

Health Literacy

Part 3:

Designing Data Visualizations



Facilitators



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- 1 Introduction Facilitators & EPRC
- Learning Objectives
- Importance of Health Literacy
- **Q4** Creating Materials (review)
- Data Visualizations
- Designing Infographics
- Presenting Report/Article Summaries
- Recap & Resources







Emory Prevention Research Center

Partnering with communities and leveraging research to prevent cancer and promote health equity



Emory Prevention Research Center (EPRC) Core (CDC-funded) research focuses on cancer prevention & reducing health disparities related to chronic disease in **rural** communities

Based in the Department of Behavioral, Social, and Health Education, Rollins School of Public Health, with strong connections to Winship Cancer Institute

Funded by CDC from 2004-2014, and now again 2019-2024

Strong partnership in **southwest Georgia** since 2004, building on Cancer Coalition of South Georgia's (now called Horizons Community Solutions) Board of Directors for our **Community Advisory Board** initially and prior study on smokefree homes

Encourage and support SIP proposals to focus on southwest Georgia when appropriate







EMORY UNIVERSITY

ROLLINS SCHOOL OF PUBLIC HEALTH

Emory Prevention Research Center

About EPRC Research Evaluation Training Community Dissemination



RESEARCH

EVALUATION

TRAINING





COMMUNITY

DISSEMINATION



Welcome!

Welcome to the website for the Emory Prevention Research Center (EPRC). We are dedicated to improving the lives of Georgia residents by developing and testing innovative interventions. evaluating promising practices, and training practitioners on evidence-based practices to prevent cancer and other chronic diseases. We are located in Emory University's Rollins School of Public Health. Please take a moment to browse our website and learn more about the EPRC.



Partnering with communities and leveraging research to prevent cancer and promote health equity

Spotlight On

Abby Morales, a SurvivorLinkTM Summer Intern is spending the summer working with the EPRC. Abby is a great addition to the team and is focusing on caregivers of pediatric cancer survivors and young adults. Learn more about her here.

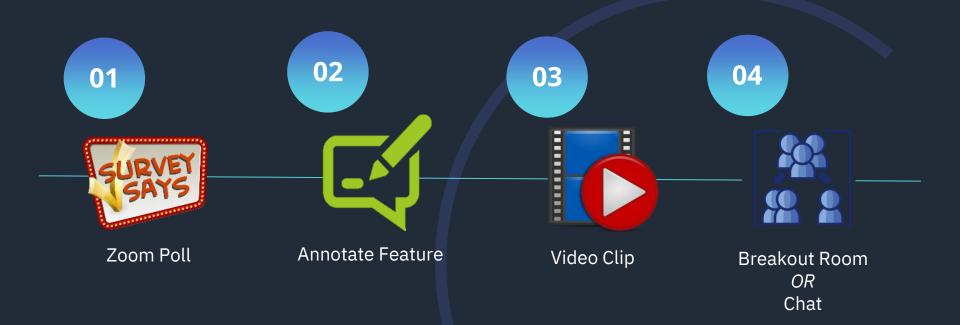


What's New?

July 18th on SaportaReport, Emory's Winship Cancer Institute Works to Bridge Racial Disparities in Cancer.



Training Symbols



Source: <u>clip-art-library.com</u>



Learning Objectives



Discuss the elements of an effective infographic



Create informative data visualizations



Describe userfriendly infographic software

Importance of Health Literacy

SURVEY

Which of the following is the strongest predictor of an individual's health status?

- A Age
- B Income
- C Health Literacy Skills

- D Employment Status
- **E** Education Level
- F Racial or Ethnic Group

What is Health Literacy?

"The degree to which individuals have the capacity to **obtain**, process, and understand basic health information and services needed to make appropriate health decisions."

The strongest predictor of an individual's health status

Low health literacy is more prevalent among:

Older adults

Minority populations

Medically underserved people

Those who have low socioeconomic status

Low health literacy is linked to...

Increased hospital stays and visits to the ER

Decrease in likelihood to follow treatment(s)

Avoidance of important medical tests

Absence or decrease in preventative health behaviors

Higher mortality rates

Poorer quality of life

Communicating the Message

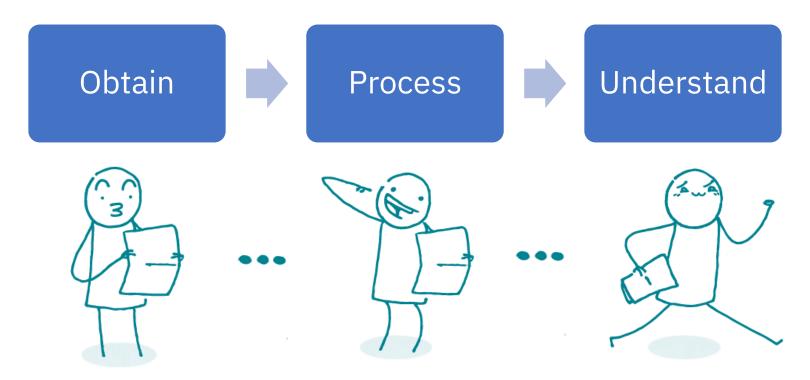
WHO am I communicating to?

WHY am I communicating the message?

WHAT do I want people to do with the information?

HOW is the message communicated?

The WHO Receiver (patient, client...)



Creating Materials

(Review)



Tips for Creating Successful Materials

Identify your audience

Create/use colorful graphics and visuals

Select a platform/canvas

Include white space

Write in active voice using plain language

Test for readability

Creating Materials: Formatting

Spacing

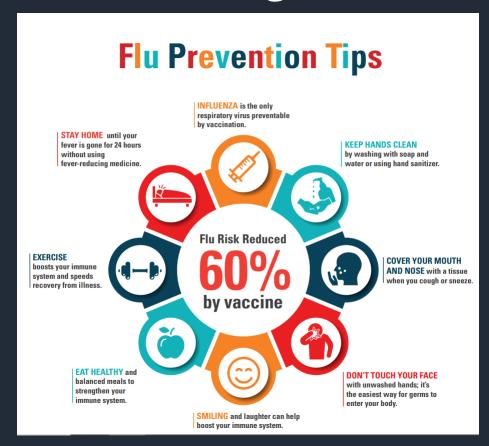
Color (page, text, images)

Images/Icons/Visuals

Flowcharts/Graphs/Data Visualizations

Font Size

Bold/Italic/Underline





Creating Materials: Words

Do not use Abbreviations & Acronyms

Bold/Italic/Underline Key Terms

Lay-friendly Vocabulary

Short Sentences & Sentence Structure



Creating Materials

Arrows

Titles

Highlights

Bullets

Chunking

Using Other Images to Scale

Layout

Design

Audience

Type of Handout (brochure, one pager, etc.)

Headings

Layout & Spacing

Chunking Information



Bullet Points

Source: (unknown)

Bullet Points

Children should get six shots by age 2:

- Measles, mumps, rubella
- Haemophilus influenzae type b
- Polio
- Diphtheria, tetanus, pertussis
- Hepatitis B
- Varicella

By age 2, children should get shots against measles/mumps/rubella; Haemophilus influenzae type b; Polio; diphtheria, tetanus, pertussis; hepatitis B; and varicella.

Source: Simply Put. CDC 2009

Data Visualization



Approximately what percent of information transmitted to the brain is visual?

A 60%

B 70%

C 80%

D 90%

Source: MIT_2014 2

What is Data gray Visualization?

"The representation of data through use of common graphics, such as charts, plots, infographics, and even animations."

"These visual displays of information **communicate complex data** relationships and data-driven insights in a way that is **easy to understand**."

Source: IBM-Data Visualization

Types of Data Visualizations



Source: Boost_Labs 24



Approximately how many times faster are visuals processes in the brain than text?

A 60X faster

C 6,000X faster

B 600X faster

D 60,000X faster

Human beings process visual information more efficiently than text

Source: MIT_2014 2

See for Yourself

Graphic Description

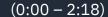
Textual Description



A plane figure with four equal straight sides and four right angles



The Joy of Stats





What's an Infographic?



(0:00-1:22)

Charts & Graphs

Font & Color

Facts & Statistics

Text & Sources

Visuals & Graphics

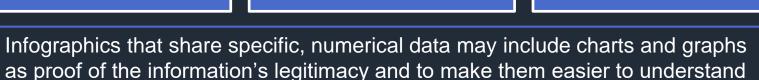
Layout & White Space

Charts & Graphs

Facts & Statistics

Visuals & Graphics

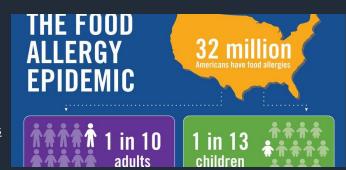
Charts & Graphs

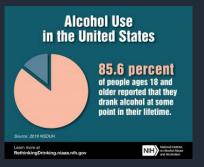






Infographics rely on facts and figures to drive the narrative to help readers understand the content and context. They also help viewers draw a conclusion about the presented information





Sources:

<u>Complete-Guide-to-Infographics</u>
<u>Food Allergy-Stats</u>
NIH-Alcohol Use



Many infographics use photos, illustrations, icons, or other visual elements to provide additional context and aesthetic design

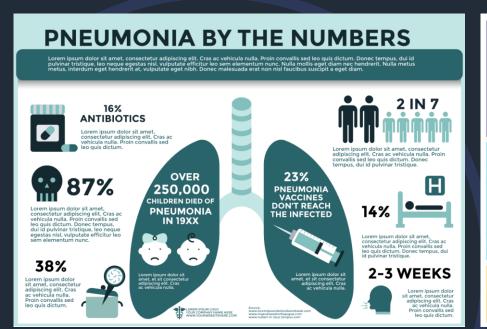


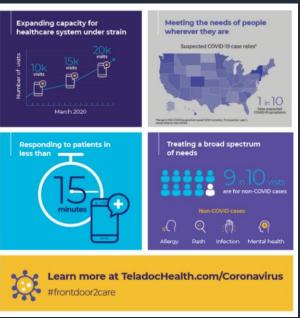


Complete-Guide-to-Infographics Beginner's Guide-Icon Graphics Healthcare-stock



Quantitative Infographics













Designing Infographics

Step-by-Step

- Define your audience
- Define your goals
- Gather your information
- Choose a type of infographic
- Create a logical hierarchy in your data
- Pick and customize a template that fits your message
- Download, share, or embed your infographic

6

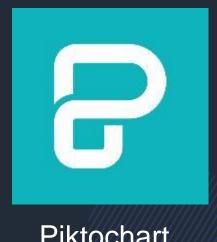
Infographic Software

PowerPoint	Canva	Piktochart	Lucid Chart	Visme
Infogram	Venngage	Easel.ey	Adobe Spark	Snappa
Animaker	BeFunky	Bitable	Mind the Graph	Freepik
Stencil	Ceros	DesignCap	Google Charts	Kartograph

Infographic Software







Piktochart









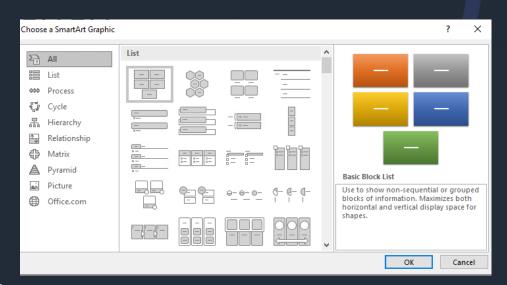
PowerPoint (Microsoft Word) has several features that will help you create infographics

Showcase Several Methods

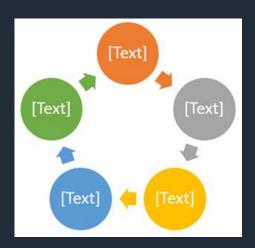
Practice with the Features

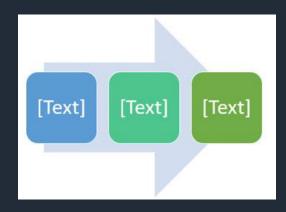
SmartArt

- It is a feature in PowerPoint to help us create fast graphics or communicate information using pre-defined templates
- SmartArt Graphic options:
 - List
 - Processes
 - Cycles
 - Hierarchy (org chart)
 - Relationship
- How to:
 - Click on Insert
 - Click on SmartArt under Illustrations (second box)

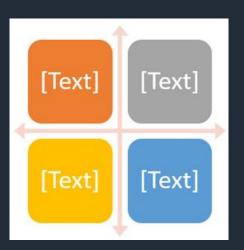


Some Examples

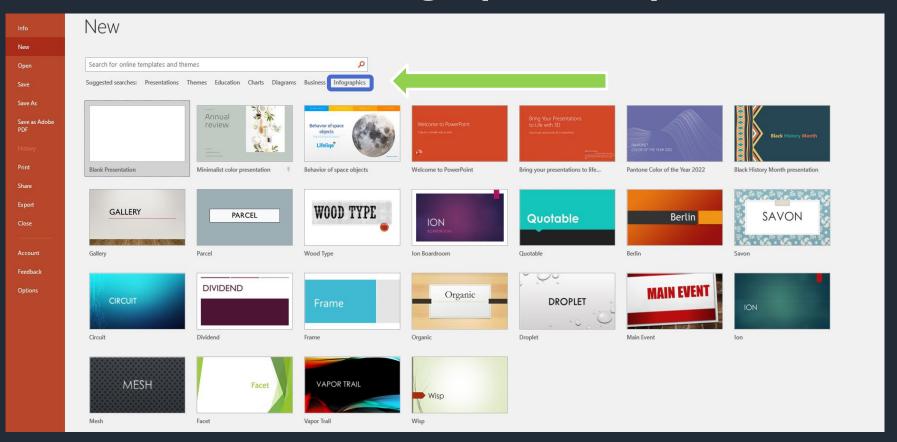




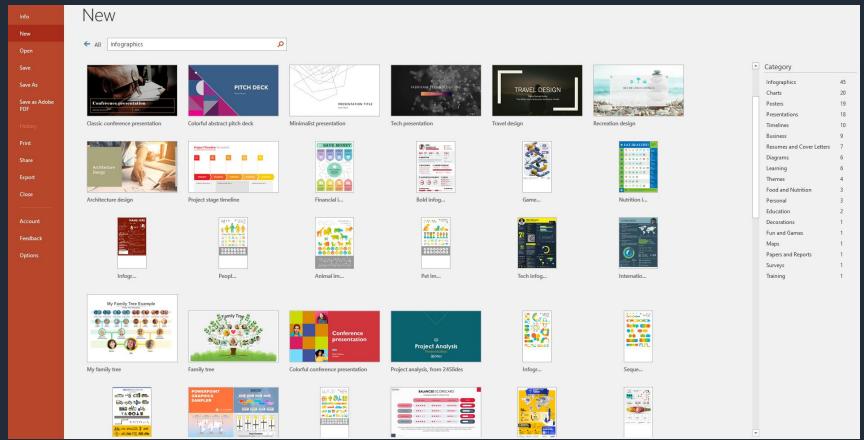




PowerPoint Infographic Templates



PowerPoint Infographic Templates



Infographic style

Editable template

Change headings and data



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O BIO

Birth Date 16 June 1990

Nationality Sweden

Location Kansas City, USA

EDUCATION

2007 School of Fine Arts
Lorem josum dolo sit amet

hendrerit in vulputate velit esse molestie consequat.

2010 Bellows College
Concentetur adipiscing elit

2015 School of Fine Arts
Sed do eiusmoa tempor

2018 Bellows College
Labore et dolore magna aliqua

CAREER TIMELINE

Contoso, Ltd.
 Junior Designer
 VanArsdel, Ltd.
 Senior Developer

2012 2013 2014 2015 2016 2017 2018 2019

Woodgrove Bank
Senior Designer

Relectoud
Art Director

8 COMPLETED PROJECTS

UI/UX Design Branding Identity

35

Presentations



LANGUAGE

English

French

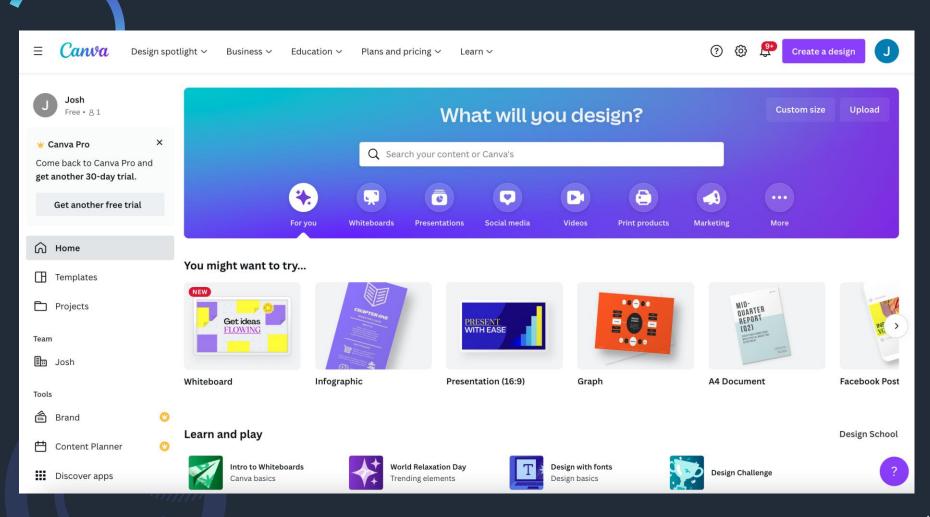
German

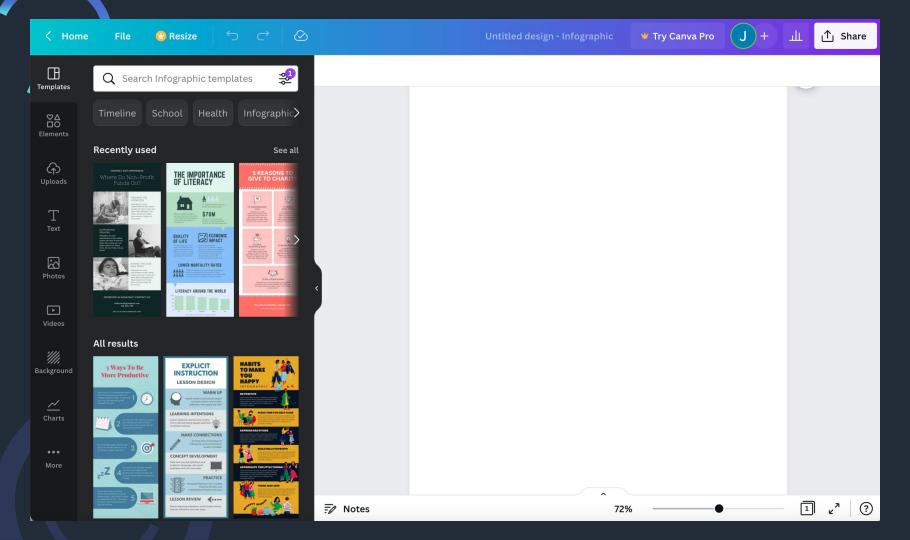
HOBBIES

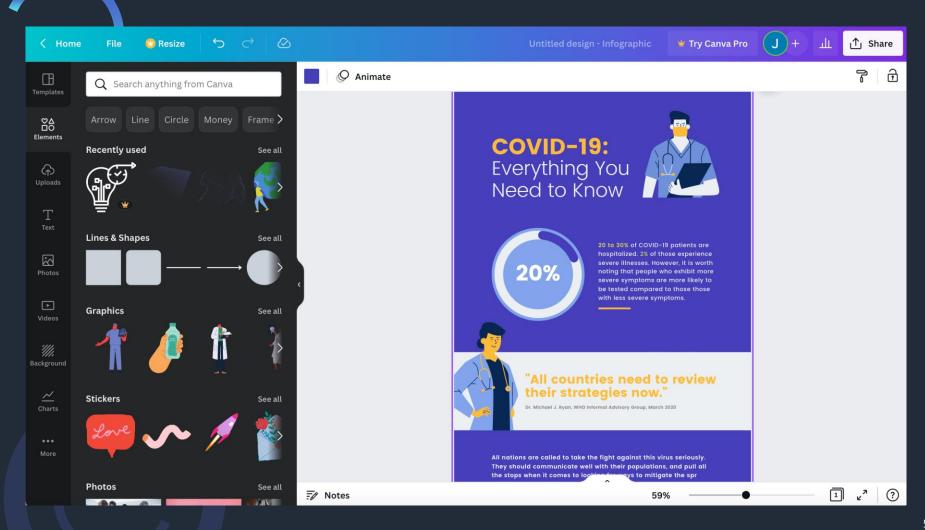


Tool #2 Canva

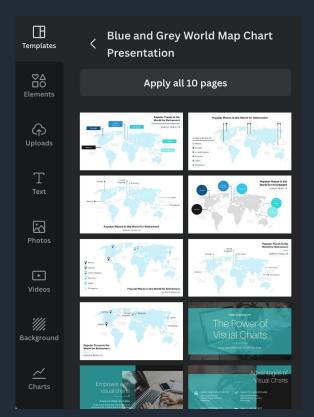












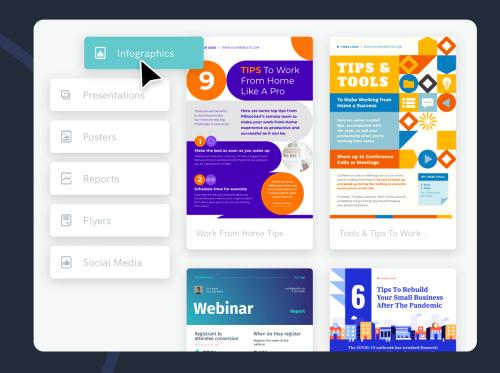








- Create a free account to use Piktochart
- Can be used to create infographics, presentations, posters, reports, flyers, and social media posts
- Templates are given to be used or can create from scratch



Social Media NEW

Create New Q Search infographic templates





Flu Prevention Tips







Importance of sleep

How Vaccines Work Organizational Ch.

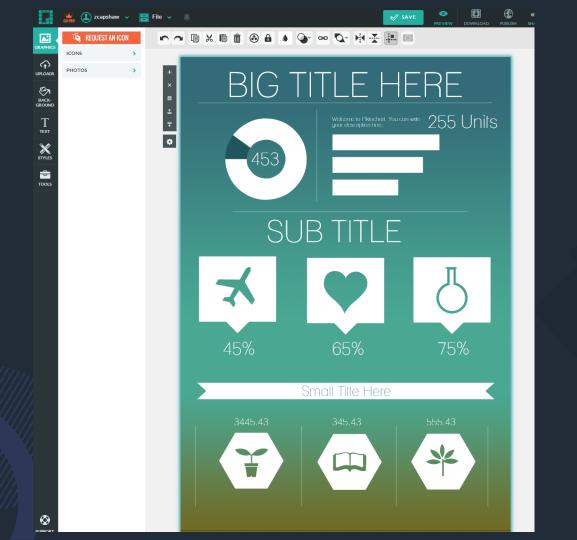










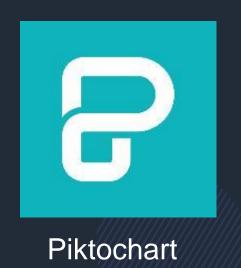




Demos!







Presenting Report/Article Summaries

Infographicbased Fliers: Report summary

Promoting Smoke-Free Homes

To reduce secondhand smoke exposure

What did we want to know?



This study tested the effectiveness of a simple program to create smoke-free homes in low-income households.

What did we do?



information and referral

system that connects

mostly low-income

callers to social services.



Sent participants 3 mailings and provided 1 coaching call. Materials focused on 5steps to creating a smoke-free home.



Asked participants and a comparison group about their home smoking bans and secondhand smoke exposure 3 and 6 months later.











What did we find?

After the intervention:



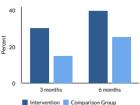
full ban on smoking in the home.

Participants reported less exposure to secondhand smoke in the home.

Homes with a full smoking ban had lower levels of nicotine.

Smokers reported smoking fewer cigarettes.

Participants with full home smoking bans 3 and 6 months after intervention





What does this mean for you?

A simple intervention of 3 mailings and 1 phone call can promote smoke-free homes in low-income households. This could be a good model for protecting children and adult nonsmokers from secondhand smoke exposure in their homes.

Tips for Converting Reports and Articles into Short Summaries

You may have projects with data such as surveys, evaluations or research

To be able do disseminate the findings, you may want to create a short flier using data visualization to get the main points across to an audience

 This could be in addition to the full report or abstract or executive summary

Breakdown the Key Report Components

Purpose

- Why did you do this project/evaluation?
- Describe what were the goals of the project
- Could use questions or headers

Methods

- What did you do?
- Describe what steps you did

Findings

- What are the top 3-5 results
- Select some key takeaways from the findings to highlight
- Use infographic style tables or graphs to present data

Implications/Next Steps

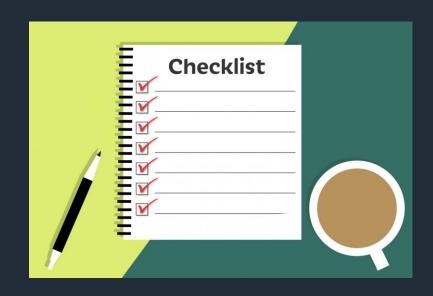
- [If need], what are the implications or what will you do next?
- Discuss practice or research implications of your findings

Examples of EPRC Infographics & Case Study



Process

- 1. Read the article/report
- 2. Identify headings for the flier:
 - a) What did we want to know?
 - b) What did we do?
 - c) What did we find?
- 3. Abstract key points
- 4. Work within a software program with data visualization features to draft the flier
- 5. Have multiple people review the draft flier
- 6. Revise the flier





Promoting Policy and Environmental Change in **Faith-Based Organizations**

Outcome Evaluation of a Mini-Grants Program

WHAT DID WE WANT TO KNOW AND WHY?







eating can reduce the risk



WHAT DID WE DO? We implemented the Prevention Strategies that

Work Program with 6 churches in SW Georgia

We surveyed 258 church members before the program and 1 year later to ask: . If the environment at their church was

· Whether they changed their eating or physical activity behaviors at church or

over 12 months.

generally.

Prevention Strategies that Work

Program was a collaborative project between the Emory Prevention Research Center, its Community Advisory Board, and the Cancer Prevention & Control Research funding (\$4000) and technical assistance



WHAT DID WE FIND?

hurches improved at least 1 aspect f their nutrition environment.



Example evidence-based strategies that were funded.





Church members who reported.



- that their church served unhealthy foods ate that their church served a metalling more unhealthy food at church and in general
- mproved physical activity environments did not report healthier behaviors at church or in general



So we wanted to know: Are mini-grants a

good way to encourage churches to create

healthy environments?

WHAT DOES THIS MEAN?



Church environments may play an important role in supporting healthy eating and physical activity at church. (Whether the influence of the church environment extends to other settings is unknown)



Mini-grants may be effective tools to encourage changes to the nutrition & physical activity environments in faith-



Behaviors are shaped by factors at the individual, interpersonal, community, organizational, and policy levels. Interventions to promote healthy church environments may have a key role in chronic disease prevention in the U.S.

This was a mini grants program where the EPRC funded churches to focus on healthy environments

- Look at the titles of the major sections
- They presented results using infographics
 - Quantitative: 6 churches improved 1 aspect of nutrition environment
 - Qualitative: 3 boxes of voices of church members

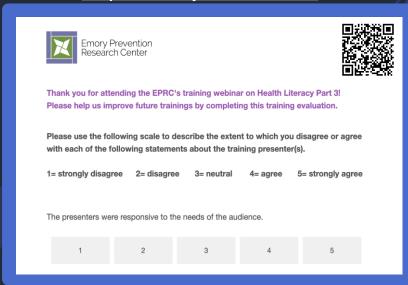
Recap & Resources





Training Evaluation

https://bit.ly/3SRQ5w5



Thanks!



Emory Prevention Research Center https://web1.sph.emory.edu/eprc/index.html







@emory prc

CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**.