An Overs
- Respectful Insolene
- Reasonable Hank
- Parents Who Prote
- Children's Hospital
- Philadelphia's Vacc
- Center

voices for vaccines credible vaccine information for families, from families

Vaccines Science Resources Get Involved Donate Q

We're families...

We know that vaccines save lives.

We believe families need facts, not hype.

We help by providing volunteer networks and credible information so we can all get the tools we need to help make our communities safe.

The world is a complicated place full of different opinions

Hello old friend in health education.....



The Health Belief Model

- We all started here!
- Think about it, what is the PRIMARY feature of the HBM that drives its focus?





Susceptibility, that is, are you likely to get a particular condition, illness, result?

Severity, that is, if you get it, how bad will it be?





PERCEIVED Susceptibility, to what extent do you BELIEVE that you are likely to get a particular condition, illness, result?

PERCEIVED Severity, if you DID get this condition, how bad do you BELIEVE it would it be?

A STORY may be able to influence perception more directly than a graph or numbers





Stories and Narrative (e.g. through pictures or representatives) are often used in political discourse:



The Annual State of the Union address
Every president invites guests to help make their points!



Similarly, when legislation is signed, representatives of the people it will affect put faces and people to the numbers or the key points.



Tools for Story Telling

Stories' ability to drive decisions are built on

- perceived trustworthiness and quality,
- people's domain-specific knowledge,
- beliefs shared by social groups
- political beliefs

Data visualization tools also can break down complex information into more visual or approachable content

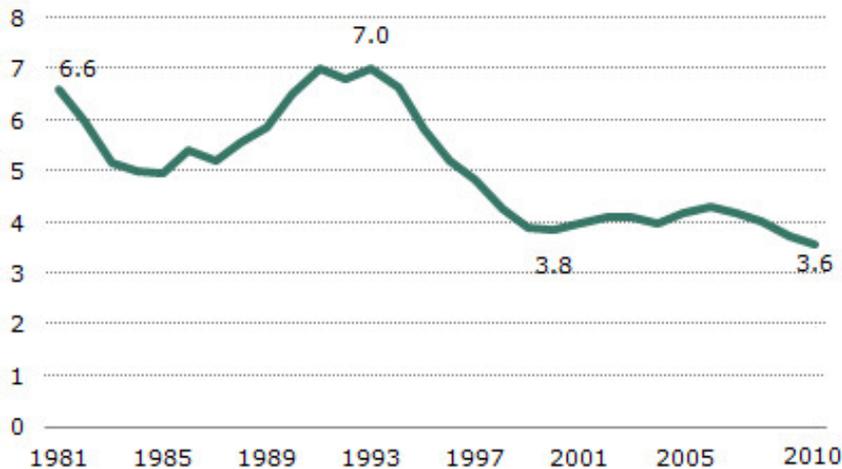
But stories can help learners or listeners visualize information by decreasing the cognitive and intellectual burden to interpret data and complex information.

Seungeun Park, Betty Bekemeier, Abraham Flaxman & Melinda Schultz (2021) Impact of data visualization on decision-making and its implications for public health practice: a systematic literature review, Informatics for Health and Social Care, DOI: [10.1080/17538157.2021.1982949](https://doi.org/10.1080/17538157.2021.1982949)



Rate of Firearm Homicide Deaths, 1981-2010

Per 100,000 people



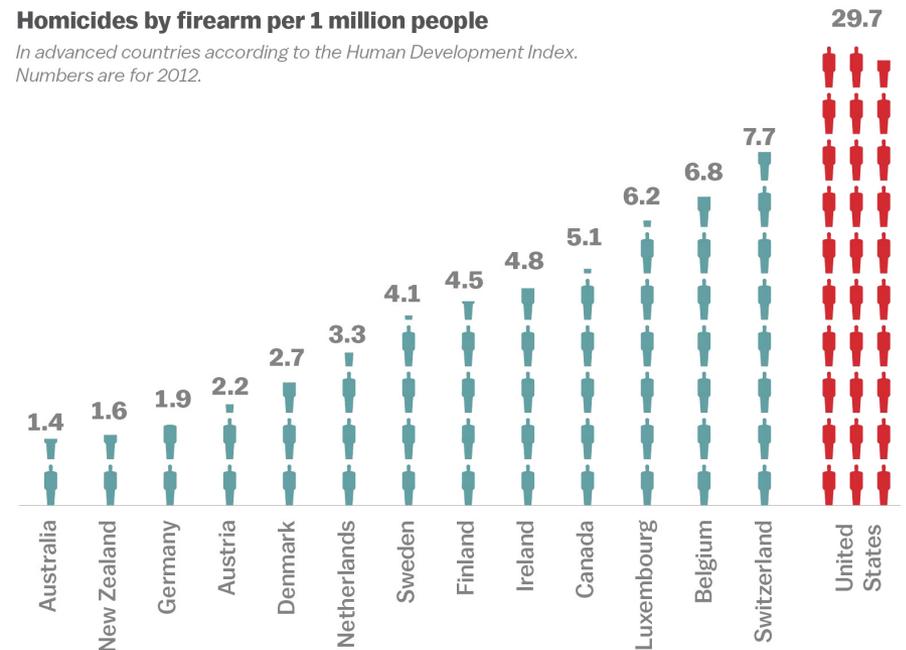
Note: Data labels shown for 1981, 1993, 2000 and 2010.

Source: CDC's National Center for Injury Prevention and Control Web-based Injury Statistics Query and Reporting System (WISQARS)

PEW RESEARCH CENTER

Homicides by firearm per 1 million people

In advanced countries according to the Human Development Index. Numbers are for 2012.



SOURCE: UNODC, Small Arms Survey, via The Guardian.

Vox

A good guy with a gun.....; We should arm teachers.....; etc. etc.
How do we demonstrate that no one, not even a hunter needs an AR-15, unless they are in active combat?
We demonstrate that with an image and a story



10-year-old Maite Rodriguez. A lover of animals and the environment, she dreamed of becoming a marine biologist. She often wore a pair of green (her favorite color) high-top Converse shoes with a heart drawn in marker over her right toes.

The green Converse on her feet turned out to be the only clear evidence that could identify her after the shooting.

Data don't change people's minds...emotions do.

A good story converts data to information that is personal and relatable. It can build understanding of a complex issue. It stirs emotions like laughter, anger, sadness, fear, or pride, which are critical for the long-term retention of information. It unites the listener with the teller in a shared sense of purpose. It creates empathy and motivates action. It builds emotion.

Humans think in stories, so we can make sense of the world by telling stories....



Data doesn't change people's minds, emotions do. Consider the difference:

115 children died of diphtheria after an outbreak in Vietnam last year. Vaccinate your child today.

OR

Ha was three-years-old — a proud big sister who liked to help her mother sew. She loved her dog, her grandmother, and anything sweet. She died of diphtheria last year, in a small farming community just like this one. Vaccinate your child today.”

Stories help us understand the people hidden behind numbers.

Stories come in all shapes and sizes (narrative, pictures, lengthy, a line)

Everyone has a story, and all can teach us something



<https://inct.global/blog/combating-vaccine-hesitancy-through-storytelling-four-key-insights-on-the-power-of-this-persuasive-approach/>



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This is exactly why we often see legislation that is NAMED for specific people

Here are a few examples



Blood is now screened for HIV. Ryan White was 13 years old when he received [a blood transfusion for his hemophilia that was contaminated with HIV](#) in 1984. Diagnosed with the Human Immunodeficiency Virus, White was told by the superintendent in the district that he would not be able to return to school. White faced AIDS-related discrimination [from other students, school officials, and people in his town in Indiana](#). White and his family advocated against the stigma of the disease and [for blood donations to be tested for HIV](#). President George H.W. Bush later signed "[The Ryan White CARE Act](#)" into legislation in 1990 (the same year as White's death), [providing the country with assistance](#) for comprehensive cost-efficient diagnosing and treatment services for communities disproportionately affected by the HIV epidemic.

Ryan White inspired a bipartisan law to help people affected by HIV and AIDS.

Megan's Law was introduced to help parents identify sex offenders living in their neighborhoods.



In 1994, [7-year-old Megan Kanka](#) from New Jersey was raped and killed by a known registered sex offender who had moved into the house across the street from her family. The family hadn't been notified or informed that they'd been living across the street from a registered sex offender.

After her death, the Kankas fought to have a law in place that would warn communities about sex offenders living in their neighborhood. Former President Bill Clinton [signed the legislation into law](#) in 1996 that stated all states were required to establish sex offender registries and establish community notification. [Many states have since adopted different ways of carrying out Megan's Law.](#)

In 2019, New Jersey Governor Phil Murphy signed 'Sami's Law' for ride-sharing after death of college student, (Robbinsville, New Jersey, native), Samantha Josephson.



- *The law says the companies must issue "two credential placards" with the driver's name, photo and license plate number to go on the driver and passenger side back windows.*
- *Rideshare companies also must give its drivers two barcodes "or other machine-readable code that passengers can scan to confirm the identity," according to the governor's statement.*

Josephson, a 21-year-old senior at the University of South Carolina, was alone when she requested an Uber ride early on March 29, Columbia police said. After she got into a stranger's car — mistaking it for her Uber — the child safety locks were activated, preventing her from escaping, police said.

Days after Josephson's slaying, [South Carolina legislators introduced](#) the "Samantha L. Josephson Ridesharing Safety Act" to require ride-sharing vehicles to have an illuminated, company-provided sign with the company's trademark or logo that can be seen in the dark. The bill was later signed by the South Carolina governor.

<https://ysph.yale.edu/news-article/storytelling-and-public-health-the-power-of-emotion-in-science/>

Storytelling and Public Health: The Power of Emotion in Science



“Most people are not data-driven,.. They are driven by emotional stories. Only then, can we provide the data, give them context, give them evidence. But they need to be moved by the story first.”
(Baer, M.D., a Harvard-trained pediatrician and adjunct professor at the UCLA Fielding School of Public Health).

Scientists know that 8 million metric tons of plastic are dumped into the world’s oceans annually creating a huge environmental problem and a life-threatening hazard to marine life. **Yet, it wasn’t until people saw the story of a sea turtle with a single straw painfully wedged up its nose that a worldwide movement to ban plastic straws finally took hold. “It took that one story to capture people’s hearts,”** said Baer.



BEWARE the disconnected scientific facts

While most people understand vaccination through personal experience, scientific facts are often reported in statistical form without relating them to the experience of their audience

An Example - hospitalization rates of COVID-19 patients -- These hospitalizations, because they are experienced by others, are unlikely to affect those who are resisting vaccination.

When we look at conversations about vaccines on social media, we see that sharing personal stories remains one of the predominant ways in which people form their opinions about the reliability and safety of vaccines.



Reddit channel posts stories of anti-vaxxers dying of Covid, scaring fence-sitters into getting the shot

Reddit channel posts stories of anti-vaxxers dying of Covid, scaring fence-sitters into getting the shot

PUBLISHED SAT, OCT 16 2021 5:32 PM EDT

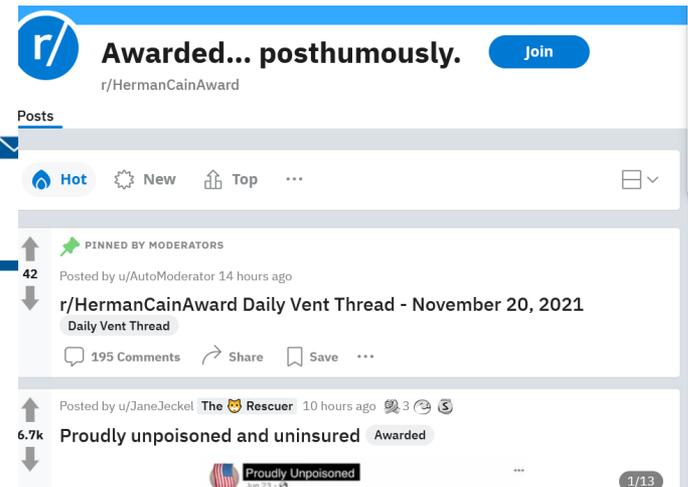


Salvador Rodriguez
@SAL19

SHARE

KEY POINTS

- A Reddit channel called r/HermanCainAward is filled with stories of people who mocked Covid-19 vaccines before eventually dying from the disease.
- Since the subreddit's creation in September 2020, it's expanded to more than 375,000 members, with the top posts garnering thousands of user interactions.
- "It really hits home when you literally see yourself in these people," said Sarah Ostrowski, who was convinced she should get vaccinated after spending time on the subreddit.





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Getting a Covid-19 vaccine is a personal decision. While many people believe that getting vaccinated is the quickest and most effective way to get back to the lives we knew before the pandemic, some members of our community are struggling with the decision. Here are a few stories from Clinica staff about why they decided to get the Covid-19 vaccine.



Belem

I decided to get vaccinated to protect myself, my



Rosie

After much speculation, I received the COVID-19



Kevin

Initially, I was hesitant to get the vaccine because

Several useful studies to read
for more information

Given the accessibility of information on the internet, parents are actively and independently researching vaccines.

They are exposed to negative claims about vaccines that appeal to their emotions and emotional stories tend to make parents doubt vaccinations.

By contrast, most positive vaccine messages focus on providing information through scientific data which has proven to be ineffective for some hesitant parents.

We suggest adopting 'storytelling' that incorporates scientific data to inform parents. Narratives are intrinsically more persuasive as they are easier to understand and may prove more effective than traditional scientific communication.

How Storytelling can Combat Vaccine Hesitancy: A Transdisciplinary Approach

December 2018 [Transdisciplinary Insights](#) 2(1):91-103

DOI: [10.11116/TDI2018.2.4](https://doi.org/10.11116/TDI2018.2.4)

[L. Jacobs](#), [Tarun Kattumana](#), [KU Leuven](#)

One study used a narrative film to provide information about Human Papillomavirus (HPV) and cervical cancer prevention. *The storyline centered on Lupita, a young woman recently diagnosed with HPV who informs her family about HPV and the availability of the HPV vaccine for her younger sister.*

A random sample of 450 European American, Mexican American, and African American women, 25-45 in the LA area was surveyed by phone before, two weeks after, and six months after viewing the film.

The more relevant women found the narrative to their own lives at two weeks, the higher they perceived the severity of the virus and the perceived response efficacy of the vaccine. Also, identifying with characters was positively associated with perceived susceptibility to HPV but negatively associated with perceived severity. But as six months, identification with specific characters was significantly associated with perceived threat and with behavior. These findings suggest that different aspects of narrative health messages should be manipulated depending on the specific beliefs and behaviors being targeted.

<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5608451/>

Storytelling elucidates, promotes, and supports contextual factors that are not captured by scientific methodologies. More opportunities are needed to exhibit storytelling's impact on **capturing the nuances in human experiences, such as those of historically and systemically underrepresented populations.**

Storytelling is a perpetual global cultural practice utilized to convey knowledge, wisdom, perspective, and skills. Additionally, storytelling emphasizes the importance of individual and collective human experiences. In this systematic review of the literature:

- Storytelling allows more in-depth and improved comprehension
- Storytelling interventions, compared with non-storytelling interventions, effectively improved participants' attitude, knowledge, behavior, or clinical outcomes.
- Positive changes were noted in health behaviors such as healthy eating, smoking cessation, decreased drug usage, vaccinations, and improved foot care.
- Storytelling affected clinical outcomes such as lowering blood pressure and A1C levels.
- Storytelling interventions also improved participants' attitudes on self-efficacy, disease management, and risk prevention
- Studies utilizing storytelling demonstrated that participants were more likely to report improved life quality

<https://journals.sagepub.com/doi/full/10.1177/10901981211009741>



The story map- How to Craft Strategic Stories

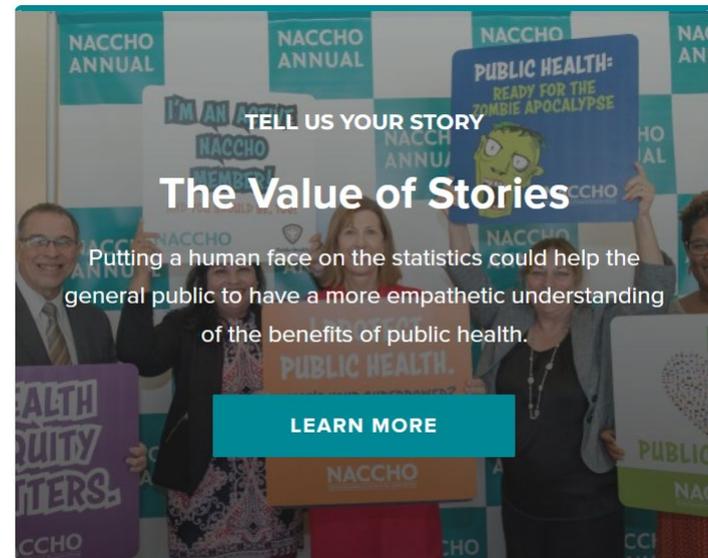
The Public Health Story Map helps you structure your story around a narrative arc. There are eight steps that you can use to map out your story from beginning to end. Some stories may cover all the steps, and some may touch on only a few—and that's okay.

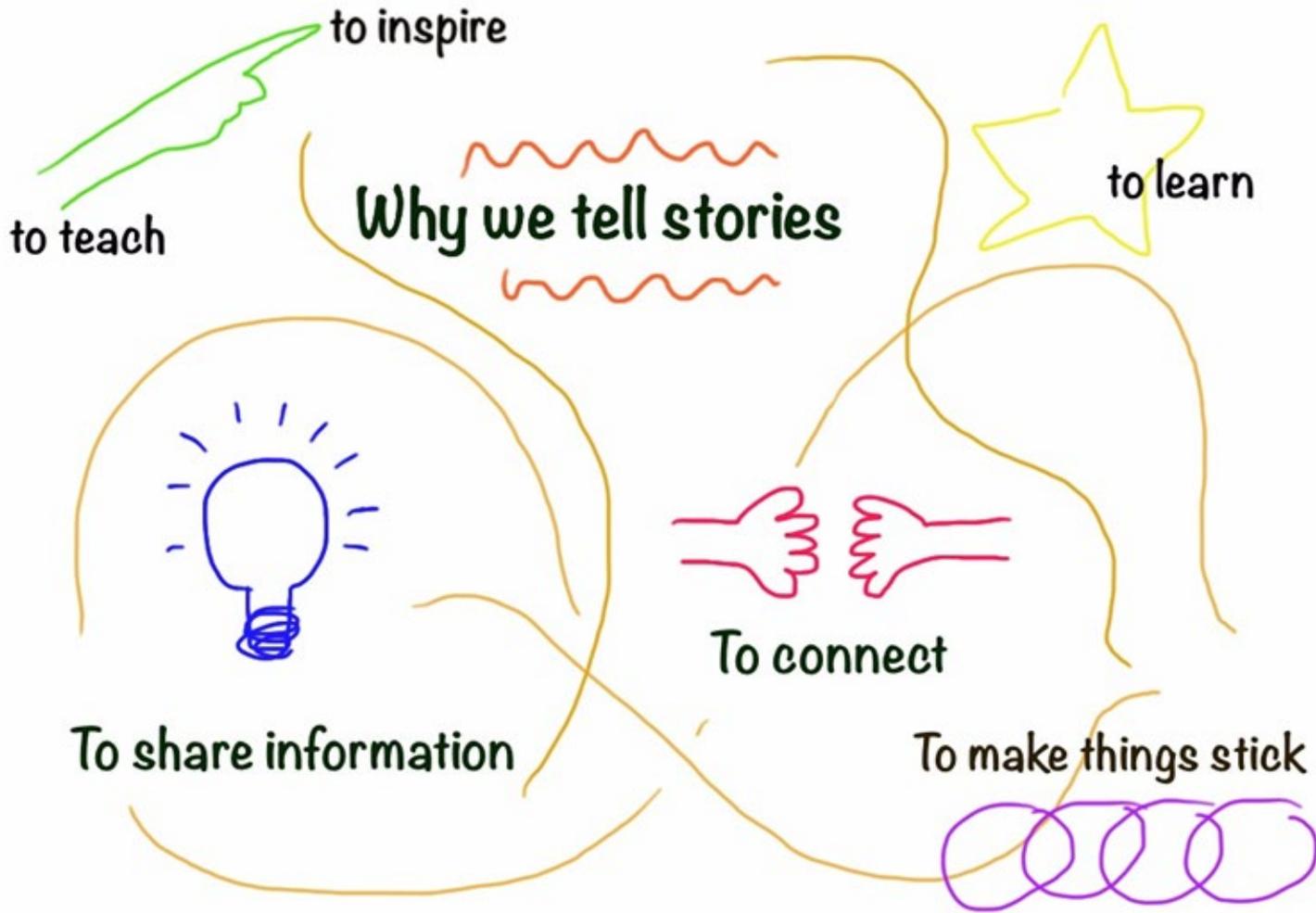


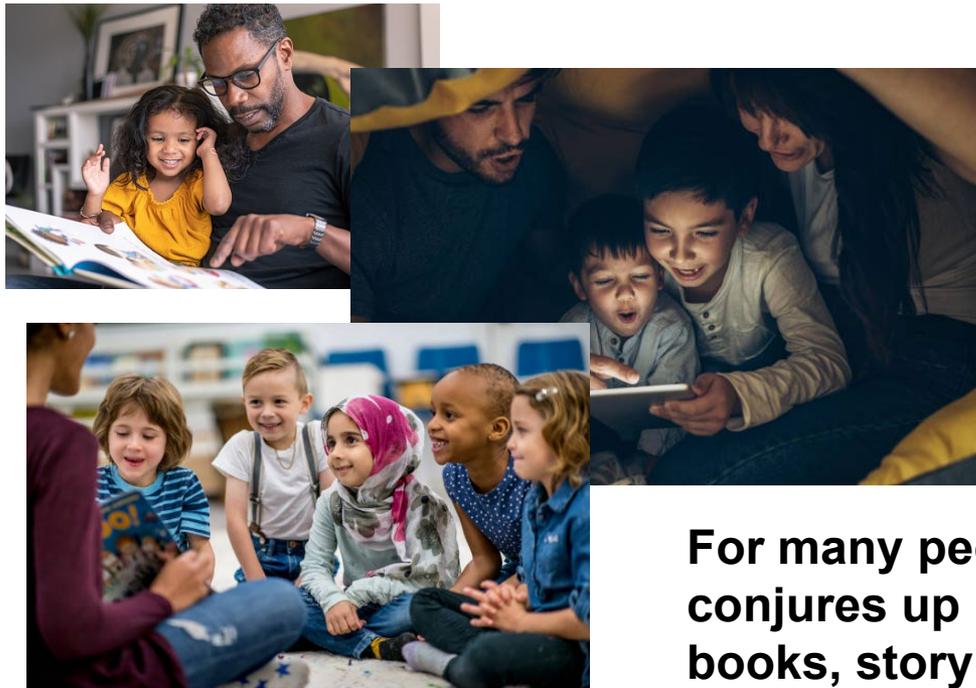
https://debeaumont.org/wp-content/uploads/2020/07/Storytelling-Toolkit-Final_.pdf

Storytelling 101 (NACCHO)

1. Make the story about a person
2. Write a “lead” sentence
3. Consider the emotional aspects of the story
4. Consider the take-away from the story
5. Provide some context
6. Use visual language to describe details
7. Use plain language and avoid jargon
8. Consider common elements of compelling storytelling
9. Read the story out loud to someone unfamiliar with it
10. Cut out the clutter







For many people, storytelling conjures up images of bedtime, books, story hour.

Tell US a story that you have used in your public health practice!

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