



# Adding Power to Our Voices

A Framing Guide for Communicating About Injury







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National Center for Injury Prevention and Control  
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## Preface

When the CDC Injury Center asked communication professionals working in injury and violence prevention and response about their communication challenges, it became clear that messages about injury and violence need to reach and appeal to a broader audience to change public perceptions and have an influence on social and political will.

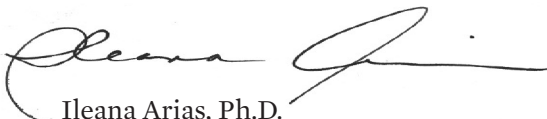
Discussions with these professionals led to an effort to collaborate and coordinate messages to achieve the greater goal of successfully elevating public awareness of injury and violence prevention and response.

Through formative research with the public, one societal value stood out as one that could speak to not only those with an existing interest or relationship with injury and violence prevention, but also could reach those who may have little previous exposure to the topic. This value that all could embrace — “We want a society where people can live to their full potential” — resonated with the public and injury communication professionals.

We took this information and created a guide that all injury and violence prevention and response professionals could use to develop messages that would benefit their injury-specific topic and the field as a whole. *Adding Power to Our Voices: A Framing Guide for Communicating About Injury* incorporates framing theory, message development techniques and vehicles for explaining public health statistics. When these tools are used to create messages for the public, your members or constituents, we anticipate these will prompt public interest and changes in perception and reaction to injury and violence prevention and response.

By using a common frame and coordinated messages across injury materials and outreach activities, we give the whole injury field a boost whenever any specific injury issue is in the spotlight. It is our hope that, over time, our efforts to modify how we frame information about our field will change perceptions, and we will see a positive evolution in personal and societal consideration of injury and violence prevention and response.

Sincerely,



Ileana Arias, Ph.D.

Director  
National Center for Injury Prevention and Control  
Centers for Disease Control and Prevention





# Adding Power to Our Voices: A Framing Guide for Communicating About Injury

We each work to address sometimes very different injury issues (prevention, response, violence, neglect, and unintentional injuries of all types). Yet, we all want to live in a society that believes and engages in injury and violence prevention and response initiatives that allow people to have the opportunity *to live to their full potential*.

Our mission at CDC's National Center for Injury Prevention and Control (CDC's Injury Center) is to prevent injuries and violence and reduce their consequences. *Adding Power to Our Voices* is designed to help organizations involved in injury and violence prevention and response speak with a consistent voice in building the social and political will needed to save lives and reduce injuries.

The information and tools provided in this guide can be used to build messages, to include press releases, speeches, annual reports, and research articles, for all of your communication with your audiences.

## Common Communication Challenges

CDC's Injury Center has invited input from a variety of injury communication professionals to explore our common communication challenges. These challenges represent significant hurdles for each of us in communicating about our individual injury issues. Not all challenges are felt equally given the diverse injury and violence prevention issues that we face. Those in the unintentional injury field grapple with the challenge of the belief that injuries are unpredictable or unavoidable while those in violence prevention encourage individual responsibility for the prevention of violence without blaming victims of violence. Yet, as we discovered in our conversations, these challenges can also help bind us together and provide a common foundation for collaboration.

This guide aims to help everyone involved in injury and violence prevention and response communicate to the public in ways that build awareness and increase the perceived value of addressing a specific injury issue and the broad range of all injury problems. The coordinated message tools provided in this guide begin to address many of the challenges that injury communication professionals have identified and build a strong infrastructure for injury communication that will

Changing people's perceptions of the value of preventing and responding to injury is critical to creating the social and political will to more fully support injury prevention and response.

last well into the future. The research-based message points presented here will help all injury programs contribute to creating the change necessary to achieve the ambitious goal of a society where everyone can live to their full potential.

These challenges can help bind us together and provide a common foundation for collaboration.

| Table 1.<br>Injury Communication Challenges When Communicating With the Public  |  |
|---|--|
| Injury and violence is seen as the responsibility of several fields (criminal justice, first responders, transportation, and education), which leads to the fracturing of the search for solutions. |  |
| Lack of understanding of the definition of injury and scope of the injury problem.  |  |
| Lack of knowledge that solutions exist to reduce the impact of injury and violence.   |  |
| Lack of individuals' sense of control over their risk environment (e.g., homes, workplaces, and schools).   |  |
| Injury and violence is not understood as a public health issue.   |  |
| Funding for injury programs is not commensurate with the magnitude of the problem.  |  |
| Stigma associated with several types of injury such as sexual violence and suicide hampers open discussion.   |  |
| Media coverage generally focuses on an individual event rather than the broader injury context.   |  |
| Low levels of personal relevance or connections to injury.  |  |
| Enduring beliefs of unintentional injury as unpredictable and not preventable.  |  |
| Consequences of violence go beyond physical injury.   |  |

### Leveraging Communication to Benefit All in the Injury Community

For this effort to succeed, we must build upon the existing communication work of all organizations working in injury and violence. We must engage those highly dedicated stakeholders, partners, volunteers, and staff members to continue to support their cause and be willing to connect their cause to the larger injury problem. Specific injury issues need to continue to thrive through tailored outreach that effectively reaches specific audiences.

This framing guide seeks to increase understanding of injury and violence and the commitment to more fully address prevention and response. This can be accomplished by building on the hard-won visibility for specific injuries that has grown over the past few decades. Coordinated messaging is a foundation that can support and connect many different specific injury programs, while not taking anything away from each specific injury topic's unique messages.

## Adding Power to Our Voices

The injury and violence field is small in comparison to other health fields. However, together we can have a louder voice than each can alone. Most stakeholders, especially the public, focus on one issue at a time (e.g., helping women, protecting children or fire safety). What if a brochure about older adult falls ends up in the hands of a traumatic brain injury prevention supporter? A coordinated message about how injury prevention, as a whole, can help people live to their full potential may give that supporter one more reason to support community programs that impact both traumatic brain injury and falls prevention. ***By using a common frame and coordinated messages across injury and violence materials and outreach activities, we give the whole injury field a boost whenever any specific injury issue is in the spotlight.***

## The Bottom Line

If all injury programs repeatedly convey the coordinated message points over time and across multiple outreach activities, the public can then begin to better understand and value that preventing and responding to injuries can help people live to their full potential. This common injury message strategy, coordinated message points, and cross-promotions are an important start in enlarging the visibility of injury and violence issues. They can influence change in how people value preventing and responding to injuries and violence and increasing awareness of solutions across a wide range of audiences.

If all injury programs convey the same value message of “full potential” over time and across multiple outreach activities, the public will come to understand and value the fact that preventing and responding to injuries can help people achieve their full potential.

# Will You Add Your Voice?

## Message Development—Coordinated Messaging

We can start to change public perception about injury and violence with the use of a coordinated message strategy. One technique of crafting messages to our constituents or audience is to start with a broad overarching statement expressing a core value held by many individuals in our society. We call this a concept frame. The statement is followed by key issues and a final message point or call to action. The combination of a cross-injury frame expressing a core societal value and injury-specific copy results in a coordinated message.

## Making the Injury Issue Meaningful

Feedback from injury communication professionals and other research suggests that the public does not value injury and violence prevention and response as much as some other public health issues. Framing theory suggests that this difference may occur because the public and other audiences do not see how addressing injuries reflects their strongly held values or is a priority for achieving the kind of community they want to live in.

People's perceptions of an issue are created largely by what they already know and associate with that issue. This knowledge base has usually been cultivated over a long period of time through a variety of communication channels such as advertising, news media, TV, movies, word-of-mouth, internet, e-mails, and direct experience. These mental shortcuts, or dominant frames, allow individuals to quickly understand issues and interrelated facts. Many of the communication challenges we noted earlier represent dominant frames that make it difficult for individuals to hear and value messages about injury and violence prevention and response.

We have used message framing theory and communication research to identify a common cultural value that would be increased if injuries were reduced. The research findings and consultation with partners indicate that the value of “we want a society where people can live to their full potential” is a frame that resonates across the spectrum of injury and violence issues.

## Message Framing—How It Works

Message framing can help connect people to issues with a new perspective and establish new associations, thus changing the dominant frame. There are many facets to successfully framing an issue. Once identified, a new frame must be established through consistent, repetitive, strong, and broad-based

communication, usually over a number of years. Linking an issue to a widely held cultural value helps start the framing process by resonating with the audience and increasing interest in learning more about how the issue connects with this cultural value.

## Changing a Dominant Frame

A few decades back, the dominant frame in driving under the influence of alcohol or drugs might have included thoughts like, “It’s those impaired drivers who have the problem.” For a new frame, communication materials, tools, activities, and outreach would have to identify a new value statement that would make individuals think differently about driving under the influence and engage them to want to learn more and become involved. In the example of driving under the influence, the old dominant or concept frame of “we live in a society where individuals are responsible for their own actions” was changed over the years to “wanting to live in a society that cares about each other.” In this case the frame was used to promote a program where friends share responsibility for preventing impaired driving. This new frame of caring and shared responsibility was communicated through TV show sitcoms, dramas, and even talk shows. Music and advertising reinforced the new frame. A more dominant message today is that “friends don’t let friends drive drunk.” It may seem daunting, but with a strong network of partners, consistent and repetitive messaging, and patience, dominant frames can be changed for the better.

## How To Do It

The following message frames (tables 2 & 3) demonstrate how to use an overarching value to shape the content of your injury-specific messages. Develop all of your communications by starting with writing a message frame. To make your start easier, the messages below have been developed specifically for adaptation by people who work in injury and violence prevention and response. You can begin to use this approach immediately in your communication to your constituents. Insert your specific injury into the text and adapt the language to reflect how your injury issue and work in injury prevention, violence prevention, or injury response best connects with the overarching frame of wanting all individuals to be able to live to their full potential.

CDC’s Injury Center has begun to use the “full potential” frame in its communication; this text appears on its Web site section that addresses fall prevention ([www.cdc.gov/ncipc/preventingfalls](http://www.cdc.gov/ncipc/preventingfalls))

*We want a society where older adults can live to their full potential. While falls are a threat to the health and independence of older adults and can significantly limit their ability to remain self-sufficient, the opportunity to reduce falls among older adults has never been better. Today, there are proven interventions that can reduce falls and help older adults live better and longer.*

| Table 2. "Full Potential" Message Concept |  |
|---|--|
| Concept Frame (Societal Value)            | We want a society where people can live to their full potential.   |
| Short Expression:                         | Organizations, communities, and individuals should work together to help all Americans live healthier, more productive lives. We can take steps to lower the risk of injuries and violence and help those who are injured achieve full recovery.   |
| Sample "Elevator Speech"*:                | My organization is part of a movement to reduce the risk of injuries and improve the immediate response to those who are injured so that everyone can live his or her life to their full potential. Each year, injuries resulting from a wide variety of physical and emotional causes—including motor vehicle crashes, sports trauma, violence, [insert injury] or neglect—keep millions of adults and children from achieving their goals and making the most of their talents and abilities. But thanks to the discoveries of science and injury research, there are steps that [communities and individuals] can take—including [specific program(s)]—that can stop injuries before they happen and increase the likelihood for full recovery when they do. By incorporating these strategies into the community and everyday activities, we can improve the opportunity for all individuals to lead active, useful, and fulfilling lives. |
| Sample Press Release Copy:                | Injuries and violence are a significant and largely preventable problem. Injury prevention research has provided new information and new tools to address this problem and help millions of people live to their fullest potential. Many of the injuries that keep adults and children from enjoying fulfilling, productive lives—such as [specific injuries]—can be prevented using known prevention measures—including [specific injury programs]. When injuries occur, chances for a full recovery can be improved with specialized emergency care, such as [specific injury program]. Organizations, communities, and individuals should work together in a coordinated effort to promote and adopt these kinds of programs to ensure that every person enjoys the highest possible quality of life.   |

\*An elevator speech is an overview of an idea for a product, service, or project. The name reflects the fact that an elevator pitch can be delivered in the time span of an elevator ride (say, 30 seconds or 100 to 150 words).

## A Tailored Message for Organizations Involved in Violence Prevention

CDC’s Injury Center understands the difficulty in developing a single coordinated message that encompasses the broad spectrum of injury issues and that will resonate with people who work daily to alleviate the suffering caused by those injuries. Through our research, individuals involved with violence prevention expressed the importance of a message that also contained the concept of freedom from fear of violence. Participants across the spectrum of injury also liked the firm and direct statement that, *“Injuries and violence are significant and largely preventable,”* because the statement is clear and because injuries are not 100 percent preventable.

Table 3. Additional Message Points for Organizations in Violence Prevention

| Concept Frame (Societal Value): | We want a society where people can live to their full potential.  |
|---------------------------------|---|
| Sample Press Release Copy:      | In order for adults and children to realize their full potential, they must have safe places to live, work, and play where they can enjoy every aspect of their lives without worry about violence or injury. Programs that use the science of injury prevention to reduce the risk of violence, injury, and their associated consequences are available—including [specific programs]. When individuals and communities join forces with business and government to implement these violence prevention measures, we can help people live fulfilling lives, safe from hurt and harm. |

## Framing Tools

### Message Development Considerations

From message testing and focus group research, audiences preferred the strongly held cultural value of “we want to live in a society where people can live to their full potential,” as the frame for injury and violence prevention and response. It is not necessary to include every coordinated message point in every communication that you develop. However, *if you can only fit in one coordinated message, the value message of “full potential” is the most important.*

Integrating the coordinated messages into your communication materials will be easier than you might think. The message development considerations below

have been developed from research with the public<sup>1</sup>. They will help you create messages that have greater impact with your audiences.

1. Make a strong and dramatic statement about the injury problem.
  - a. “Injuries and violence are significant and largely preventable public health problems.”
  - b. “Each year, injuries, violence, and their consequences keep millions of adults and children from achieving their goals.”
2. Include lists of a wide range of injuries that might seem unrelated to your specific injury issue, but can help frame the injury field as one field. This approach will also help audiences understand which specific types of health problems fit under the umbrella we call “injury.”
  - a. “Injuries result from a wide variety of physical and emotional causes—including motor vehicle crashes, sports trauma, violence, or neglect.”
3. Use positive, action-oriented statements to present solutions early in the message.
  - a. “There are steps that communities and individuals can take that are proven to stop injuries before they happen.”
  - b. “Injury and violence prevention research has provided new information and new tools to address this problem.”
4. Use inserts of specific injury issues and programs to customize the message to your injury area.
  - a. “Many of the injuries that keep adults and children from enjoying fulfilling, productive lives—including [specific injuries]—can be avoided or reduced by using prevention measures—including [specific injury programs].”
  - b. “When injuries occur, chances for a full recovery can be improved with specialized emergency care, such as [specific injury program].”
5. Highlight the value of personal responsibility and community action—characterize organizations as partners.
  - a. “Individuals can live healthier, more fulfilling lives by taking steps to protect themselves from injuries and prevent violence from occurring.”
  - b. “When individuals and communities join forces with business and government to implement these prevention measures, we can help people live fulfilling lives, safe from hurt and harm.”

If you can only fit in one coordinated message, the value message of “full potential” is the most important.

<sup>1</sup>Executive Summary of Audience Research Recommendations for Coordinated Communication Message Frame and Dissemination, National Center for Injury Prevention and Control, Centers for Disease Control and Prevention, Atlanta, GA, 2007.



6. Reinforce the science of injury and violence prevention (without the use of jargon).
  - a. “Thanks to the discoveries of science and injury and violence research, there are steps that communities and individuals can take.”
  - b. “Injury and violence prevention research has provided new information and new tools to address this problem.”
7. Ensure that the message includes an “ask” or call to action.
  - a. “Organizations, communities, and individuals can work together in a coordinated effort to promote and adopt these kinds of programs to ensure that every person enjoys the highest possible quality of life.”
8. End by reinforcing the value message and reminding individuals that the actions they take can help achieve the value message (full potential) and create the kind of world that they want. This reinforcement of the value message is critical.
  - a. “When individuals and communities join forces with business and government to implement these violence prevention measures, we can help people live fulfilling lives, safe from hurt and harm.”
9. Remember that this work is designed to help create the social and political will to address injury and violence prevention through the socio-ecological model<sup>2</sup>. Sometimes different elements of the social ecology will be the focus of our messages to build awareness of and desire for solutions to injury and violence issues. While it may be appropriate to focus messages on what individuals can do to protect themselves from unintentional injuries (e.g., use of safety belts), violence prevention requires greater focus on individual responsibility for refraining from violence and on community-level change. We must ensure that our messages do not have the unintended consequence of implying that victims of violence are to blame.
10. Words of caution when integrating coordinated messages:
  - a. Frame preventive and response actions as giving people more freedom to live up to their full potential because they will be injury-free and able to pursue their goals.
  - b. Do not dwell on the injury problem and provide exhaustive lists of the statistics of the problem. People want to know about solutions, how they will be accomplished, and what they will cost.
  - c. Do not describe injury problems using a single situation (e.g., a specific child abuse case). Instead, describe the context around how injury and violence happens over the long term and not as a single event.

CDC uses a four-level **social-ecological model** to better understand injury and violence and the effect of potential prevention strategies. This model considers the complex interplay between individual, relationship, community, and societal factors. It allows us to address the factors that put people at risk for experiencing or perpetrating injuries and violence.

<sup>2</sup>Dahlberg, L.L., Krug, E.G. (2002). Violence—a global public health problem. In E. Krug, L.L. Dahlberg, J.A. Mercy, A.B. Zwi, R. Lozano R. (Eds.), *World Report on Violence and Health* (pp. 1-56). Geneva, Switzerland: World Health Organization.

### Social Math and Framing<sup>3</sup>

To emphasize your issue and make your points relevant to your audience, consider using social math in your messages. Be sure to use credible sources and provide references for your data sources. This technique provides data in a mental picture that demonstrates the breadth or depth of your message and makes your issue relevant to your audience. For example:

- ◆ Based on 2005 data, every 35 minutes an older adult dies from a fall-related injury.
- ◆ More than 1.6 million people are seen in an emergency department, are hospitalized, or die from a traumatic brain injury (TBI) in the United States each year. That's more than the number of people who live in the cities of Baltimore, MD, Washington, DC, and Richmond, VA combined.
- ◆ Nationwide implementation of effective school-based programs to prevent youth violence could result in 187,000 fewer fight-related injuries among high school students. That's equivalent to nearly 7,500 classrooms of students.

See Appendix A for more examples and samples.

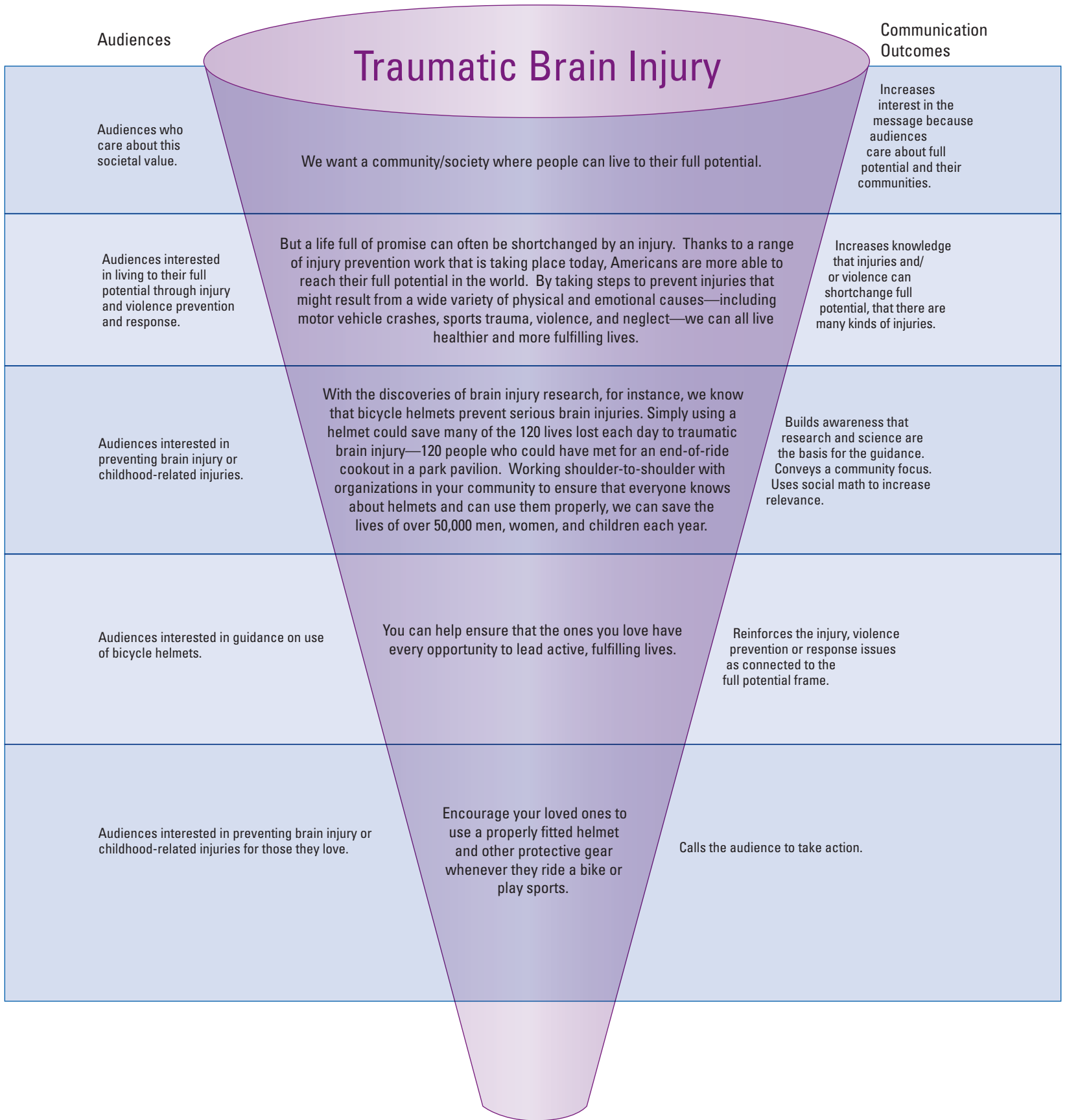
### Message Funnels

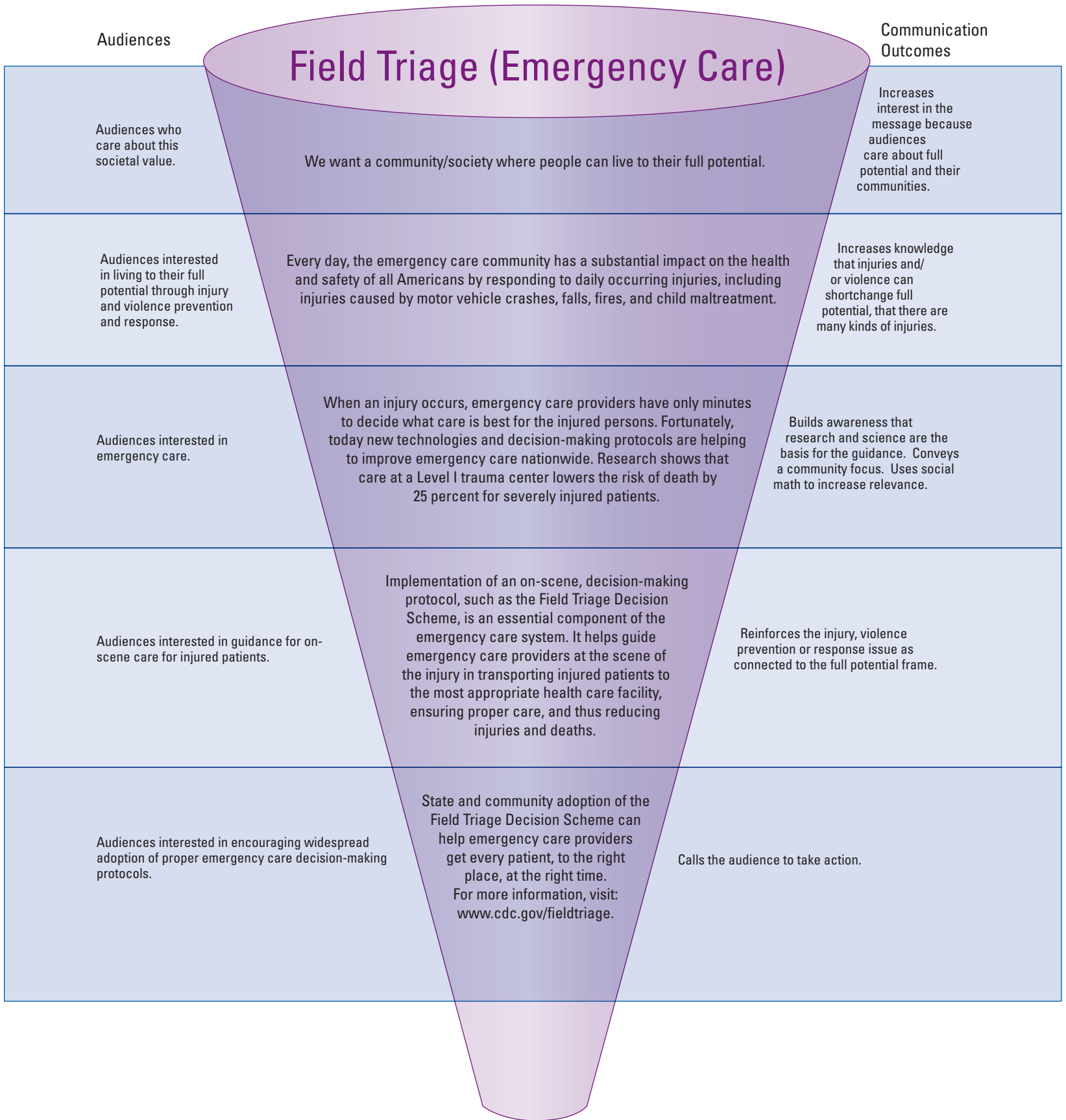
Think of coordinated messaging as a funnel. If we can attract more audiences by linking injury and violence prevention and response to a core value in our society, then more audiences will enter the top of the funnel. As audiences read or listen to more about the injury issue at hand, some will lose interest in the message along the way for various reasons. Many will stay interested all the way to the end of the funnel. Some will become supporters of specific injury programs. When more of the audience enters the top of the funnel, all injury issues have a chance to attract some of that new share to their specific causes. Audiences have a chance to learn a bit about other injuries along the way.

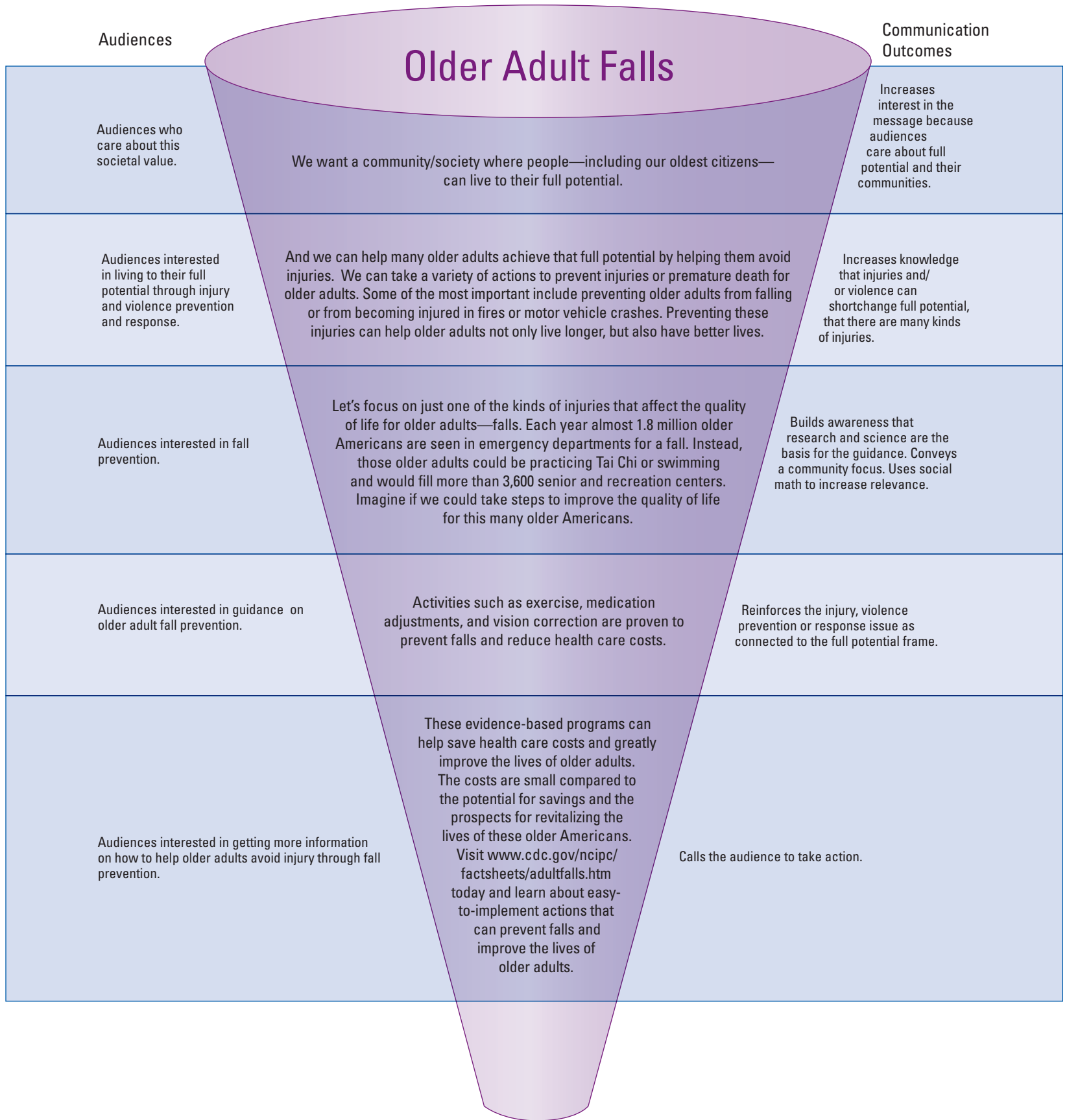
Funnels are an easy way to see how framing messages works. Each message section of the funnel moves the reader through a progression that starts with the value statement at the widest part of the funnel and ends with a call to action at the narrower end. Your initial audiences are a broad segment of the population who are interested in the value statement. Messages midway through the funnel speak to intended audiences, or those individuals who have an interest in, or experience with, your specific injury area, or who want to learn more about it. By increasing knowledge and awareness and presenting a call to action, you provide new information that changes what both audiences know or believe about your specific injury. (See Appendix B for more information about how to use funnels in message development.)

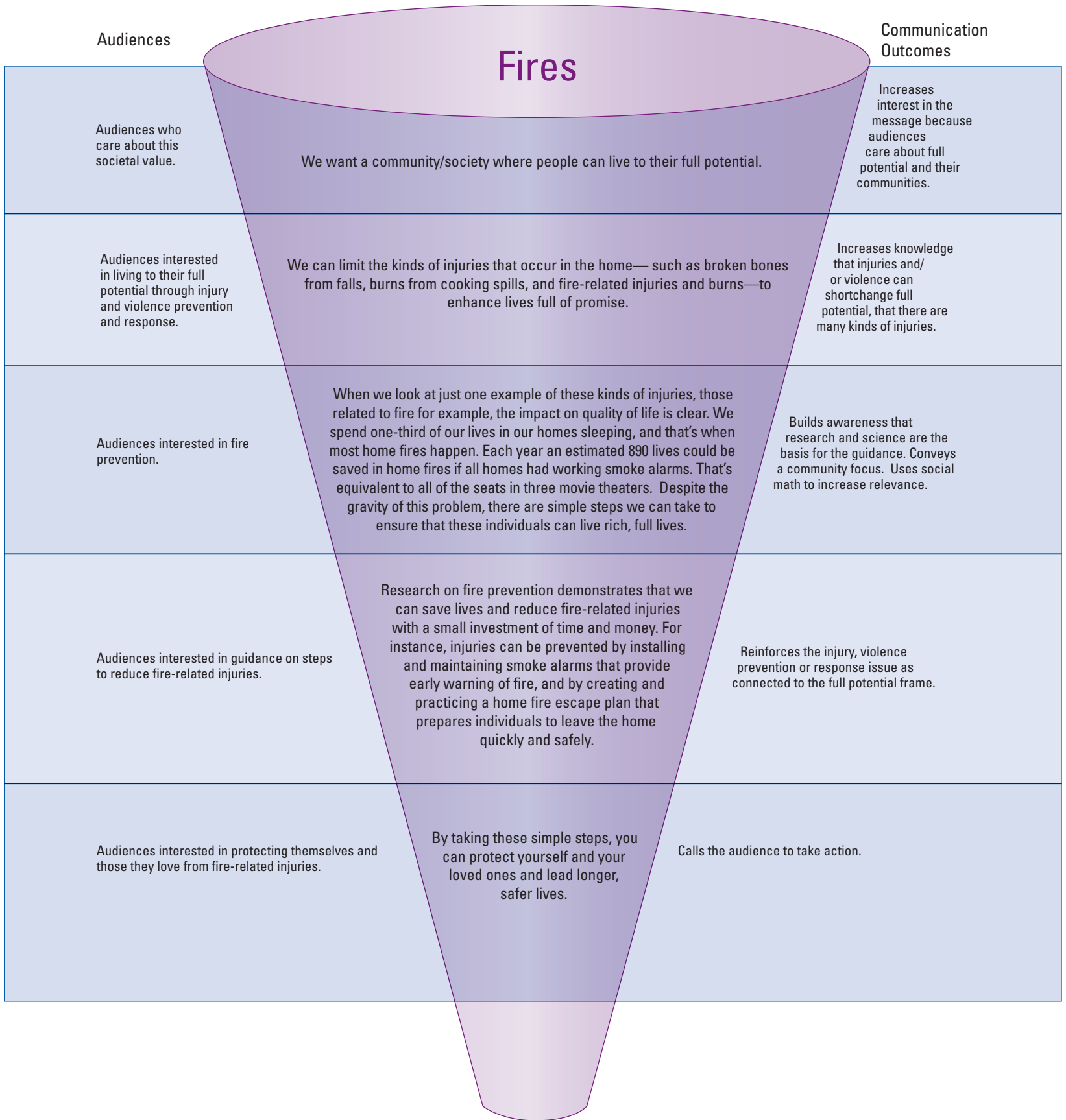
<sup>3</sup>Dorfman, L., Woodruff, K., Herbert, K., & Ervice, J. (2004). *Making the case for early care and education: A message development guide for advocates* (pp. 112-114). Berkeley, CA: Berkeley Media Studies Group. Available at [www.bmsg.org/documents/YellowBookrev.pdf](http://www.bmsg.org/documents/YellowBookrev.pdf).

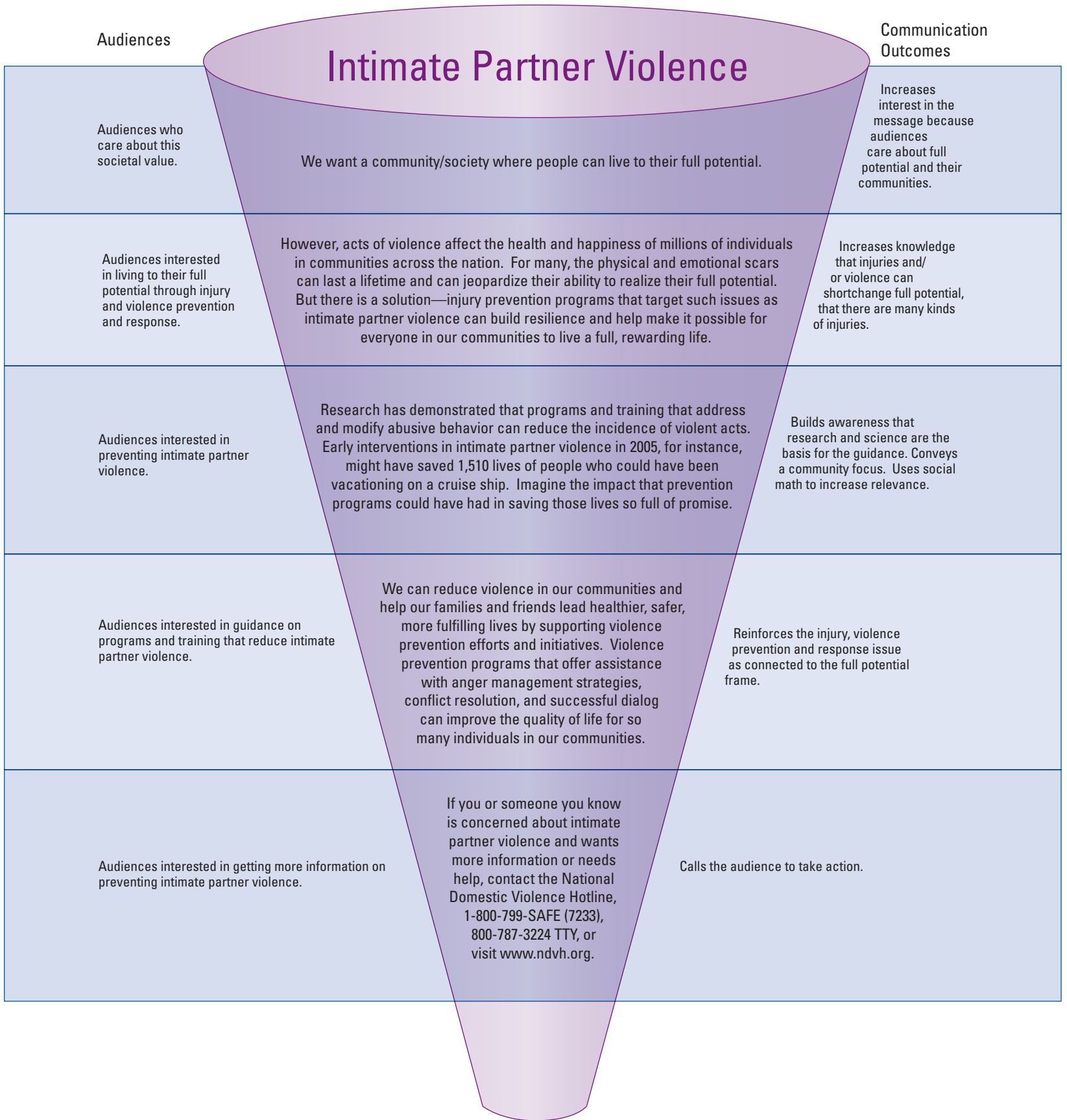
What do messages funnels look like? The following are funnels developed for injury-specific messages. In addition to the specific message, notice the inclusion of the coordinated “full potential” message and the offering of a solution to preventing the injury. We encourage you to create message funnels for your injury issue and organization and share your work with others in the field.



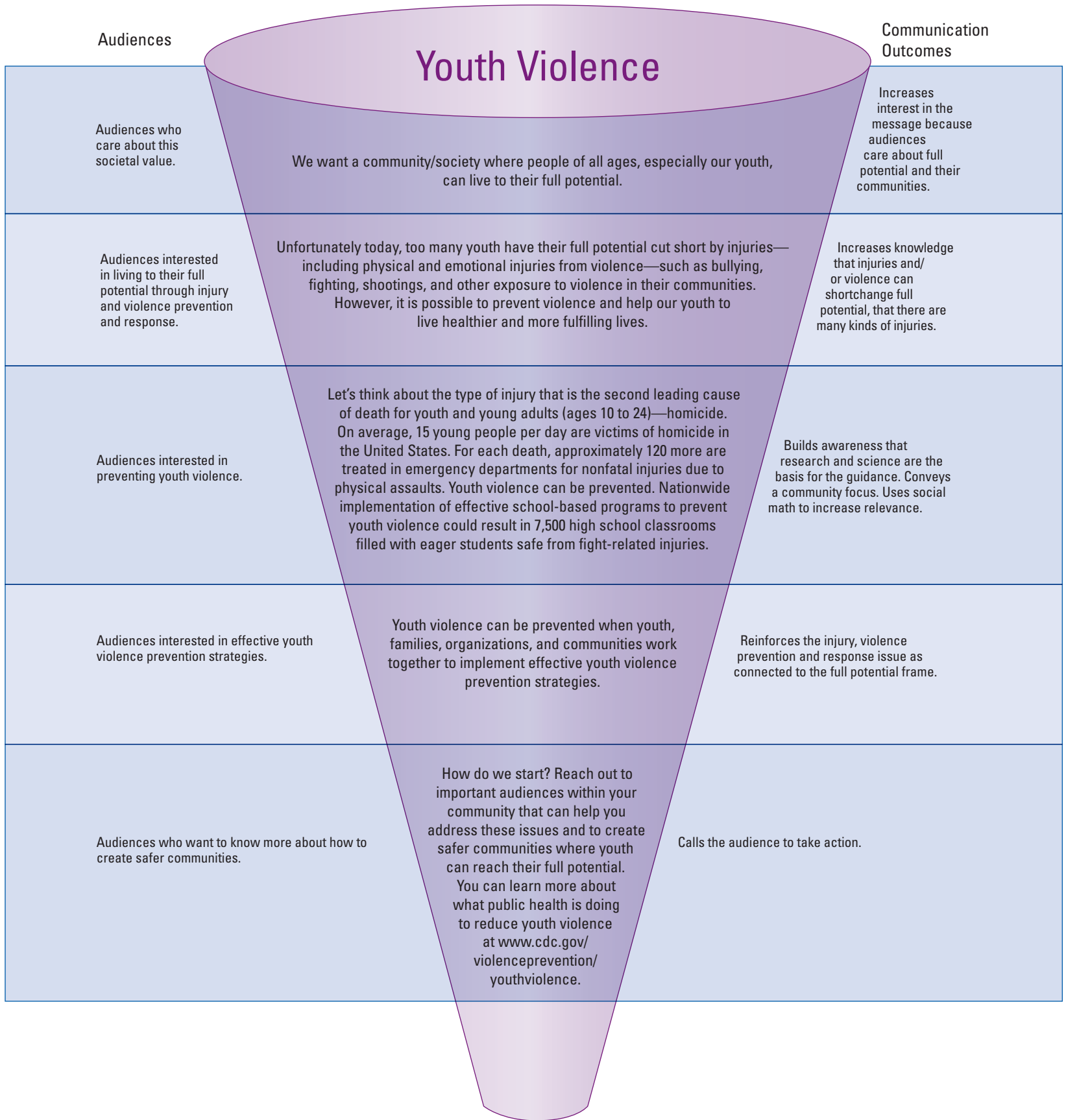


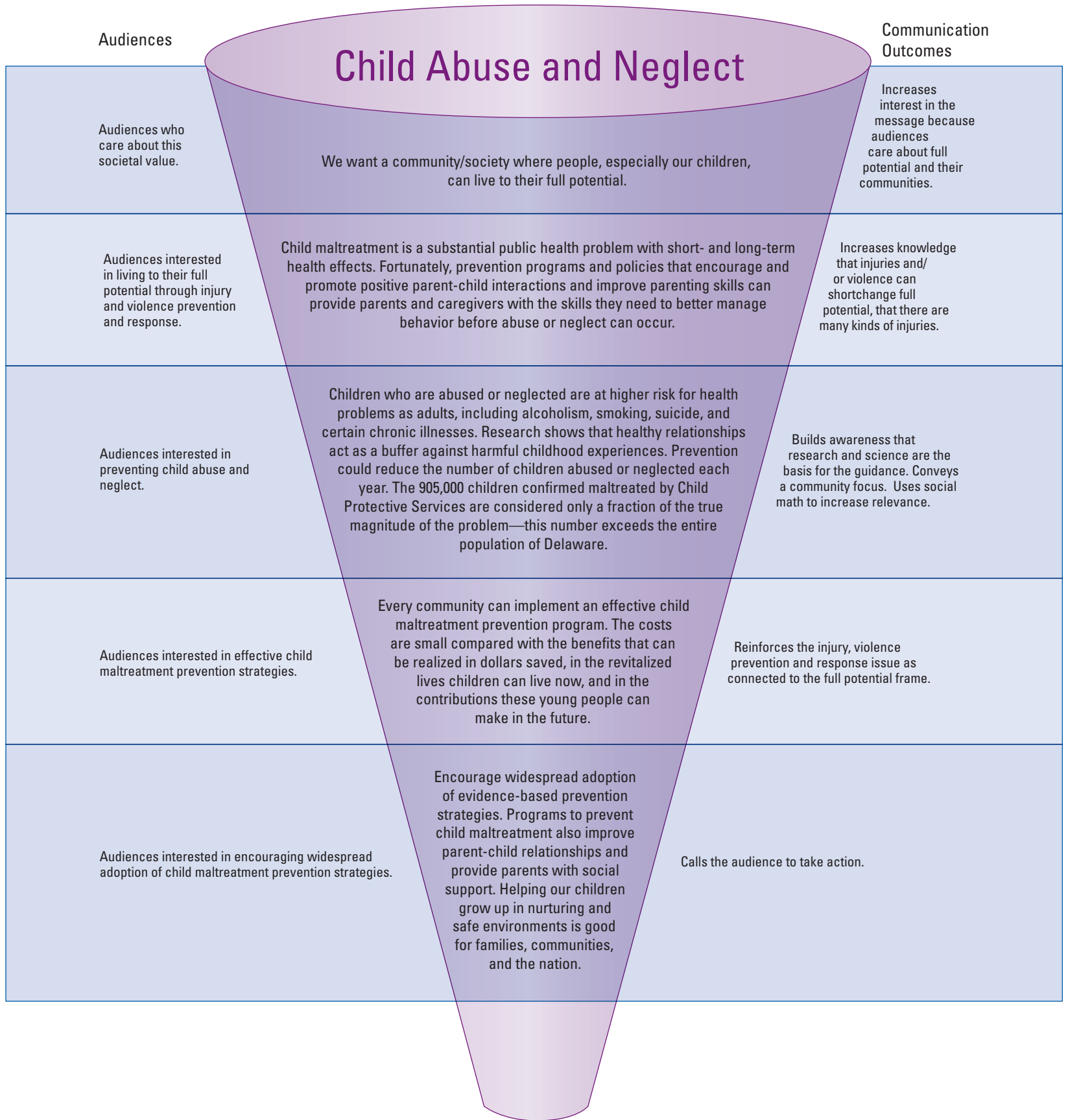


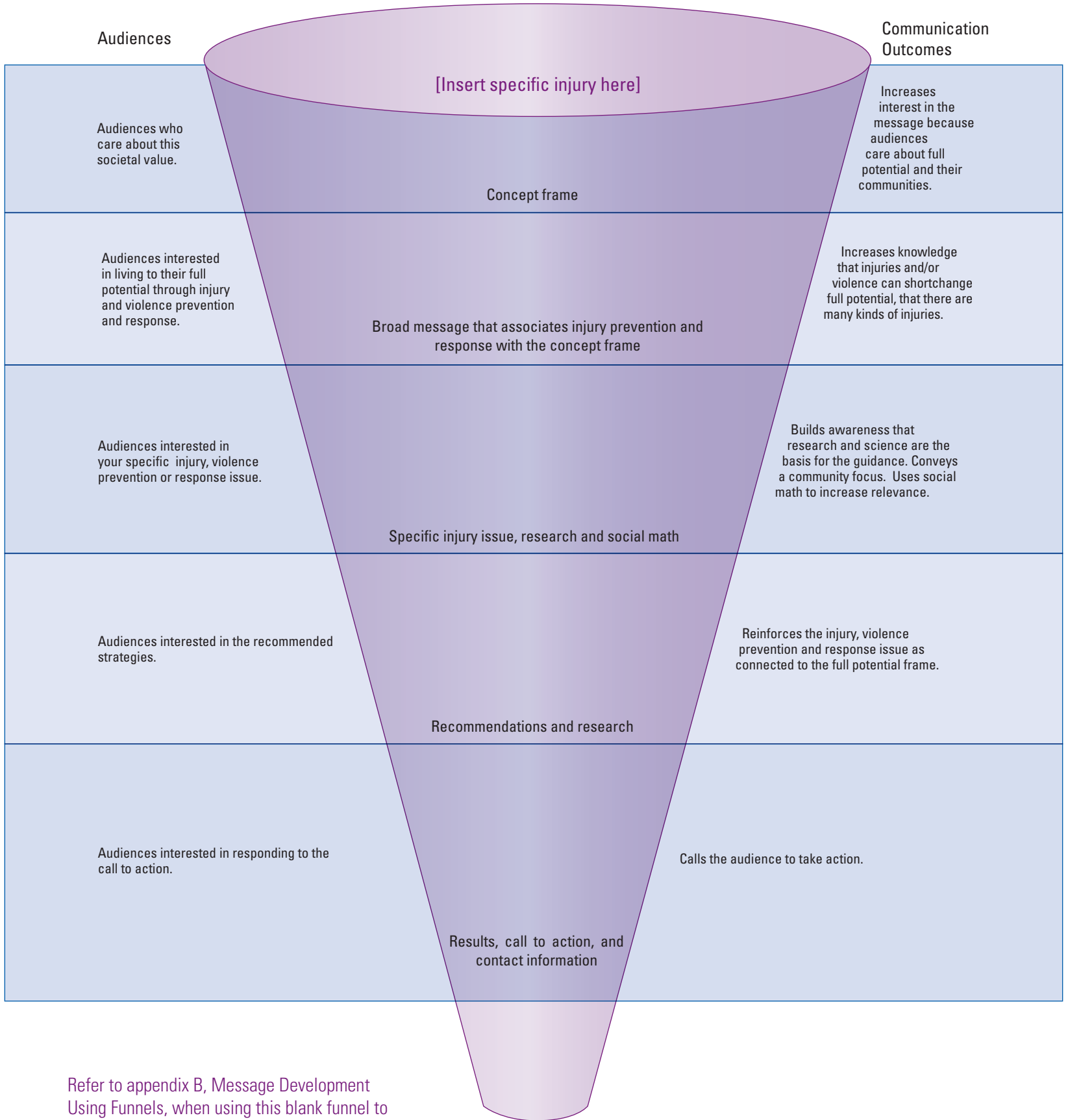












Refer to appendix B, Message Development Using Funnels, when using this blank funnel to develop your messages.

## Our Call to Action

The public sees and hears a variety of safety, health, and wellness messages every day. Still, many members of the public do not believe that injuries and violence are preventable if individuals and communities work together. Table 1 highlights some of the communication challenges of the injury and violence prevention field. By addressing the challenges through a coordinated frame, we help the injury field as a whole, and, when our overarching injury and violence prevention and response messages get through to a wider audience, we all benefit. The public becomes more aware of all that is “injury,” the injury field gains more visibility, and *we all benefit from positive responses that lead us toward living our lives to the fullest potential.*

To accomplish this vision and have a widespread impact, we need to take these actions:

- ◆ Use the “full potential” frame.
- ◆ Present the message points with words and images that resonate.
- ◆ Repeat these points across injury issues and audiences.

Let’s add power to our voices by using the framing approach.

## Appendix A

# Social Math

Social math is “the practice of translating statistics and other data so they become interesting to the journalist, and meaningful to the audience”<sup>4</sup>—it makes the statistics and numbers surrounding an issue meaningful to people by vividly communicating those numbers.

When combined with other frame elements, social math is a tool that can help guide people to think about the social and built environments surrounding the behavioral choices that individuals make. Social math helps messages resonate with the target audience by referencing or comparing the issue numbers to:

- ◆ Familiar numbers or costs (e.g., cost of car payment)
- ◆ Dramatic events (e.g., the number of residents displaced following Hurricane Katrina)
- ◆ Costs that are smaller and understandable (e.g., the program would cost less than the cost of a cup of coffee each day)
- ◆ Current numbers from other issues (e.g., it’s more than one-third of what we spend on prescription medication each year).

As an example, a message can state that over 1.6 million people experience a traumatic brain injury each year. That’s pretty abstract and gives the reader no comparison to things they know and understand in daily life. But if the message states that more people experience a brain injury than can fill Boston Red Sox’ Fenway Park 35 times, the reader then has some visual cue and dramatic reminder of the size of the problem. Without using social math, communicators will try to convey a lot of abstract numbers to people who are already overloaded with information.

Social math helps audiences remember important facts and helps those facts become more salient. It is critical to select a social math fact that is 100 percent accurate, visual if possible, dramatic, and appropriate for the target audience. Using a baseball social math fact for a target audience that doesn’t know about or connect with baseball would be ineffective. This guide has incorporated social math into a number of funnels so that you can see how to use social math facts for different issues.

<sup>4</sup>Dorfman, L., Woodruff, K., Herbert, K., & Ervice, J. (2004). *Making the case for early care and education: A message development guide for advocates* (pp. 112-114). Berkeley, CA: Berkeley Media Studies Group. Available at: <http://www.bmsg.org/documents/YellowBookrev.pdf>.

## Steps for Creating Social Math

### 1. Consider the Frame

Look at the selected frame and the research supporting it, and review the message testing research culminating in the final message. This is the main focus when developing the social math, so keep this frame in mind throughout. The frame we've developed for those who work in the field of injury is—"we want a society where people can live to their full potential."

To incorporate social math successfully into an overall communication strategy, look at what the research says the frame needs to accomplish. Social math can then help set a new frame by:

- ◆ Connecting two or more things together
- ◆ Comparing the size of things
- ◆ Functioning as a metaphor.

### 2. Consider Relevant Injury Examples

Consider specific, relevant injury examples that will resonate with the public and the media. Consider using injury issues, such as children's bicycle helmets, teenagers' drinking and driving incidents, child abuse and neglect, traumatic brain injury, falls among older adults, or motor vehicle crashes, which clearly reflect the value of the frame.

### 3. Consider Relevant Statistics for the Injury Issues<sup>5</sup>

It is critical that you select numbers that best support your goal and those that would be compelling. Keep the overall number of statistics you use in interviews, graphs, and other media-related materials to a minimum. Also use statistics in slide presentations, briefings, town meetings, podcasts, and other communication vehicles.

Begin by selecting 5 to 10 key statistics that are related to the point you are trying to prove. As you will see below, these could be about the number of injuries, morbidity, mortality, funding, personnel or time spent on the issue, or almost anything as long as it relates back to the frame. Begin by focusing on the numbers of people, injuries, fatalities, or hours, rather than percentages, which can be more difficult to translate into social math.

- ◆ *Break the numbers down by time.*

If you know the amount over a year, what does that look like per hour? Per minute? For example, the average annual salary of a childcare worker nationally is \$15,430, roughly \$742 per hour. While many people understand that an annual salary of \$15,430 is low, breaking the figure down by the hour

<sup>5</sup>Dorfman, L., Woodruff, K., Herbert, K., & Ervice, J. (2004). *Making the case for early care and education: A message development guide for advocates* (pp. 112-114). Berkeley, CA: Berkeley Media Studies Group. Available at: <http://www.bmsg.org/documents/YellowBookrev.pdf>.

reinforces that point—and makes the need for some kind of intervention even more clear.

- ◆ *Break down the numbers by place.*

Comparing a statistic with a well-known place can give people a sense of the statistic's magnitude. For instance, approximately 250,000 children are on waiting lists for childcare subsidies in California. That's enough children to fill almost every seat in every Major League ballpark in California. Such a comparison helps us visualize the scope of the problem and makes a solution all the more imperative.

- ◆ *Provide comparisons with familiar things.*

Providing a comparison to something that is familiar can have great impact. For example, "While Head Start is a successful, celebrated educational program, it is so underfunded that it serves only about three-fifths of eligible children. Applying that proportion to social security would mean that almost a million currently eligible seniors wouldn't receive benefits."

- ◆ *Provide ironic comparisons.*

For example, the average annual cost of full-time, licensed, center-based care for a child under age 2 in California is twice the tuition at the University of California at Berkeley. What's ironic here is how out of balance our public conversation is. Parents and the public focus so much on the cost of college when earlier education is dramatically more expensive.

- ◆ *Localize the numbers.*

Make comparisons that will resonate with community members. For example, saying, "Center-based childcare for an infant costs \$11,450 per year in Seattle, Washington," is one thing. Saying, "In Seattle, Washington, a father making minimum wage would have to spend 79 percent of his income per year to place his baby in a licensed care center," is much more powerful because it illustrates why it is nearly impossible.

#### 4. Finding Useful Comparison Statistics

Once you have an idea of what you want to say and how you want to say it, you will need to complete the cycle by filling in useful comparisons from outside the field of injury research. Avoid controversial topics for your comparison, including politics, crime, other health issues, or anything that could get twisted out of context. For example, one way to highlight a large amount of money is to compare it with the amount currently being spent on your issue.

#### 5. Fact Checking and Polishing for Presentation

Put all the pieces together in a simple, seamless statement, which clearly demonstrates your position. Double check the statistics for the comparison data.

Have the data and formulas you used available for reference when presenting the social math examples.

Run your social math example by colleagues to make sure it is clear, compelling, and unoffensive. Ensure that your numbers have a strong scientific basis and do not detract from your point or damage your credibility. Pay careful attention to the accuracy of the claims you are making. If you are using math for advocacy, you must be able to understand and defend the data and the way you are presenting the information.

### Five Lessons for Using Numbers More Effectively

#### 1. Unless numbers are married to a story, they are unlikely to mean anything to the public.

- ◆ Provide the meaning first and then use the numbers to support that meaning.
- ◆ What is the organizing principle or frame that the numbers support?

#### 2. Too often, numbers are used to tell one story—crisis.

- ◆ The crisis frame incapacitates people and does not engage them in fixing the problem.
- ◆ Often the crisis frame describing a big problem is followed with a small solution, which seems meaningless or futile.
- ◆ Ask instead, “What is the story that our numbers could be used to tell that allows people to see solutions?” Think “David and Goliath” (little triumphing over large) or the “Little Engine that Could” (succeeding in the face of great adversity).

#### 3. Social math unifies the narrative and the numbers.

- ◆ Provide the framing cues that are missing in the raw numbers. For example, “Community residents near a gasoline refinery noted that the plant emits 6 tons of pollutants per day— or 25 balloons full of toxic pollution for each school child in the town.”
- ◆ By explaining one number in terms of another, the problem gets defined—pollutants (the issue) are “about” health and what’s at stake is our children (advocacy).
- ◆ Make sure you choose the right value for your comparison (can backfire otherwise). For example, “Americans spend more on pet food than on helmets and body protection equipment.”



#### 4. Use numbers to support causal stories.

- ◆ Outline the story your numbers need to support as a chain of events in which the influences of each are apparent. For example, “Sea levels rise because our cars are pumping more carbon dioxide into the air, fish die in the oceans, and the food chain is disrupted. Here are the facts [insert math facts and statistics to support your statements above]. And here’s how it could work differently.”
- ◆ Simple causal sequences are important in helping people understand context, human impacts, prevention, and the efficacy of solutions.

#### 5. Uninterpreted numbers tell a story of random mayhem.

- ◆ Random mayhem means that there is no room for human causality, prevention, or government responsibility.
- ◆ Use numbers to describe what could have been done to prevent the problem.
- ◆ Relating just the facts or the numbers does not inspire obligation from your reader to take action.

## Social Math Examples

*These injury-specific social math facts were developed by CDC’s National Center for Injury Prevention and Control Division of Injury Response:*

### Acute Care

- ◆ “Each year, U.S. emergency departments treat more than 30 million nonfatal injuries. That is more than the populations of Montana, Nevada, New Mexico, and Texas combined.”
- ◆ “If you are severely injured, getting care at a Level I trauma center can reduce your risk of death by 25 percent. For every 100,000 people who are severely injured, 2400 lives can be saved.”

### Traumatic Brain Injury

- ◆ “As many as 3.8 million sports- and recreation-related concussions occur each year in the United States. That’s enough people to fill the 2008 super bowl stadium more than 50 times.” (University of Phoenix Stadium capacity is 73,719.)
  - ❖ Or, “That’s equal to the current population of Oregon.”
  - ❖ Or, “That’s equal to the current population of Los Angeles.”
- ◆ “More than 1.6 million people are seen in an emergency department, are hospitalized, or die from a traumatic brain injury in the United States each year. That’s more than the number of people who live in the cities of Baltimore, MD, Washington, DC, and Richmond, VA combined.”

### Alcohol Screening and Brief Intervention

- ◆ “In the United States, the third leading cause of preventable death and the leading risk factor for serious injury is alcohol misuse. It accounts for more than 75,000 deaths annually—one death every 7 minutes.”

*These injury-specific social math facts were developed by CDC’s National Center for Injury Prevention and Control, Division of Unintentional Injury Prevention:*

### Falls Prevention

- ◆ “Based on 2005 mortality data, every 35 minutes an older adult dies from a fall-related injury.”
- ◆ “Every day 5,000 adults age 65 and above are hospitalized due to fall-related injuries.”

### Motor Vehicle Injury Prevention

- ◆ “Every 15 minutes, a 16- to 19-year-old teen is admitted to an emergency department because of motor vehicle crash-related injuries.”
- ◆ “Every day, an average of 12 teenagers between ages 16 and 19 die as a result of a motor vehicle crash.”
- ◆ “Only 1 in 10 teens buckles up when riding in a vehicle with someone else. Teenagers’ passengers are less likely to wear their safety belts than any other age group.”

### Fire Injury Prevention

- ◆ “People who don’t have working smoke alarms in their homes are twice as likely to die in a fire than those with working alarms.”

*These violence-specific social math facts were developed by CDC’s National Center for Injury Prevention and Control, Division of Violence Prevention:*

### Violence Prevention

- ◆ “Nationwide implementation of effective school-based programs to prevent youth violence could result in 187,000 fewer fight-related injuries among high school students. That’s equivalent to nearly 7,500 classrooms of students.”
- ◆ “Over 5 percent of high school students report missing school at least once in the past 30 days because of safety concerns. This is the equivalent of approximately 25,000 classrooms of high school students missing school because of fear.”
- ◆ “Each year over 91,000 infants less than 1 year old are victims of substantiated child maltreatment. If we were to place these infants’ cribs end-to-end, the line of cribs would stretch for 78 miles.”

- ◆ “The number of homicide victims in the United States each year could fill 32 Boeing 747 airplanes. Can you imagine how much concern there would be if 32 airplanes fell out of the sky in the U.S. in a given year?”
- ◆ “If all low- income families in the United States received nurse home visitation services, 300,000 cases of child maltreatment could be prevented each year.”
- ◆ “There are over 32,000 suicides each year in the United States—this means that there is a suicide every 16 minutes.”

**The following are general social math facts:**

- ◆ “In 1969, for many students, walking to school was as easy as walking down the street because their school was in their neighborhood. By 2001, most schools were farther away from their students, and walking or biking to school was the equivalent of doing a 5K race or more— twice a day.”
- ◆ “Exercise is something that children need every day, but half of all students attend schools that have reduced their physical education class to just 1 or 2 days per week. Part-time fitness is no more effective than part-time reading or math instruction.”
- ◆ “Coca-Cola and Pepsi alone spend 100 times more on advertising than the Federal *Fruits & Veggies—More Matters* healthy diet campaign.”
- ◆ “Between 1971 and 2002, the Trust for Public Land’s work in cities resulted in the acquisition of 532 properties totaling 40,754 acres. That’s like adding park space equivalent to 326,000 soccer fields. What a terrific opportunity to engage in healthy activities that influence one’s full potential.”
- ◆ “In 1991, U.S. college students consumed 430 million gallons of alcoholic beverages per year at a cost of \$5.5 billion. Enough alcohol was consumed by college students to fill 3,500 Olympic-size swimming pools, about one on every campus in the United States.”
- ◆ “In 1991, U.S. college students consumed 430 million gallons of alcoholic beverages per year at a cost of \$5.5 billion. The overall amount spent on alcohol per student exceeded the dollars spent on books and was far greater than the combined amount of fellowships and scholarships provided to students.”
- ◆ “The alcohol industry spends more than \$2 billion every year to advertise and promote consumption. This amounts to approximately \$225,000 every hour of every day.”
- ◆ “Health benefit costs of the employees who build tractors costs more than the steel that goes into a tractor.”

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## Appendix B

# Message Development Using Funnels

Funnels can be used as tools to aid the development of your injury-specific messages. Funnels provide visual and directional prompts to help you create effective messages designed to engage your audience. Use funnels as tools for message development to make it easier to create messages that will have greater impact.

Use the funnels to help you develop a variety of messages to include elevator speeches, brochures, press releases, backgrounders for media kits, speeches, press conference announcements, and Web pages.

Funnels are also convenient visual aids to help explain framing and a new method of developing messages designed to attract and engage a broader audience while increasing awareness and education about the injury. By looking at two or three funnels contained within this guide, one can see various ways messages can be developed to achieve the end result.

## Visual Representation of Funnels

We want to attract more people into being interested in injury and violence prevention issues by first connecting these issues to a strongly held value. Placement of this value within the message should attract many not usually interested in messages about injury and violence prevention.

A message starts broadly at the top of the funnel and becomes more specific to a particular injury – and to a particular audience – as the message works its way from top to bottom. The narrowing of the funnel shape is a visual reminder that your message must speak more directly and succinctly about the issue while using techniques (see social math appendix) to retain the maximum audience interest through to the end or bottom of the funnel. The use of framing<sup>6</sup> and the evolution of a message through the funnel are designed to capture and retain a larger audience compared to unframed messages written for general audiences or audiences already attracted to information about a particular topic.

<sup>6</sup>Concept frames are similar to what FrameWorks Institute calls level one frames.  
<http://www.frameworksinstitute.org>

## Sections of Funnels

Funnels are divided into five sections. While it is not necessary to develop long messages, they should contain certain components to be effective.

1. **Concept frame** - The overarching message is broad to attract the widest audience. The first section at the top of the funnel contains the cultural value or “full potential” frame. “We want a society where people can live to their full potential” speaks to everyone. This can be modified to include mention of the broad injury issue or populations vulnerable to the injury. This broad statement has attracted an audience that is now poised to hear more of your message.
2. **Broader message to finer message** - As the message speaks more specifically about a particular injury or injury issue, keeping the audience engaged is important. The second section of the funnel relates the societal value of believing that everyone should be able to achieve their full potential to injury and violence prevention and response. Creating this link may make some members of the audience more open to receiving more specific messages about specific injury, violence prevention, and response programs, policies, and initiatives.
3. **Specific injury issue and social math** - The third section of the funnel identifies the specific injury, its influence on people’s lives and the size and scope of the injury or violence issue. This is where social math comes into play. Social math is “the practice of translating statistics and other data so they become interesting to the journalist, meaningful to the audience”<sup>7</sup>—it makes the statistics and numbers surrounding an issue meaningful to people by vividly communicating those numbers.

Since very large numbers or statistics are often overwhelming and difficult to make relevant to an audience, social math is used to present information in a more relevant manner by providing the audience with a mental picture of an injury statistic. (See appendix A – Social Math for additional information)

4. **Recommendations and research** - This section offers specific recommendations and protective actions one can take to prevent injuries. Make statements regarding any research to support the use of protective actions or information. The audience wants to know that there is something they can do and that “accidents” don’t just happen. To change the frame of injury, we must change the way the public considers their participation in preventing injuries. Although not all injuries are preventable or predictable, many can be influenced by policies, community initiatives, and personal and societal responsibility.

<sup>7</sup>Dorfman, L., Woodruff, K., Herbert, K., & Ervice, J. (2004). *Making the case for early care and education: A message development guide for advocates* (pp. 112-114). Berkeley, CA: Berkeley Media Studies Group. Available at: <http://www.bmsg.org/documents/YellowBookrev.pdf>.

5. Results and contact information - By the end of the message, the audience is more knowledgeable about the injury, its impact on family and friends and, whenever possible, actions to take to influence the potential for the injury. The final statements here should refer back to how changes in the perception and understanding of injury can play a positive role in helping us reach our full potential. Depending on the message or call to action, and anticipated audience response desired, include a website and phone number of an organization to contact for additional information about the injury.

### Guides for Crafting Message Evolution – Audiences and Communication Outcomes Sidebars

The prompts in the left and right margins are directional notes to guide you, the writer, as you develop the content within each section of the funnels. The section descriptions above outline the type of content to include in each section to ensure your message contains elements to keep your audience engaged until the end of the message. Jot your audience and message focus needs in the sidebars. Under “Audience,” identify your targets and the narrower segments of this audience you want to retain as the message becomes more specific. Do the same for outlining your “Communication Outcomes” in the other sidebar. Creating these sidebar guides will help you organize your message development and can serve as a checklist as you write your message.



## Appendix C

# Formative Research

The frame developed for this publication was created from discussions with injury communication professionals and was tested through focus groups with members of the public. CDC's Injury Center sought to identify an overarching message frame that individuals and organizations involved in injury and violence prevention and response would be willing to use and that would also resonate with the public.

In focus groups conducted by CDC's Injury Center and the Hawaii State Department of Health, members of the public reviewed and provided feedback on the messages. The groups were intended to identify the frame that would have the greatest impact and the messages that would support the frame. These focus groups offered the opportunity to see and hear the immediate reactions to the proposed messages and then probe for reasons behind these reactions. We listened carefully to the thoughts, opinions, and experiences of the participants, which, in turn, provided insight into how the messages would be received and ultimately how they might motivate behavior change or action.

CDC's Injury Center believes more research is needed with members of the public to provide a greater depth of understanding about how this message frame can be used effectively across the breadth of injury and violence prevention issues. Those interested in conducting focus groups should consider the guidelines described below.

Recruitment of participants will require development of eligibility criteria and a recruitment screener. It may be that focus group participants should reflect the general population so that the screening results in participants who represent a broad spectrum of racial and ethnic populations and educational and income levels. Research that focuses on audiences susceptible to, or particularly concerned with, an area of injury or violence prevention will also be important.

The moderator guide should include a variety of open-ended questions that explore reactions to the frame and the messages being tested. The questions below provide examples of the type of information you are trying to gather:

- ◆ What does this message mean to you?
- ◆ What is clear or unclear about this message?
- ◆ Tell me how this message gets you to think more about injuries and how they can be prevented and responded to. What part specifically?
- ◆ How well do you think these different messages convey the value statement of wanting to live in a society where people can live to their full potential?

- ◆ Which one of the messages elicits the greatest emotional reaction?
- ◆ Tell me about the message you prefer.
- ◆ Tell me about the message, if any, you dislike?
- ◆ Tell me about the part of the message you can relate to the most.
- ◆ Tell me about how the message makes you want to get involved in doing something about injury in your community or in your home. Which parts specifically?
- ◆ This message suggests different benefits of living in a society where individuals can live to their full potential. Which message provides the most valuable benefit to you? To your community?

To take full advantage of the opportunity to hear from participants, a professionally trained moderator and a note taker should be engaged for each group. Focus groups should be audio-recorded and, if possible, transcribed so researchers can review the actual words spoken in their analysis of themes and development of findings.

So that everyone working to develop coordinated messages on injury and violence prevention and response can improve communication, researchers are encouraged to share their findings.



U.S. Department of Health and Human Services  
Centers for Disease Control and Prevention  
National Center for Injury Prevention and Control  
[www.cdc.gov/Injury](http://www.cdc.gov/Injury)

*We Want a Society Where People Can Live to Their Full Potential.*