CDC's Interactive Evidence-Based Decision Making Tool

A Resource to Strengthen Evaluation Practice and Capacity

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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

Why the Need for a Comprehensive Understanding of Evidence?

What is 'Evidence?'

"The available
information in
proposition is
Dictionary,20

"Evidence can be defined as information or facts that are systematically obtained, i.e. obtained in a manner that is replicable, observable, credible, verifiable, or basically supportable." *(Rycroft-Malone & Stetler, 2004)*

"For public health professional evidence is some form of data - including epidemiologic (quantitative) data, results of program or policy evaluations, and qualitative data - for use in making judgments or decisions," *(Brownson, Fielding, and Maylahn, 2009)*

of empirical
ystematic
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e in support of a
ealth Services
Research Foundation, 2004)

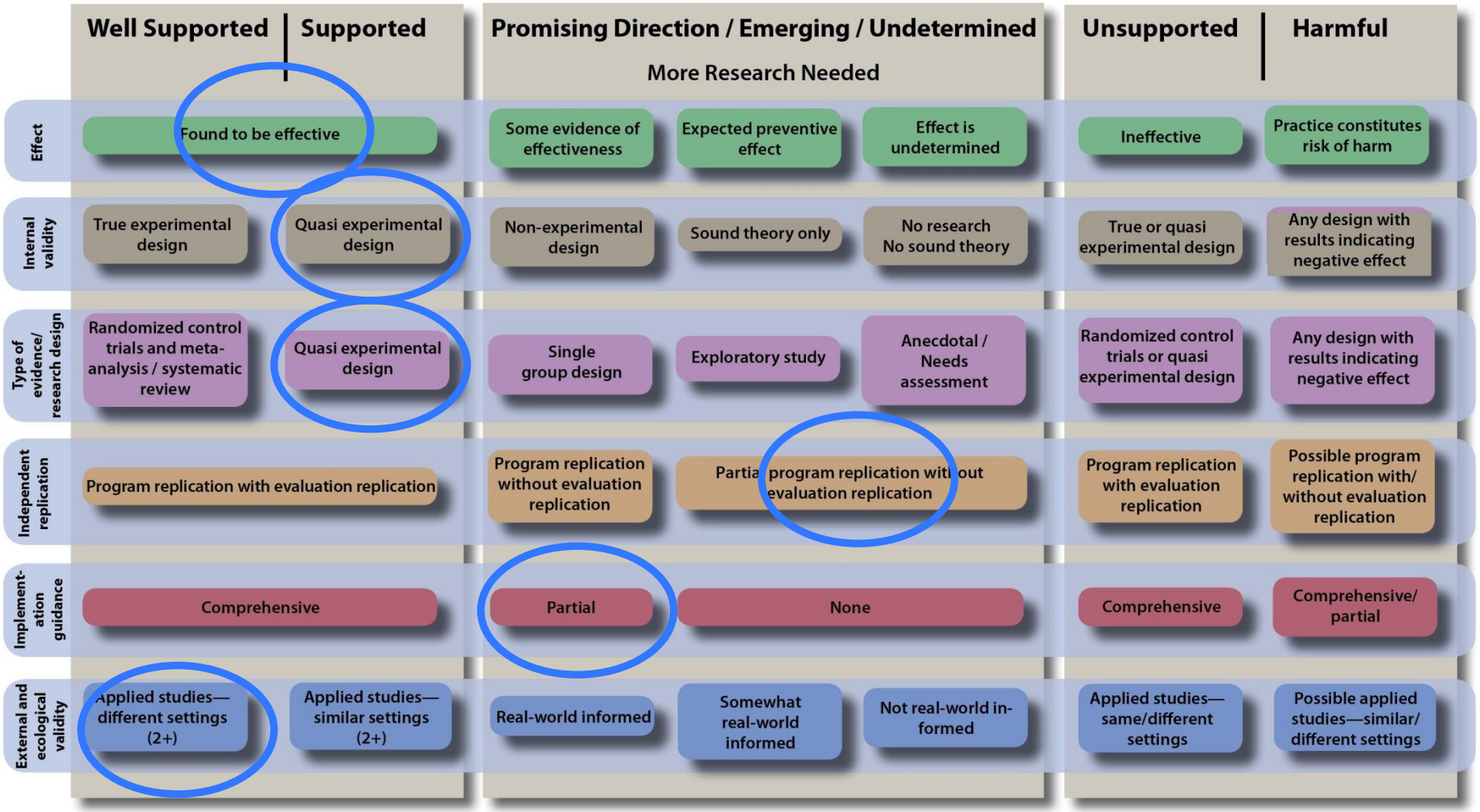
Framework for Thinking About Evidence

Framework for Thinking About Evidence

Questions BARE Can Help Answer

- How much **scientific research** has been done on the program/strategy?
- What effects has the program had on your **desired outcomes**?
- How **rigorously** has the program been studied? How much confidence can we have in the validity of study findings?
- What **implementation guidance** is available, and what does that guidance tell us about capacity needed to successfully implement the program?

Continuum of Evidence of Effectiveness



For more information:

Centers for Disease Control and Prevention
National Center for Injury Prevention and Control
Division of Violence Prevention
1-800-CDC-INFO • www.cdc.gov/violenceprevention • cdcinfo@cdc.gov

Framework for Thinking About Evidence

What is Contextual Evidence?

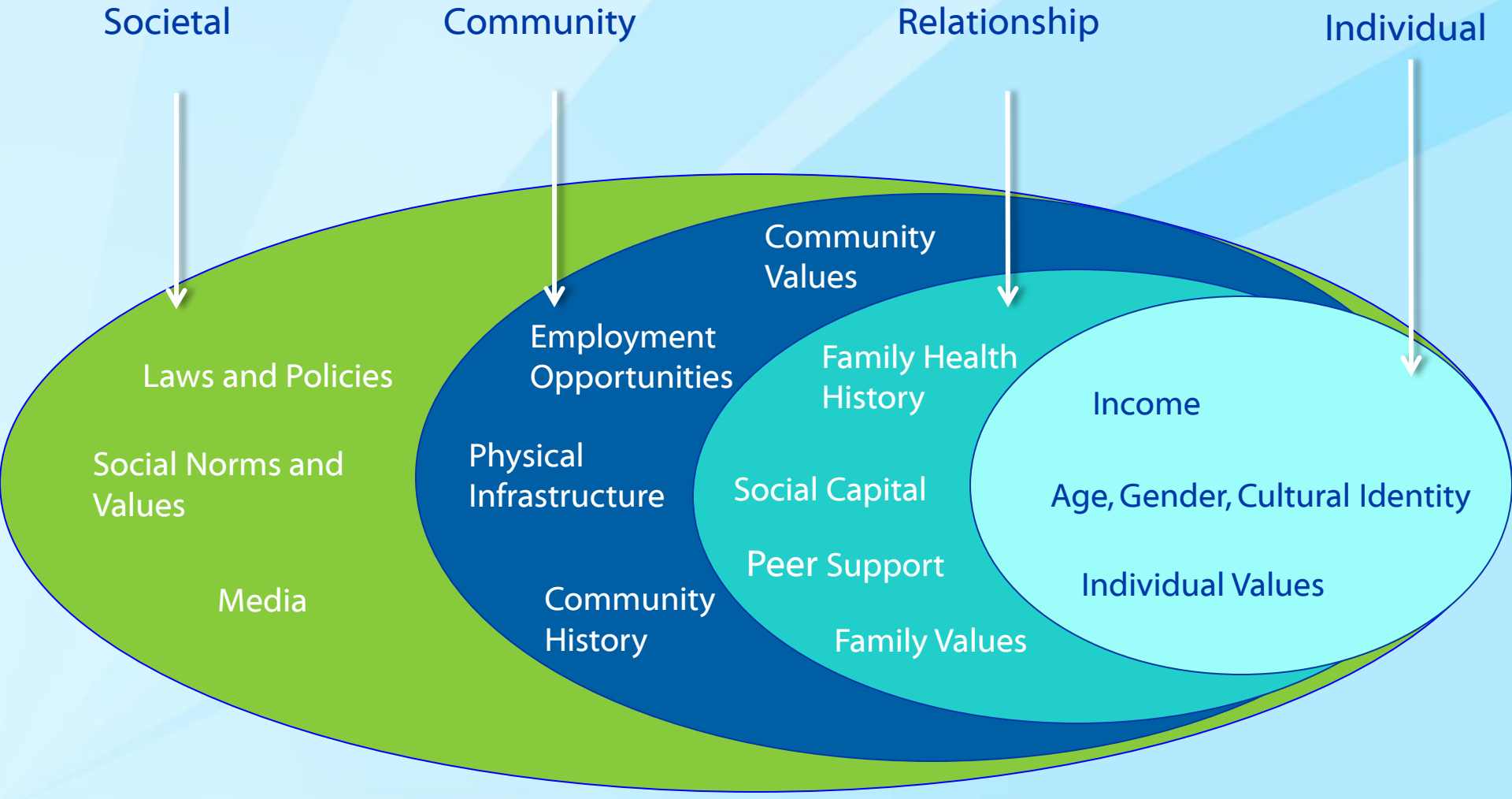
- Measurable factors in the community that are likely to influence the implementation of a strategy.

- Provides information on whether a strategy is likely to be:
  - Feasible to implement
  - Useful
  - Acceptable to the local community

Questions Contextual Evidence Can Help Answer

- Does the community have the **resources and/or capacity to implement** the prevention strategy effectively? Who will implement the strategy?
- What are the **characteristics of the setting/population** to be served by the prevention strategy?
- **Who will be implementing** the strategy?
- How might setting/population characteristics **affect implementation** of the prevention strategy?

Measurable Contextual Variables Across the Social Ecology



How do you Measure Contextual Evidence?

- **Existing Sources of data**
  - Census data
  - Local administrative data (hospital, school, law enforcement)
- **Gathering new data**
  - Community Assessments
  - Surveys
  - Focus Groups/Interviews

Framework for Thinking About 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.

Questions Experiential Evidence Can Help Answer

- What has **previously worked/not worked** in the community?
- Would this program **appeal to stakeholders** and participants?
- What are **common goals** among stakeholders related to this issue?
- How **well matched** are these goals to the programs based on the best available research evidence that are being considered?

How do you Measure Experiential Evidence?

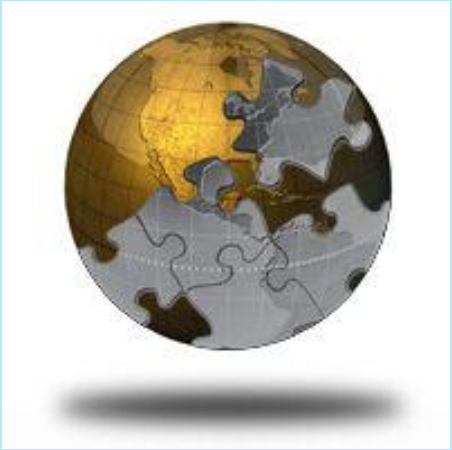
Methods

- Reflective questions
- Communities of practice
- Expert panels
- Team decision making
- Other consensus processes

Putting it all Together:
Evidence-Based Decision Making

Key Characteristics

- Transparency
- Inclusiveness/Participation
- Openness/Explicitness
- Skilled Leadership
- Defined Process



CDC's Framework for Program Evaluation

Understanding Evidence

http://vetoviolence.cdc.gov/evidence

Understanding
EVIDENCE

EVIDENCE

explore the full scope of evidence

LOGIN

Experience resources and content tailored to your area of expertise

USERNAME

PASSWORD

Not registered yet?
Forgot password?

LOG IN

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.

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

Understanding
EVIDENCE

USERNAME

PASSWORD

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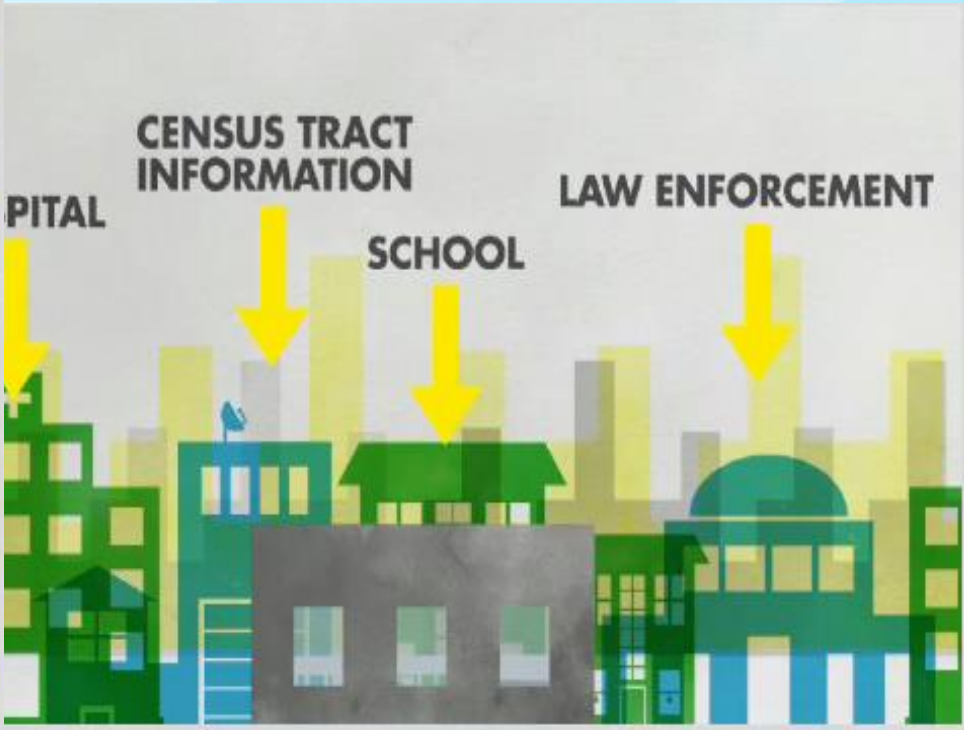
CHILD
MALTREATMENT
home visitation
evidence-based strategy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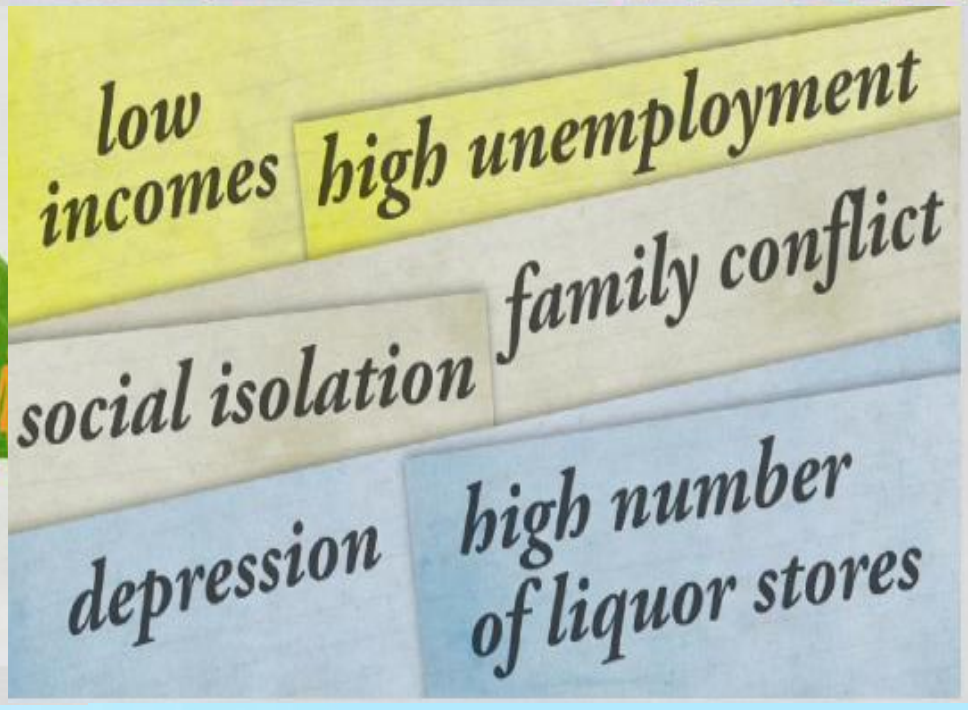
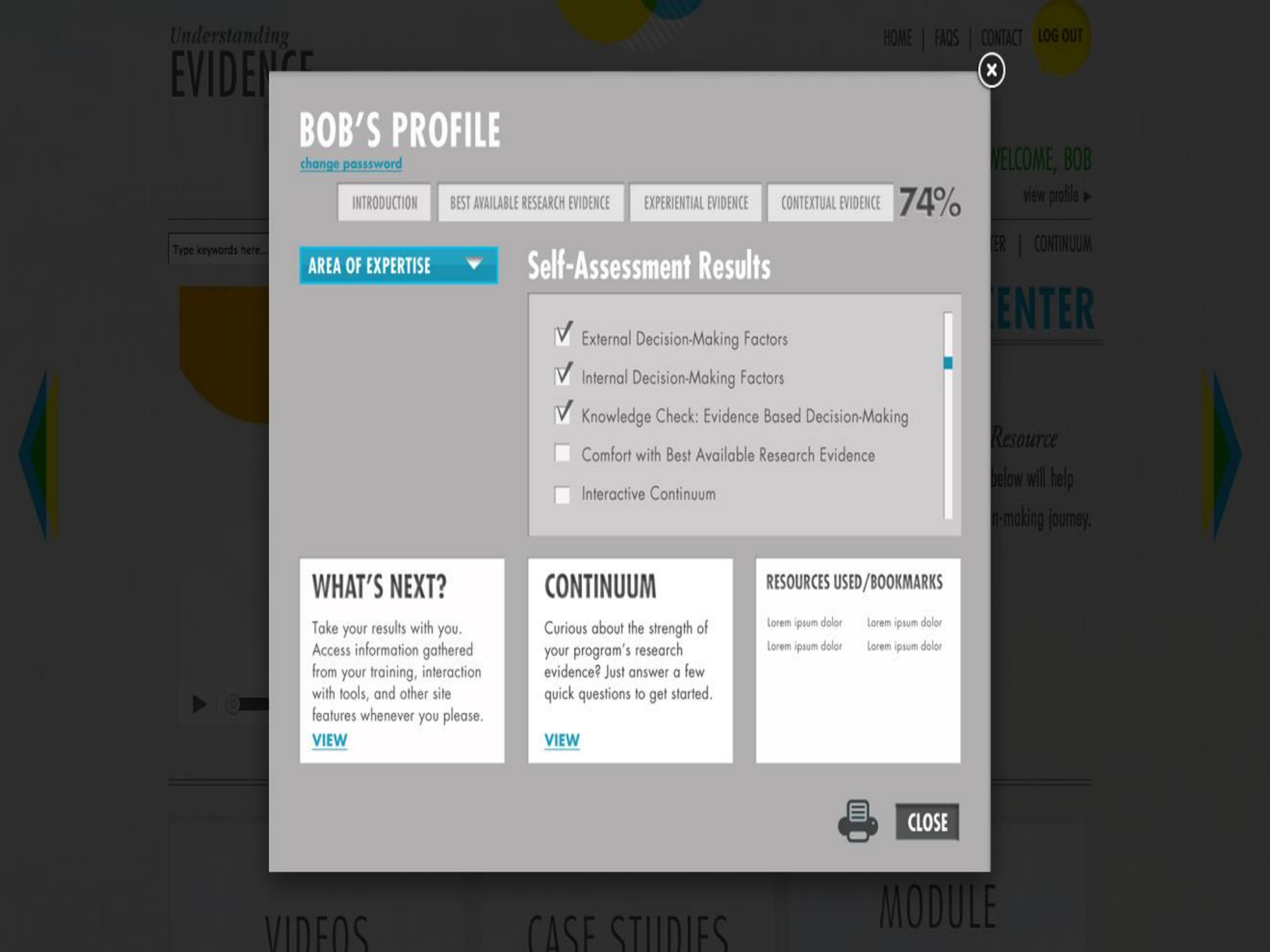

low
incomes
high unemployment
social isolation
family conflict
depression
high number
of liquor stores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INTRODUCTION
BEST AVAILABLE RESEARCH EVIDENCE
EXPERIENTIAL EVIDENCE
CONTEXTUAL EVIDENCE
74%
AREA OF EXPERTISE
Self-Assessment Results
External Decision-Making 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
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CLOSE
MODULE
VIDEOS
CASE STUDIES

WHAT'S NEXT:

considerations & resources

Anna Curtis
acurtis@banyancom.com

INTRODUCTION

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

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.

LEARN MORE

about evidence-based decision making

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

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.

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.sdrg.org/ctcresource/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?

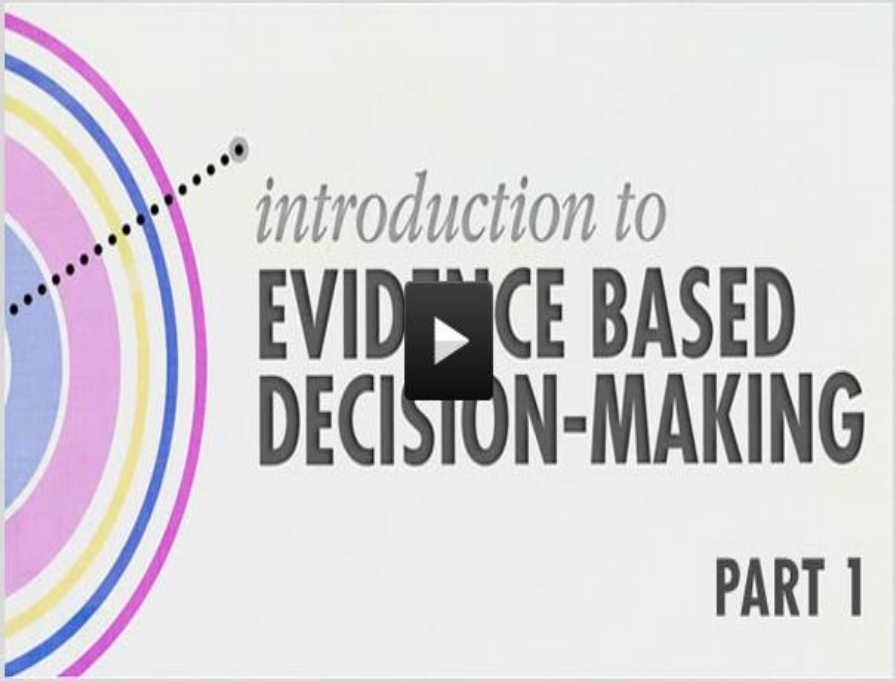
Best available research evidence is information that enables researchers, practitioners and policy-makers to determine whether or not a prevention program, practice or policy is actually achieving its intended outcomes. Best available research evidence can also help to determine whether or not a prevention 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

Understanding
EVIDENCE



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.

The designation of "best a
prevention, the research e
is collected (i.e., through
research evidence indicati
strategies meet the highes

In some situations, ra
acceptable. In these c
and qualitative data m
goal remains to seek

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
for decision-making
n-making, the framew
nsions that complem

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tial Evidence

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 Spiva 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

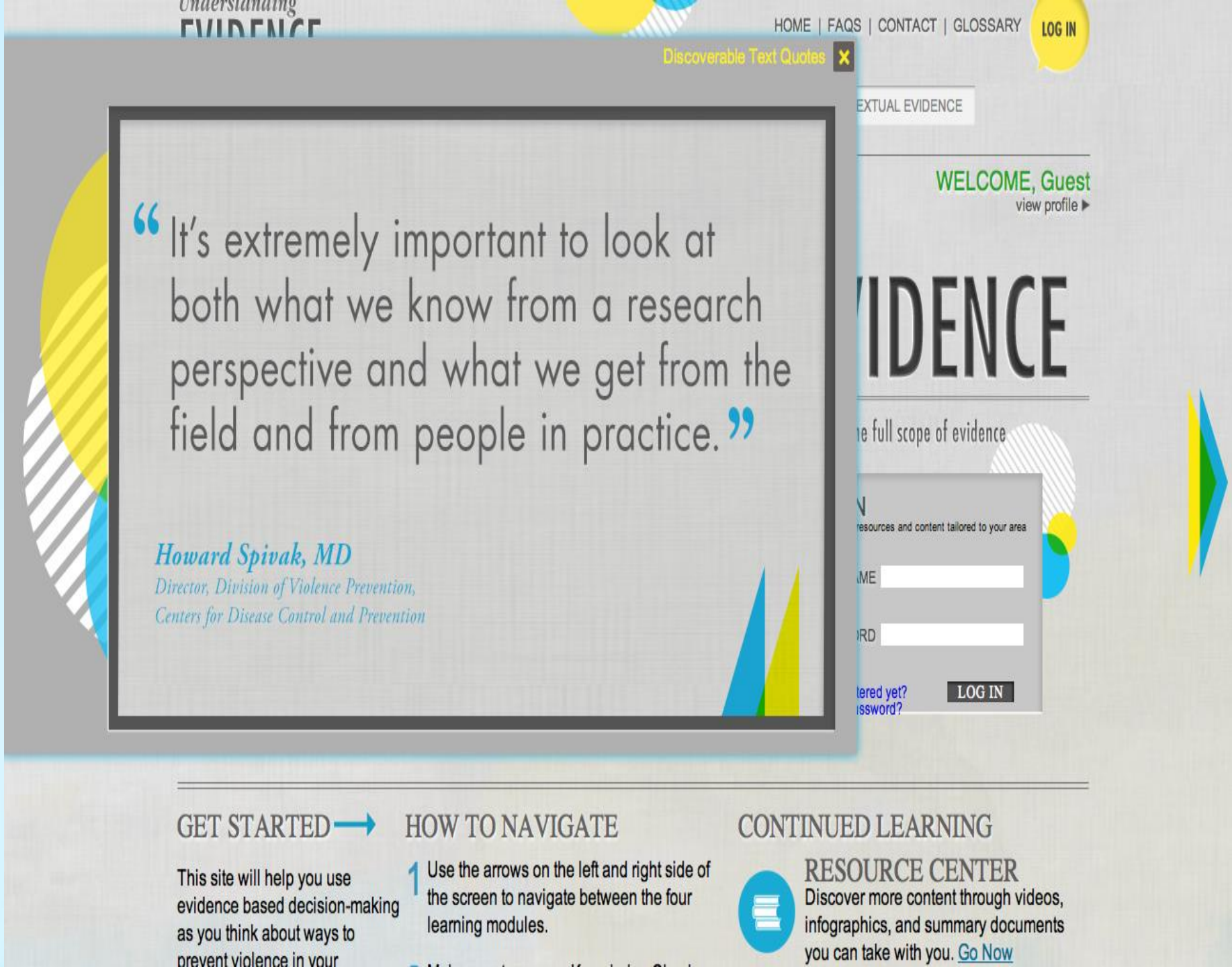
Introduction to experiential evidence

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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Discoverable Audio Quotes

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.

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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

EXPERIENTIAL EVIDENCE

CONTEXTUAL EVIDENCE

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.

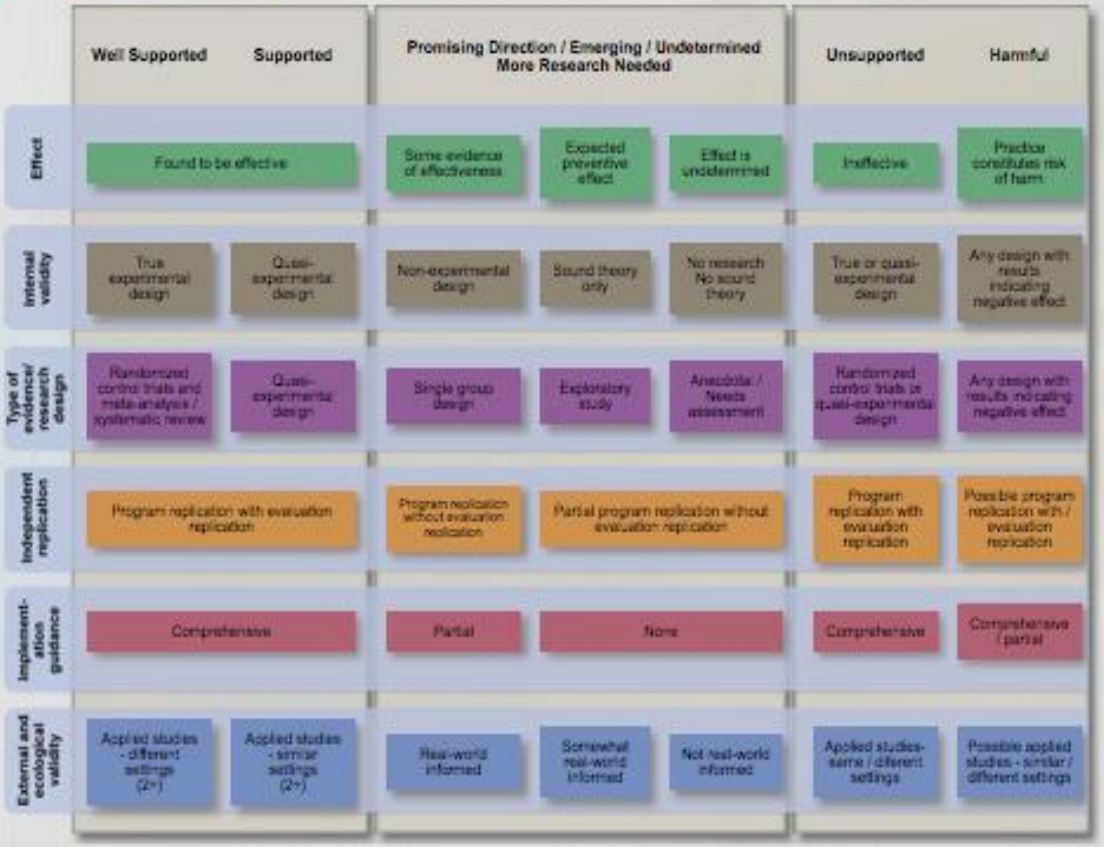
— Daniel Whitaker, Professor of Public Health at Georgia State University

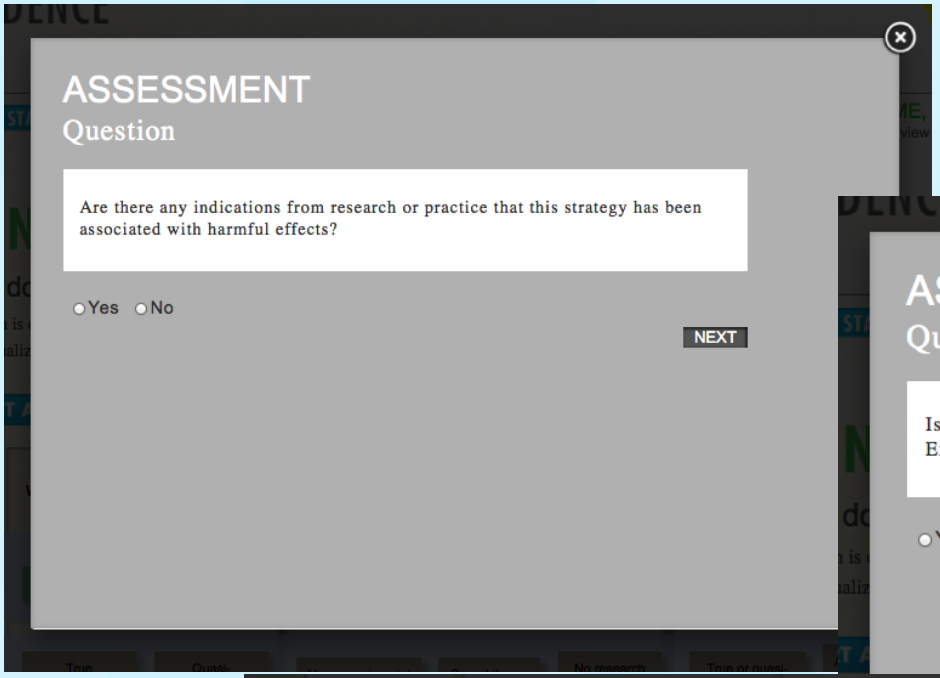
CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

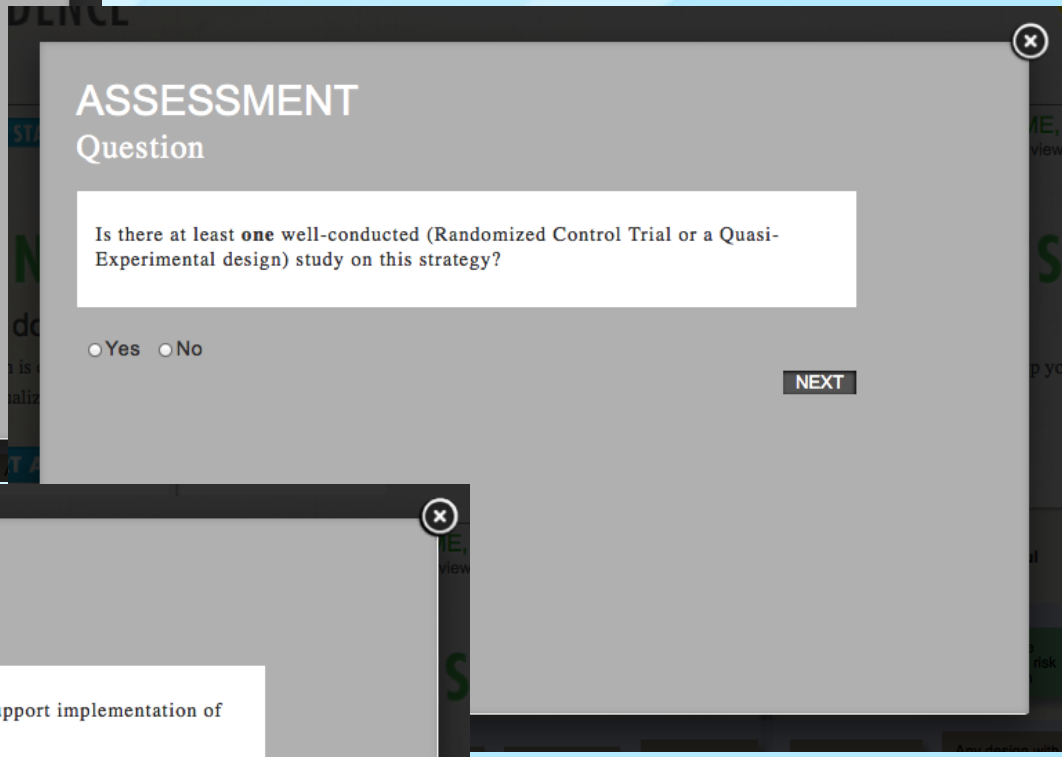
How does your strategy map onto the Continuum?

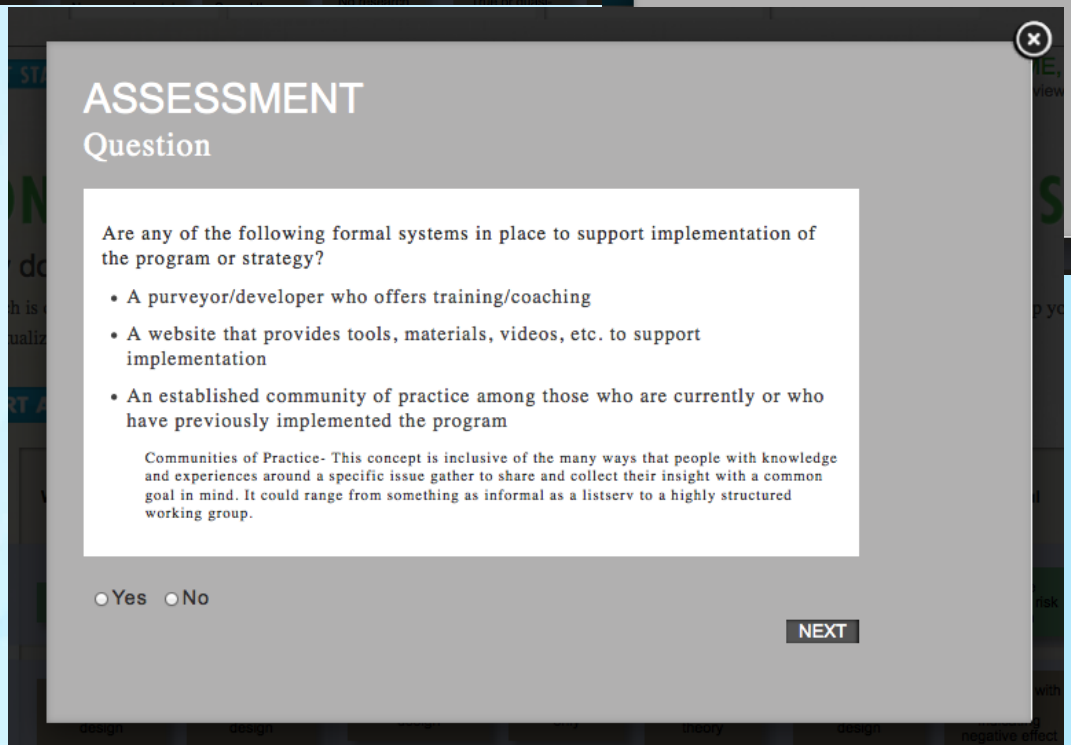
Research is constantly emerging and evolving, making the use of best available research evidence a continuous journey. This tool will help you conceptualize where you are on this journey and what steps you can take to continue moving forward.

START ASSESSMENT ▶




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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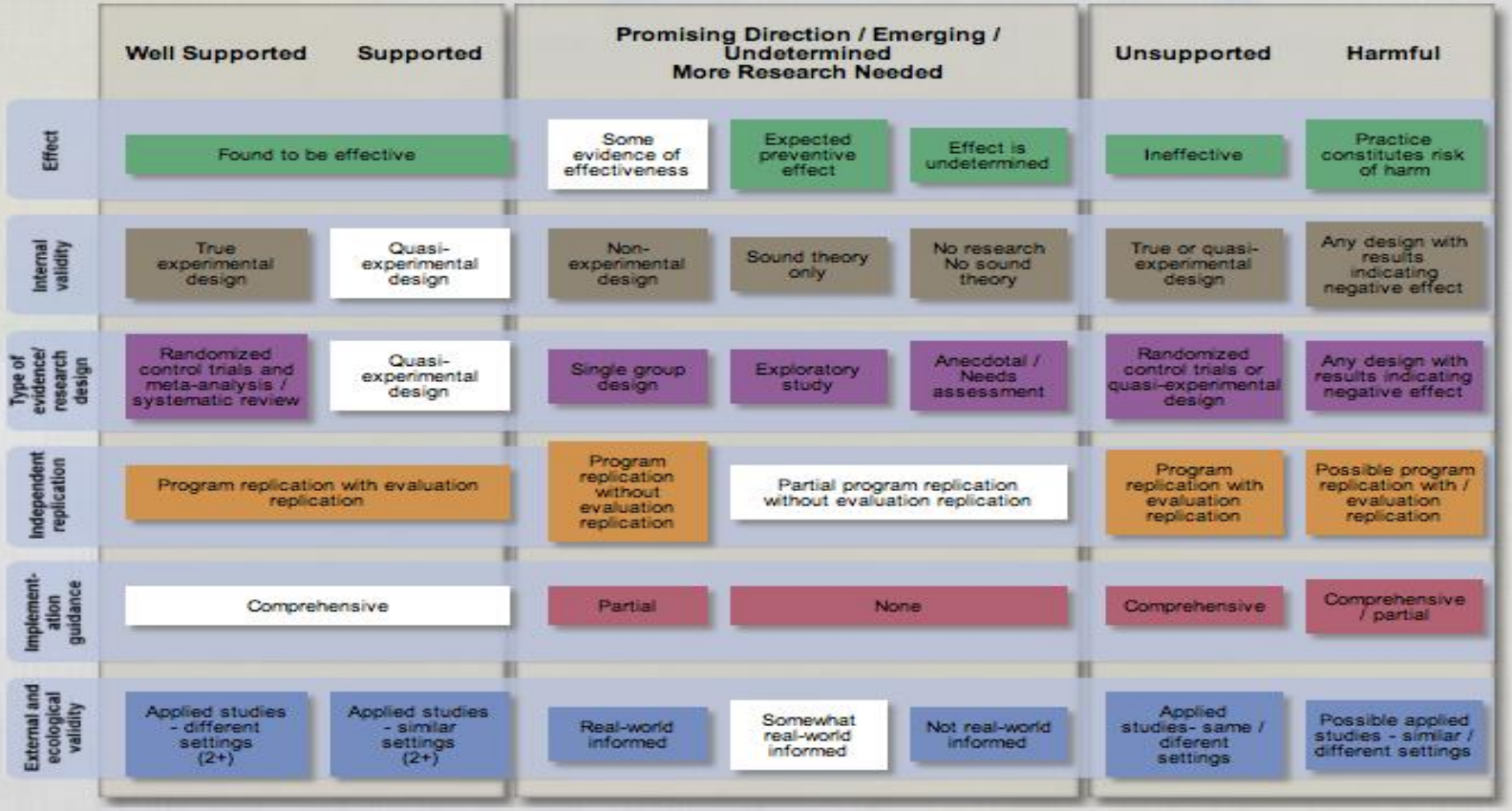
START ASSESSMENT ►



continuum results for:

INTERNAL VALIDITY

non-experimental design

Relative to experimental and quasi-experimental designs, non-experimental studies are the weakest of the three in terms of internal validity. Even though these designs are not as rigorous as true and quasi-experiments, they may still be based on sound theory and include some empirical aspects geared toward internal validity. Studies that are non-experimental do not have a control/comparison group or multiple measurement points making it difficult to attribute observed changes to the program. An example of a non-experimental study would be one with a single (treatment) group and a pre-post test or a post test only.

RELATED RESOURCES:

Internal Validity 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

- Community-Campus Partnerships for Health
  ccph.info
- The Community Toolbox
  http://ctb.ku.edu/en/dothework/tools_tk_12.aspx
- CDC's Framework for Program Evaluation
  http://www.cdc.gov/eval/framework/index.htm
- The American Evaluation Association
  http://www.eval.org/p/cm/ld/fid=108
- Innovation Network
  http://www.innonet.org/index.php?section_id=4&contentid=16

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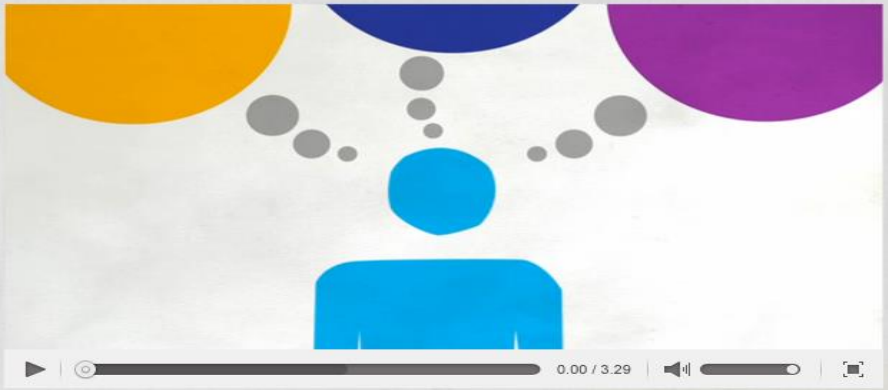

RESOURCE CENTER

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

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.

CONTACT

underevid@cdc.gov

Helen Singer, MPH
Health Scientist
Division of Violence Prevention

Name:

Email:

Message:

SEND

This program provides a free continuing education opportunity by:
International Association for Continuing Education and Training (IACET)

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Thank you!

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