

Understanding Evidence

CDC's Tool to Support Evidence-Based Decision Making

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Division of Violence Prevention
National Center for Injury Prevention and Control
Centers for Disease Control and Prevention



U.S. Department of Health and Human Services

Centers for Disease Control and Prevention

Framework for Thinking About Evidence



CDC's Framework for Program Evaluation

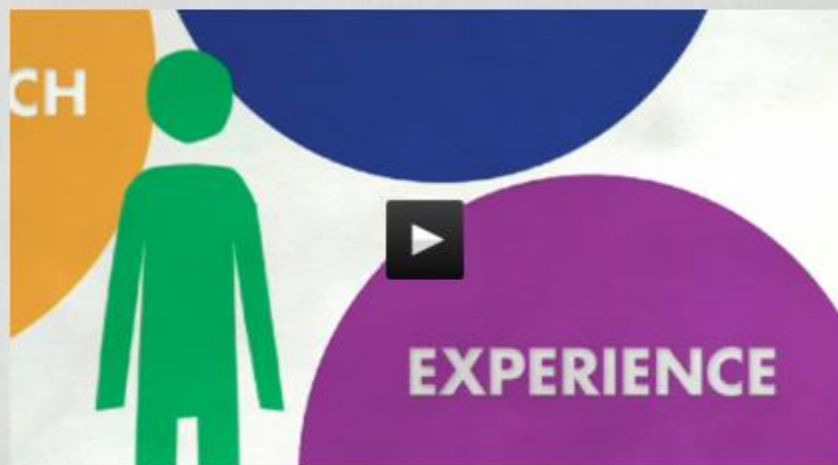


Community Psychology

- Ecological (i.e., settings and individuals are interrelated)
- Person – environment fit
- Attention to issues of diversity and context
- Social justice
- Grounded in empiricism
- Methodology acknowledges value

Understanding Evidence

<http://vetoviolence.cdc.gov/evidence>



EVIDENCE

explore the full scope of evidence

LOGIN

Experience resources and content tailored to your area of expertise

USERNAME

PASSWORD

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GET STARTED →

This site will help you use evidence based decision-making as you think about ways to prevent violence in your community.

HOW TO NAVIGATE

- 1 Use the arrows on the left and right side of the screen to navigate between the four learning modules.
- 2 Make sure to answer Knowledge Check questions that are asked throughout the modules. Your responses will help populate your output document at the end.
- 3 Refer to the Glossary located at the top of the screen anytime for definitions of key concepts and terms.
- 4 After completing all four modules, click through to the Conclusion page, where you will be able to register for your Continuing Education credits.

CONTINUED LEARNING



RESOURCE CENTER

Discover more content through videos, infographics, and summary documents you can take with you. [Go Now](#)



CONTINUUM

This tool will help you gauge the strength of best available research evidence you may be considering. [Go Now](#)



DISCOVERY LEARNING

Find content hidden around the site! Click on the Plus symbols in the top left corner of the web pages or use the "+" or "-" key on your keyboard or visit Bonus Materials in the Resource Center. [Go Now](#)



It's extremely important to look at both what we know from a research perspective and what we get from the field and from people in practice.

- Howard Spivak, Director, Division of Violence Prevention, Centers for Disease Control and Prevention



HOW TO GET STARTED

The accredited lesson modules on this site will help you incorporate evidence-based decision making into your violence prevention efforts.

INTRODUCTION

BEST AVAILABLE RESEARCH EVIDENCE

EXPERIENTIAL EVIDENCE

CONTEXTUAL EVIDENCE

The Progress Bar on the top of the site will help you navigate through the website and will keep track of your progress.

How to Get Started

1. **Watch the Homepage Video** to get an overview of the different types of evidence you will learn about.
2. **Create a Login** to make a user profile that will allow you to choose the area of violence prevention you would like to focus on, save your progress through the learning modules and get an output document customized to your input.
3. **Go to the Introduction Page** to view the introduction lesson module, then view each of the three remaining lesson modules in any order you wish.

LOGIN

USERNAME

PASSWORD

LOG IN

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YOUTH VIOLENCE

*evidence-based
prevention strategy*

HOSPITAL

CENSUS TRACT
INFORMATION

LAW ENFORCEMENT

SCHOOL



lack of jobs

low incomes

*low academic
performance*

*substance
abuse*

gang violence

*limited youth
activities*



BOB'S PROFILE

[change password](#)

INTRODUCTION

BEST AVAILABLE RESEARCH EVIDENCE

EXPERIENTIAL EVIDENCE

CONTEXTUAL EVIDENCE

74%

Type keywords here...

AREA OF EXPERTISE



Self-Assessment Results

- ☒ External Decision-Making Factors
- ☒ Internal Decision-Making Factors
- ☒ Knowledge Check: Evidence Based Decision-Making
- ☐ Comfort with Best Available Research Evidence
- ☐ Interactive Continuum

WHAT'S NEXT?

Take your results with you.
Access information gathered
from your training, interaction
with tools, and other site
features whenever you please.

[VIEW](#)

CONTINUUM

Curious about the strength of
your program's research
evidence? Just answer a few
quick questions to get started.

[VIEW](#)

RESOURCES USED/BOOKMARKS

Lorem ipsum dolor Lorem ipsum dolor
Lorem ipsum dolor Lorem ipsum dolor



CLOSE

WELCOME, BOB

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TER | CONTINUUM

ENTER

Resource

below will help
n-making journey.

WHAT'S NEXT:

considerations & resources

INTRO

B.A.R.E

EXPERIENTIAL

CONTEXTUAL

CONCLUSION

Anna Curtis
acurtis@banyancom.com

YOUTH VIOLENCE | MAY 29, 2012

INTRODUCTION

Note: Resources will only be provided for those Lesson Modules completed.

LEARN MORE

about evidence-based decision making

BEST AVAILABLE RESEARCH EVIDENCE RESOURCES

sources of research evidence

This report should help you apply your new knowledge for evidence-based decision making in your prevention work. The resources listed reflect the input you provided in the Lesson Modules.

In addition, you may want to visit the Understanding Evidence Resource Center to find more resources.

The following websites may provide opportunities for learning more about Evidence-Based Decision Making:

- Analysis of the Future: The Delphi Method
 - creatingminds.org
 - keyword: Delphi method
- Health-evidence.ca
 - <http://health-evidence.ca>
 - Click "Additional Resources"
- National Collaborating Centre for Methods and Tools
 - <http://www.nccmt.ca>
 - keyword: overview

Now that you have completed the Lesson Module on Best Available Research Evidence, it may be useful to know some of the resources that may help you find research evidence on prevention strategies.

This report contains only resources related to the field of [Youth Violence](#). You may want to look in the Understanding Evidence resource center for resources related to other areas of violence prevention that overlap with your area of interest.



GLOSSARY

Acceptability

The extent to which the stakeholders find the strategy satisfactory or agreeable

(<http://www.ojp.usdoj.gov/BJA/evaluation/glossary/>)

Archival data analysis

Archival data is information that has already been collected and/or documented. It can include records that are kept by governmental and other agencies, as well as records normally kept as part of the operation of an institution or organization.

(http://www.sdr.org/ctresource/Communit%20Assessment%20Training/Trainer%20Guide/CAT_TG_mod3.pdf)

Best Available Research Evidence

Best available research evidence enables researchers, practitioners, and policy-makers to determine whether or not a prevention program, practice, or policy is actually achieving the outcomes it aims to and in the way it intends. The more rigorous a study's research design, the more compelling the research evidence, indicating whether or not a program, practice, or policy is effectively preventing violence (Puddy & Wilkins, 2011).

Capacity assessment

Process to identify those particular areas of capacity that are strongest and those that need improvement

(<http://www.vppartners.org/sites/default/files/reports/assessment.pdf>)

Communities of Practice

This concept is inclusive of the many ways that people with knowledge and experiences around a specific issue gather to share and collect their insight with a common goal in mind. It could range from something as informal as a listserv to a highly structured working group.

Consensus

The production of a common understanding among participants about issues and programs

(<http://www.ojp.usdoj.gov/BJA/evaluation/glossary/>)



CLOSE



FREQUENTLY ASKED QUESTIONS

1. WHAT IS EVIDENCE?

Evidence is defined in many different ways. When we think about evidence based decision-making in particular, evidence is defined as information or facts that are systematically obtained (i.e., obtained in a manner that is replicable, observable, credible and verifiable) for use in making judgments or decisions (adapted from Rycroft-Malone et al, 2004 & Brownson et al., 2009). This definition of evidence applies to best available research evidence as well as contextual and experiential evidence.

2. WHAT IS BEST AVAILABLE RESEARCH EVIDENCE?

Best available research evidence is information that enables researchers, practitioners and policy-makers to determine whether or not a prevention program, practice or policy is actually achieving its intended outcomes. Best available research evidence can also help to determine whether or not a prevention strategy is harmful. The more rigorous a study (e.g. true/quasi-experimental design, independent replication), the more compelling the research evidence is indicating whether or not a program, practice or policy is effectively preventing violence. The extent to which a prevention strategy has been replicated in multiple, applied settings with diverse populations (external/ecological validity), and the availability and accessibility of implementation supports (implementation guidance) are also important aspects of best available research evidence.

3. WHERE CAN YOU FIND BEST AVAILABLE RESEARCH EVIDENCE?

Registries of evidence-based programs are the best place to start when looking to find programs based on the best available research evidence. Technical assistance resource centers, which are typically tailored toward a particular area of violence prevention, also provide a variety of different resources for identifying prevention strategies based on the best available research evidence. In circumstances when there is very little research evidence on effective prevention strategies, technical assistance resource centers can also be very helpful. Technical assistance resource centers may aid in identifying known risk and protective factors and sound theories of change for your area of violence to guide your programmatic efforts as well as resources for evaluating them. A list of these registries and technical assistance resource centers can be found in the resource section.

[CLOSE](#)

[INTRODUCTION](#)

[BEST AVAILABLE RESEARCH EVIDENCE](#)

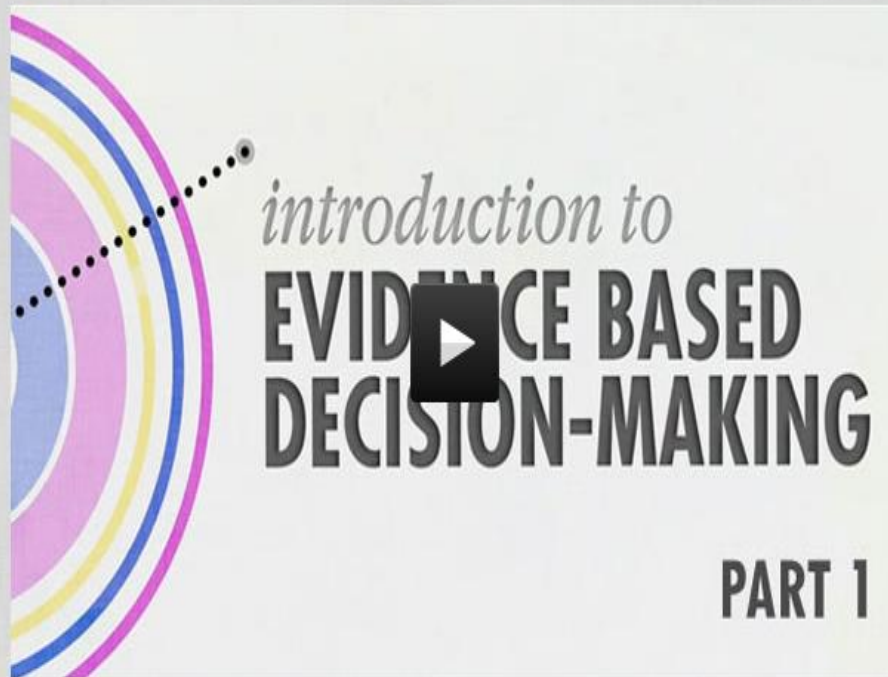
[EXPERIENTIAL EVIDENCE](#)

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GET STARTED ▶

[LEARNING MODULES](#) | [RESOURCE CENTER](#) | [CONTINUUM](#)

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Introduction to **EVIDENCE BASED DECISION-MAKING**

When you make a decision, you often do research, consider your situation and learn from others. When you collect this information systemically and in a way that is credible, replicable and verifiable, you are using evidence based decision-making. Take this first module to learn more about evidence based decision-making and to unlock additional modules about different types of evidence.

[BEST AVAILABLE RESEARCH EVIDENCE](#) ▶

[EXPERIENTIAL EVIDENCE](#) ▶

[CONTEXTUAL EVIDENCE](#) ▶

Understanding Evidence: BEST AVAILABLE RESEARCH EVIDENCE MODULE SUMMARY

Introduction to best available research evidence

Best available research evidence enables researchers, practitioners, and policy-makers to determine whether or not a prevention program, practice, or policy is actually achieving the outcomes it aims to and in the way it intends. The more rigorous a study's research design, the more compelling the research evidence, indicating whether or not a program, practice, or policy is effectively preventing violence.



Understanding Evidence: EVIDENCE BASED DECISION-MAKING SUMMARY

Introduction to Evidence Based Decision-Making

Evidence Based Decision-Making is a process for making decisions about a program, practice, or policy that is grounded in the best available research evidence and informed by experiential evidence from the field and relevant contextual evidence.

What is the framework for thinking about evidence?

The framework includes contributions from researchers and practitioners to provide a more comprehensive view of evidence that is appropriate



Understanding Evidence: CONTEXTUAL EVIDENCE MODULE SUMMARY

Introduction to contextual evidence

Contextual evidence refers to information about whether or not a strategy "fits" with the context in which it is to be implemented. In other words, contextual evidence provides prevention practitioners with information on whether a strategy is:

- Feasible to implement
- Useful
- Likely to be accepted by a particular community

Contextual evidence provides guidance grounded in information from a variety of local data sources, such as findings from community needs/assets assessments, and census, school, economic, or police data. Whether found in established local databases or newly collected, this information offers a "snapshot" of measurable community characteristics that may affect a particular decision.

"When a group is considering taking on a new, evidence-based or evidence-informed strategy, we always have to take a close look at the staff and resources they have on hand. We also recommend they collect information on their community's needs and assets that could affect the success of any new strategy."

— Valerie Sptea Collins, MS Ed, DHSC, Training & Technical Assistance Supervisor, FRIENDS National Resource Center

What questions can contextual evidence help to answer?

- Does the community have the resources and/or capacity to implement the prevention strategy effectively?
- Do the strengths documented in the research evidence match well with the needs of the community?
- What are the characteristics of the population to be served by the prevention strategy?
- Who are the people and organizations that will implement the prevention strategy?
- What are the characteristics of the setting for the proposed program, policy or practice that could affect its implementation?

Understanding Evidence: EXPERIENTIAL EVIDENCE MODULE SUMMARY

Introduction to experiential evidence

Experiential evidence is the collective experience and expertise of those who have practiced or lived in a particular setting. It also includes the knowledge of subject matter experts. These insights, understandings, skills, and expertise are accumulated over time and are often referred to as intuitive or tacit knowledge. Experiential evidence provides distinctive guidance in the form of "real-world" experience gathered directly from multiple stakeholders. These stakeholders are familiar with a variety of key aspects about the setting (such as community norms and values), and have knowledge about the community in which a prevention strategy is to be implemented.



"People already know within themselves what the problem is ... what it is they need... So I think the bottom line is being open-minded to what you're going to receive from the people."

— Angelita Lee, Case Manager, Johns Hopkins Center for American Indian Health

What questions can experiential evidence help to answer?

- What can the experiences and knowledge of stakeholders tell us about what has previously worked or not worked with the specific community and/or population in question?
- What can the experiences and knowledge of stakeholders tell us about a program, practice, or policy's possible appeal to stakeholders and participants?
- What common goals do the stakeholders have around this issue?
- From the experiences and knowledge of stakeholders, how well matched are those goals to the programs, practices, or policies based on the best available research evidence?

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“It’s extremely important to look at both what we know from a research perspective and what we get from the field and from people in practice.”

Howard Spivak, MD

*Director, Division of Violence Prevention,
Centers for Disease Control and Prevention*

EVIDENCE

the full scope of evidence

resources and content tailored to your area

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HOW TO NAVIGATE

- 1 Use the arrows on the left and right side of the screen to navigate between the four learning modules.

CONTINUED LEARNING



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Juliette Mackin, PhD
Senior Research Associate
NPC Research



00:00 / 00:21

How can practitioners benefit from collaborating with researchers?

The important part about building a community around research and practice, is to have people who have expertise in both areas, who can work together, and that's the part that is really rewarding for someone like me, who works in research, because what we do this for is to make programs better, to make communities healthier.

[EVIDENCE](#)[EXPERIENTIAL EVIDENCE](#)[CONTEXTUAL EVIDENCE](#)[TER](#) | [CONTINUUM](#)

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EVIDENCE BASED DECISION-MAKING

PART 1

Introduction to EVIDENCE BASED DECISION-MAKING

When you make a decision, you often do research, consider your situation and learn from others. When you collect this information systemically and in a way that is credible, replicable and verifiable, you are using evidence based decision-making. Take this first module to learn more about evidence based decision-making and to unlock additional modules about different types of evidence.

[BEST AVAILABLE RESEARCH EVIDENCE ▶](#)

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BEST AVAILABLE RESEARCH EVIDENCE

If you know how to recognize the strength of the research evidence across key dimensions, you will be better prepared to determine whether or not a prevention program, practice, or policy is actually achieving its intended outcomes.

[EXPERIENTIAL EVIDENCE](#) ▶

[CONTEXTUAL EVIDENCE](#) ▶

[CONCLUSION](#) ▶

? RELATED FAQs

What is Best Available Research Evidence?

Where can you find Best Available Research Evidence?

[VIEW FAQs](#) ▶

≡ RESOURCES

View more resources and tools to help you on your evidence based decision-making journey.

[VIEW RESOURCE CENTER](#) ▶

📄 MODULE SUMMARY

You can download or print the Best Available Research Evidence Module Summary here.

[VIEW MODULE SUMMARY](#) ▶



“You have to go the literature, you want to look for studies, you want to weight studies more heavily if they used rigorous designs, randomized trials, and so forth. The nice thing is, now there are a number of rating systems, really organizations around the country that have rating systems and they rate all sorts of programs on whether they’re effective.”

— Daniel Whitaker, Professor of Public Health at Georgia State University

CONTINUUM of EVIDENCE OF EFFECTIVENESS

How does your strategy map onto the Continuum?

Research is constantly emerging and evolving, making the use of best available research evidence a continuous journey. This tool will help you conceptualize where you are on this journey and what steps you can take to continue moving forward.

START ASSESSMENT ►

	Well Supported	Supported	Promising Direction / Emerging / Undetermined More Research Needed			Unsupported	Harmful
Effect	Found to be effective		Some evidence of effectiveness	Expected preventive effect	Effect is undetermined	Ineffective	Praction constitutes risk of harm
Internal validity	True experimental design	Quasi-experimental design	Non-experimental design	Sound theory only	No research No sound theory	True or quasi-experimental design	Any design with results indicating negative effect
Type of evidence/research design	Randomized control trials and meta-analyses / systematic review	Quasi-experimental design	Single group design	Exploratory study	Anecdotal / Needs assessment	Randomized control trials or quasi-experimental design	Any design with results indicating negative effect
Independent replication	Program replication with evaluation replication		Program replication without evaluation replication	Partial program replication without evaluation replication		Program replication with evaluation replication	Possible program replication with / evaluation replication
Implementation guidance	Comprehensive		Partial	None		Comprehensive	Comprehensive / partial
External and ecological validity	Applied studies - different settings (2+)	Applied studies - similar settings (2+)	Real-world informed	Somewhat real-world informed	Not real-world informed	Applied studies - same / different settings	Possible applied studies - similar / different settings

ASSESSMENT

Question

Are there any indications from research or practice that this strategy has been associated with harmful effects?

☐ Yes ☐ No

NEXT

ASSESSMENT

Question

Is there at least **one** well-conducted (Randomized Control Trial or a Quasi-Experimental design) study on this strategy?

☐ Yes ☐ No

NEXT

ASSESSMENT

Question

Are any of the following formal systems in place to support implementation of the program or strategy?

- A purveyor/developer who offers training/coaching
- A website that provides tools, materials, videos, etc. to support implementation
- An established community of practice among those who are currently or who have previously implemented the program

Communities of Practice- This concept is inclusive of the many ways that people with knowledge and experiences around a specific issue gather to share and collect their insight with a common goal in mind. It could range from something as informal as a listserv to a highly structured working group.

☐ Yes ☐ No

NEXT

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

How does your strategy map onto the Continuum?

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continuum results for:

IMPLEMENTATION GUIDANCE



partial

For some programs, there may be some products, services, or activities to help researchers/practitioners implement them in different settings, but they may be limited in their availability and accessibility. It is important to note that since implementation support and guidance are limited for these programs, there is a chance that implementation issues (not the program itself) may be influencing outcomes.



RELATED RESOURCES:

Implementation Guidance is only one of six dimensions that are described on the continuum of the best available research evidence. Ideally, strategies will demonstrate strong evidence across as many of these dimensions as possible.

Remember that a well-informed evidence-based decision will need to include contextual and experiential evidence as described in detail in the corresponding Lesson Modules.

To learn more about how to strengthen the research evidence related to a specific strategy, the resources below may be helpful.

RESOURCE LINKS

- National Implementation Research Network
<http://nirn.fpg.unc.edu/resources/implementation-research-synthesis-literature> 
- <http://nirn.fpg.unc.edu/resource-search> 

INTRODUCTION

BEST AVAILABLE RESEARCH EVIDENCE

EXPERIENTIAL EVIDENCE

CONTEXTUAL EVIDENCE

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Type keywords here...

RETURN TO LESSON ►



LEARNING MODULES | RESOURCE CENTER | CONTINUUM

RESOURCE CENTER

TOOLS for SUCCESS

Welcome to the Evidence Resource Center. The resources and tools below will help you on your evidence based decision-making journey.

← Video Title Here

VIDEOS



CASE STUDIES



MODULE
SUMMARIES



RESOURCES



GLOSSARY



BONUS
MATERIALS



INTRODUCTION

BEST AVAILABLE RESEARCH
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GET STARTED ▶

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CONGRATULATIONS

CONCLUSION

Discover More

Learn more about evidence based decision-making through the various tools and resources available on this site.

FREE CONTINUING
EDUCATION CREDITS▶

CONTINUUM▶

WHAT'S NEXT▶

DISCOVER MORE



Now that you've completed the training, check out these features.



FREE CONTINUING EDUCATION CREDITS

Now that you have completed all the learning modules, you are eligible for free continuing education credits through the CDC.



WHAT'S NEXT

Customized by your profile and your experience in the Learning Modules, What's Next is personalized to help you with your next steps.



CONTINUUM

This tool will help you gauge the strength of best available research evidence you may be considering.

[INTRODUCTION](#)[BEST AVAILABLE RESEARCH EVIDENCE](#)[EXPERIENTIAL EVIDENCE](#)[CONTEXTUAL EVIDENCE](#)

CONTACT

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Presentations will not include any discussion of the unlabeled use of a product or a product under investigational use.

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Want to Learn More?

Summer Webinar Series

- **Archive of In-Depth Presentation for TA Providers:**
http://www.preventconnect.org/2013/04/understanding_evidence/
- **Additional Webinars Coming Soon for:**
 - State Injury and Violence Prevention Programs
 - Child Maltreatment Prevention:Practitioners
 - Suicide Prevention Practitioners
 - Intimate Partner Violence/Sexual Violence Prevention Practitioners
 - Youth Violence Prevention Practitioners

Thank you!

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