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
Framework for Thinking About Evidence

- Best Available Research Evidence
- Experiential Evidence
- Contextual Evidence

Evidence Based Decision Making
Framework for Thinking About Evidence

- Best Available Research Evidence
- Evidence Based Decision Making
- Experiential Evidence
- Contextual Evidence
Measurable Contextual Variables Across the Social Ecology

- Societal Variables:
  - Laws and Policies
  - Social Norms and Values
  - Media

- Community Variables:
  - Employment Opportunities
  - Physical Infrastructure
  - Community History

- Relationship Variables:
  - Community Values
  - Family Health History
  - Social Capital
  - Peer Support
  - Family Values

- Individual Variables:
  - Income
  - Age, Gender, Cultural Identity
  - Individual Values

Across the Social Ecology
Framework for Thinking About Evidence

Experiential Evidence

Evidence Based Decision Making

Best Available Research Evidence

Contextual Evidence
What is Experiential Evidence?

• The **collective** experience and expertise of those who have practiced or lived in a particular setting.

• The knowledge and expertise of subject matter experts.
CDC’s Framework for Program Evaluation

Steps:

- Engage Stakeholders
- Describe the program
- Focus the evaluation design
- Gather credible evidence
- Justify conclusions
- Ensure use and share lessons learned

Standards:
- Utility
- Feasibility
- Propriety
- Accuracy
Understanding Evidence

http://vetoviolence.cdc.gov/apps/evidence
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

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

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.
YOUTH VIOLENCE

evidence-based prevention strategy

CENSUS TRACT INFORMATION
SCHOOL
LAW ENFORCEMENT

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%

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

CLOSE
WHAT'S NEXT:
considerations & resources

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

LEARN MORE
about evidence-based decision making

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.ncmt.ca
  - keyword: overview

BEST AVAILABLE RESEARCH
EVIDENCE RESOURCES
sources of research evidence

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.

UNDERSTANDING EVIDENCE A Resource for Evidence Based Decision-Making
**Acceptability**
The extent to which the stakeholders find the strategy satisfactory or agreeable ([http://www.ojp.usdoj.gov/BJA/evaluation/glossary/](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.srdg.org/ctresource/Communit20Assessment%20Training/Trainer%20Guide/CAT_TG_mod3.pdf](http://www.srdg.org/ctresource/Communit20Assessment%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.vcppartners.org/sites/default/files/reports/assessment.pdf](http://www.vcppartners.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/](http://www.ojp.usdoj.gov/BJA/evaluation/glossary/)).
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 the 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 towards 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 where 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.
Introduction to Evidence Based Decision-Making

PART 1

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.
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: 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 assessments, and census, school, economic, or police data. Whether found in established local databases or newly collected, this information offers a “snapshot” of communities characterized in ways that may affect a particular decision.

![Quote Image](https://via.placeholder.com/150)

“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.”
—Angela Lee, Case Manager, Youth Empowerment Center for American Indian Youth

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?
“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
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.

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.
You have to go to 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 testing systems, really organizations around the country that have rating systems and they rate all these programs on whether they’re effective.

— Daniel Whisler, 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

<table>
<thead>
<tr>
<th>Effect</th>
<th>Well Supported</th>
<th>Supported</th>
<th>Promising Direction / Emerging / Undetermined</th>
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<td>Found to be effective</td>
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<td>True or quasi-experimental design</td>
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| Type of evidence design | Program replication with evaluation replication | Program replication without evaluation replication | Partial program replication without evaluation replication |
|-------------------------|-----------------------------------------------|-----------------------------------------------|
| Randomized control trials and meta-analyses / systematic review | Program replication with evaluation replication | Possible program replication with / evaluation replication |
| Quasi-experimental design | | |
| Single group design | | |
| Exploratory study | | |
| Anecdote / Needs assessment | | |
| Randomized control trials or quasi-experimental design | | |
| Any design with results indicating negative effect | | |

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<th>Partial</th>
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<td>Possible program replication with / evaluation replication</td>
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<th>Applied studies - similar settings (2+)</th>
<th>Real-world informed</th>
<th>Somewhat real-world informed</th>
<th>Not real-world informed</th>
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</table>
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?

Research is constantly emerging & 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.
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/resources/implementation-research-synthesis-literature)
- [http://nirn.fpg.unc.edu/resource-search](http://nirn.fpg.unc.edu/resource-search)
CONTACT

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Health Scientist
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Name: 

Email: 

Message: 

This program provides a free continuing education opportunity by:
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CDC does not accept commercial support.
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've 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.
Thank you!

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