



## Bringing Data to Communities: Bridging the Gaps

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## Disclaimer

The findings and conclusions in this presentation are those of the author and do not necessarily represent the views of the Centers for Disease Control and Prevention.

## Possible Barriers - Epidemiologist

- Not knowing who to contact
- Lack of support to work with stakeholders
- Lack of funding, time, or resources to travel
- Internal politics
- Unaware or misinformed about what communities need

## Possible Barriers – Community

- Lack of trust
- Perception of top-down approach
- Data may not reflect community priority, value, or culture
- Lack of ownership and buy-in
- Data presented are too technical
- May not know how to articulate community data needs

## Not Everyone Understands Health Information

- ❑ Health literacy: obtain, communicate, process, and understand basic health information and services to make appropriate health decisions
- ❑ Results from National Assessment of Adult Literacy
  - 12% of U.S. adults have proficient health literacy levels
  - Over 1/3 of U.S. adults have trouble with common health tasks
  - Anyone can have limited health literacy skills—regardless of education level

# Not Everyone Understands Numbers

- ❑ Health literacy skills  $\neq$  numeracy skills
  - Numeracy: ability to understand and use numbers
- ❑ Half of population has problems with simple numeric tasks
- ❑ People can retain 7 ( $\pm 2$ ) new pieces of information at a time
- ❑ More data  $\neq$  increase argument strength

White RO, Wolff K, Cavanaugh KL, Rothman R. Addressing Health Literacy and Numeracy to Improve Diabetes Education and Care. *Diabetes Spectr.* 2010 October 2; 23(4): 238–243.

Nelson DE, Hesse BW, Kwon HT. Making data talk. Presented at the 2010 Joint Conference of SOPHE and Prevention Research Centers Program. Available from <http://www.sophe.org/Sophe/PDF/2010%20MY/Precon3.pdf>

Peters E, Hibbard J, Slovic P, Dieckmann N. Numeracy skill and the communication, comprehension, and use of risk-benefit information. *Health Aff (Millwood)*. 2007 May-Jun;26(3):741-8.

# Aspects of Bringing Data to Communities

## ❑ Building trust

- Engage community from the beginning
- Understand community context

## ❑ Analyze and interpret data

- Consider additional information to understand the data (i.e., what in the community could have influenced the rates)
- Engage community members

## ❑ Present Data

- Meaningful context
- Simple and concise
- User-friendly format

## Building and Maintaining Trust

- Engage stakeholders from the beginning
- Understand community ( i.e., person, place, and time)
- Create safe space to allow candid conversation
- Build trust
- Maintain trust
- Don't over-promise
- Balance community needs with maintaining scientific accuracy and quality

## Analyzing Data



## Making Sense of Data – Understand the Context

- Step out of your comfort zone
- Okay to say what you know and what you are not sure about
- Engage community in understanding the data
- Epidemiologist + Communities = Effective Team
- Facilitate interpretation of data
- Pay attention to the community context along the way
- Consider additional information (i.e., news, blog, programmatic information)
- Ask questions

## Communicating Information

- ❑ Purpose: Why share the data? What is the objective?
- ❑ Audience: Who? Where?
- ❑ Meaning: So what? Why should I care?
- ❑ Channel/Format: How does the audience prefer to get data or information?
- ❑ Timing: When to communicate/share?

## Considerations for Communicating Data

- ❑ Use frequencies instead of percentages or ratios
- ❑ Give absolute risk instead of relative risk
- ❑ Use consistent time frames and denominators
- ❑ Present pictures not just numbers
- ❑ Keep it simple and clear—limit to 1-2 data points
- ❑ Give important information first
- ❑ Limit the number of messages

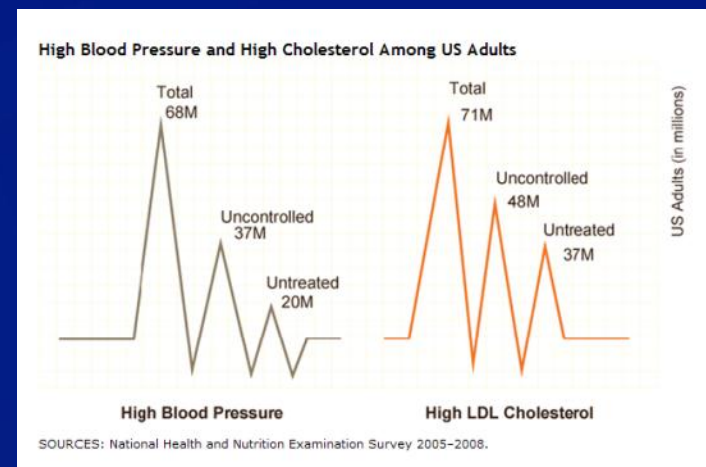
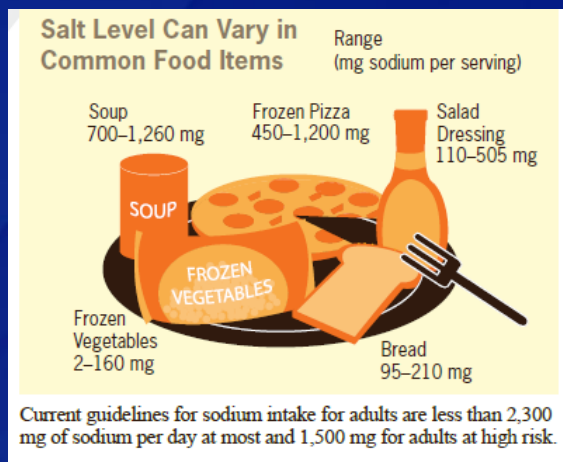
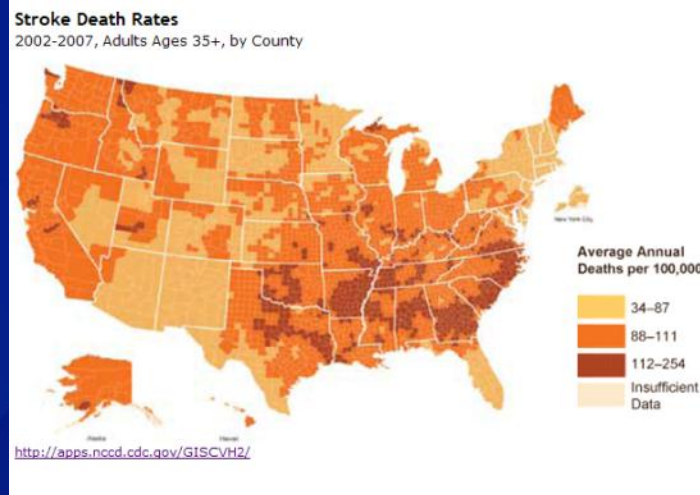
Fagerlin A. Making Numbers Count: Communicating Numerical Information When Numeracy and Emotions Interfere. Presented at the Cancer Communication: State of the Science and Practice Conference. Available from <http://www.cancercommunicationconference.com>

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Centers for Disease Control and Prevention. Simply put: A guide for creating easy-to-understand materials (3<sup>rd</sup> edition). Atlanta, GA : U.S. Department of Health and Human Services; 2010. Available at [http://www.cdc.gov/healthliteracy/pdf/Simply\\_Put.pdf](http://www.cdc.gov/healthliteracy/pdf/Simply_Put.pdf)

## **Examples of Communicating Information**

# Charts, Figures, and Maps From CDC Vital Signs



# Brochures and Fact Sheets

## SALT STATS



### Salt in Our Diets

- 90 percent of the sodium we eat comes in the form of salt.<sup>1</sup>
- 77 percent of a person's salt intake comes from restaurant or processed food; only 6 percent is added at the table and only 5 percent during cooking.<sup>2</sup>
- Many foods that contribute a significant amount of sodium in the diet do not taste particularly salty, such as breads and cheeses. Some of these foods are deceptively high in salt; others are lower in salt content but frequently consumed.

### Salt and Blood Pressure

- As sodium intake rises, so does blood pressure.<sup>3</sup>
- Nearly 68 million U.S. adults (1 in 3) have high blood pressure.<sup>4</sup>
- High blood pressure increases the risk for heart disease and stroke.<sup>4</sup>
- High blood pressure usually has no warning signs or symptoms, so many people do not know they have it.<sup>4</sup>
- 1 in 2 adults with high blood pressure does not have it under control, and 1 in 3 does not receive any treatment.<sup>4</sup>
- If all Americans followed the recommended limits for sodium, national rates for high blood pressure would drop by a quarter, saving tens of thousands of lives each year.<sup>4</sup>

### Recommended Sodium Limits

- The 2010 Dietary Guidelines for Americans recommend limiting sodium intake to 1,500 milligrams (mg) per day for people 51 and older, African Americans, and those who have high blood pressure, diabetes, or chronic kidney disease—about half the U.S. population and the majority of adults.<sup>5</sup>
- All others should reduce sodium intake to less than 2,300 mg per day.<sup>5</sup>
- Nearly all American adults consume more sodium than they need; most consume more than twice their recommended limit each day.<sup>6</sup>

### The Cost of Cardiovascular Disease

- Cardiovascular disease (CVD) includes heart disease, stroke, and other vascular diseases.
- CVD is the leading cause of death in the United States.<sup>7</sup>
- Every 39 seconds, an adult dies of CVD.<sup>8</sup>
- 1 in every 6 U.S. health care dollars is spent on CVD.<sup>9</sup>
- 800,000 U.S. adults die of CVD each year; 150,000 of them are younger than 65.<sup>9</sup>
- Reducing average population sodium intake to 1,500 mg per day may save \$26 billion health care dollars and reduce cases of hypertension by 16 million.<sup>9</sup>

National Center for Chronic Disease Prevention and Health Promotion  
Division for Heart Disease and Stroke Prevention



### Heart Disease and Stroke: The Nation's Leading Killers

Heart disease and stroke, the first and third leading causes of death for men and women, are among the most widespread and costly health problems facing our nation today, yet they also are among the most preventable. Cardiovascular diseases, including heart disease and stroke, account for more than one-third (33.6%) of all U.S. deaths.

In 2007, of all Americans who died of cardiovascular diseases, 150,000 were younger than age 65. Heart disease and stroke also are among the leading causes of disability in the United States, with nearly 4 million people reporting disability from these causes.

#### The Costs of Disease Are Staggering

Death rates alone cannot describe the burden of heart disease and stroke. In 2010, the total costs of cardiovascular diseases in the United States were estimated to be \$444 billion. Treatment of these diseases accounts for about \$1 of every \$6 spent on health care in this country. As the U.S. population ages, the economic impact of cardiovascular diseases on our nation's health care system will become even greater.

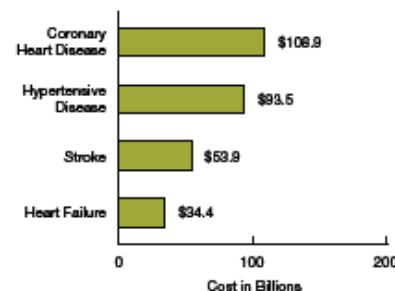
Overall, death rates for heart disease and stroke have decreased in the United States in recent decades. However, rates for incidence and death continue to be high, especially among some populations, including members of certain racial and ethnic groups, people with low socioeconomic status, and those living in the southeastern United States.

For example, age-adjusted death rates for cardiovascular disease are 37% higher among African Americans than among whites. The risk of having a first-ever stroke is nearly two times higher among African Americans than among whites. In addition, about 55,000 more women than men have a stroke each year. Recent studies show that the prevalence of heart disease and the percentage of associated premature deaths are higher among American Indians and Alaska Natives than among any other U.S. racial or ethnic group.

#### The Cost of Heart Disease and Stroke

- More than 1 of 3 (83 million) U.S. adults currently live with one or more types of cardiovascular disease.
- An estimated 935,000 heart attacks and 795,000 strokes occur each year.
- Nearly 68 million adults have high blood pressure, and about half do not have this condition under control.
- An estimated 71 million adults have high cholesterol (i.e., high levels of low-density lipoprotein cholesterol). Nearly 2 of 3 do not have this condition under control.

Estimated Direct and Indirect Costs of Major Cardiovascular Diseases, United States, 2010



Source: Heidebreich PA, Trogen JG, Khanlou GA, Butler J, Dracup K, Emmons MD, et al. Forecasting the future of cardiovascular diseases in the United States: a policy statement from the American Heart Association. *Circulation* 2011;123(5):935-944.

## Press Release

### Press Release

For Immediate Release: July 11, 2011

Contact: [CDC Media Relations](#)

(404) 639-3286

### High Sodium, Low Potassium Diet Linked to Increased Risk of Death *Change in Americans' diet necessary to lower risk*

Americans who eat a diet high in sodium and low in potassium have a 50 percent increased risk of death from any cause, and about twice the risk of death from heart attacks, according to a study published today in the Archives of Internal Medicine. The study was conducted by researchers at the Centers for Disease Control and Prevention, Emory University and Harvard University.

# Web Sites


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**Economic impact**

Heart disease and stroke – cardiovascular disease – cost the European Union €169 billion.<sup>1</sup> The most up to date costs nearly €310.23 billion in direct and indirect costs, €22.24 billion and HIV infections, €22.24 billion.<sup>2</sup>

The economic burden of heart disease is no longer limited to Saharan Africa, cardiovascular disease is the leading cause in prevalence of risk factors such as tobacco use and obesity.<sup>3</sup>

[CDC Home](#)



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**Overweight and Obesity**

**Overweight and Obesity**

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**Economic Consequences**

Overweight and obesity and their associated health problems have a significant economic impact on the U.S. health care system (USDHHS, 2001). Medical costs associated with overweight and obesity may involve direct and indirect costs (Wolf and Colditz, 1998; Wolf, 1998). Direct medical costs may include preventive, diagnostic, and treatment services related to obesity. Indirect costs relate to morbidity and mortality costs. Morbidity costs are defined as the value of income lost from decreased productivity, restricted activity, absenteeism, and bed days. Mortality costs are the value of future income lost by premature death.

**National Estimated Cost of Obesity**

The medical care costs of obesity in the United States are staggering. In 2008 dollars, these costs totaled about \$147 billion (Finkelstein, 2009).

**Related Resources**

[Vital Signs: Adult Obesity](#)

[The Health Consequences of Obesity](#)

**References**

Finkelstein, EA, Trogon, JG, Cohen, JW, and Dietz, W. Annual medical spending attributable to obesity: Payer- and service-specific estimates. *Health Affairs* 2009; 28(5): w822-w831.

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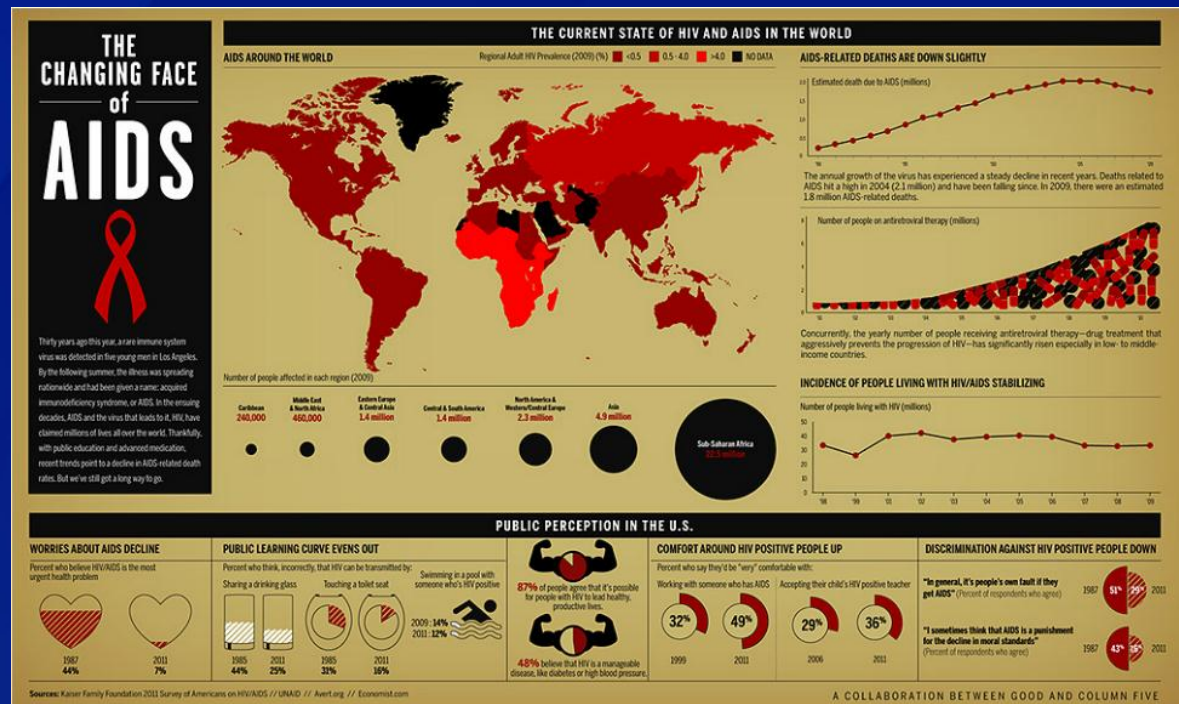
**Contact Us:**

 Centers for Disease Control and Prevention  
1600 Clifton Rd  
Atlanta, GA 30333

 800-CDC-INFO  
(800-232-4636)  
TTY: (888) 232-6348  
24 Hours/Every Day  
 [cdcinfo@cdc.gov](mailto:cdcinfo@cdc.gov)

# Other Success Story Formats

- ❑ Infographics
- ❑ Maps
- ❑ Photos
- ❑ Social Media

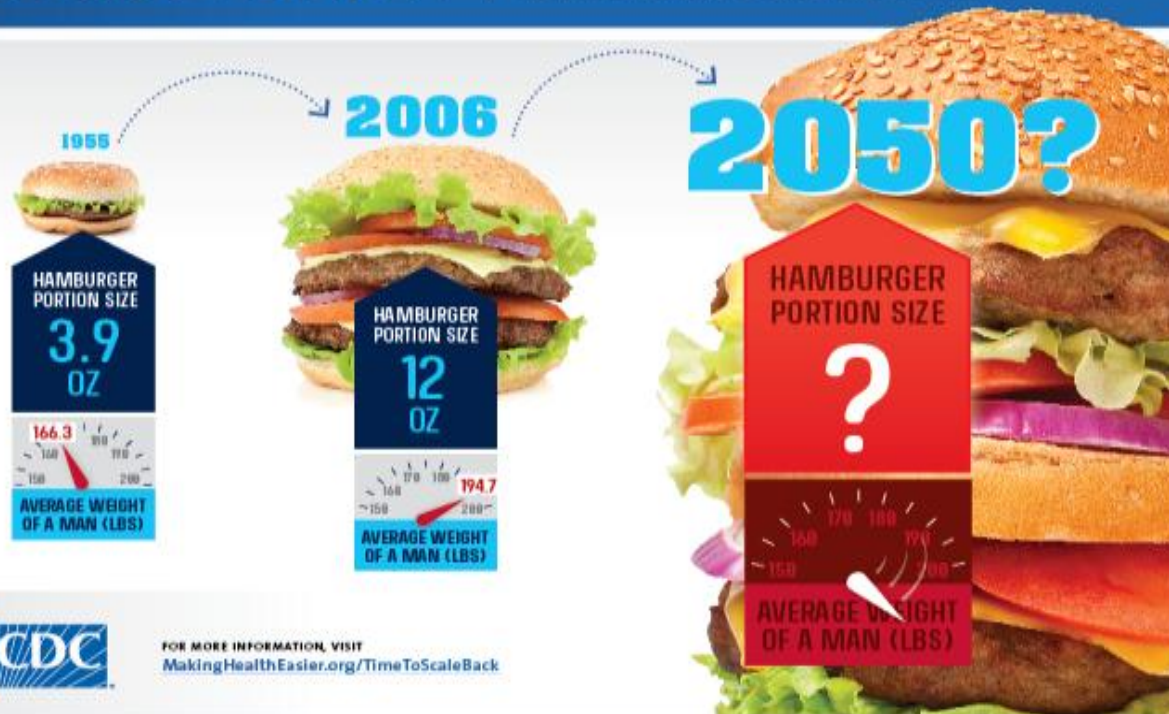


Good (2011). Infographic: The Successes and Failures of the Fight Against AIDS. <http://www.good.is/post/infographic-public-attitudes-about-aids/>

# Example of a CDC- Infographic

## TIME TO SCALE BACK

Portion sizes have been growing, so have we. Burgers today are three times bigger than they were in the 1950s, and men are, on average, 28 pounds heavier. At this rate, imagine the size of a burger in 2050! But, we can work together to make healthy living easier. Scale back when eating out by ordering the smaller portion, sharing with a friend, or eating half and taking the rest with you. And, ask the restaurant manager to offer smaller-sized options.



FOR MORE INFORMATION, VISIT  
[MakingHealthEasier.org/TimeToScaleBack](http://MakingHealthEasier.org/TimeToScaleBack)

### SOURCES

Young, L., & Nestle, M. (2002). The contribution of expanding portion sizes to the US obesity epidemic. *APPH*, 33(1), 246-49.

Young, L., & Nestle, M. (2007). Portion size and obesity: Response of fast food companies. *PHR*, 16(1), 298-49.

CDC, *Advance Data*, No. 343, Oct. 23, 2004.

CDC, *National Health Statistics Reports*, No. 16, Oct. 22, 2008.

## Some Considerations for Bridging the Gaps

- ❑ Person – Reach out as a person-listen, observe, ask questions, and be open to mutual learning
- ❑ Place – Experience, connect, understand
- ❑ Time – Time invested in building relationships and understanding community dynamics/context is time spent well