

CONTINUUM of EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun



The tool is an interactive Web resource developed by CDC’s Division of Violence Prevention that supports public health practitioners in making evidence-informed decisions around violence prevention. The goal of evidence-based decision making is to bring a high standard of research evidence into the decision-making process while considering the contextual and experiential factors that influence those decisions. The Understanding Evidence tool is a free online resource that offers important knowledge and resources for using evidence in decision-making processes to practitioners and others working to prevent violence.

<http://www.cdc.gov/features/UnderstandingEvidence/index.html>

Questions and Answers (from <http://vetoviolence.cdc.gov/apps/evidence/#&panel1-8>)..... 1-4

Final strategy map..... 5

Description of “Some evidence of effectiveness” 6

References 7

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.



Strategy: H.R. ____, Handgun Purchaser Licensing Act (permit-to-purchase)

Objective: Reduce firearm homicide rate by 40% in 10 years.

ASSESSMENT

Introduction

The Continuum of Evidence of Effectiveness is a tool that clarifies and defines standards of the Best Available Research Evidence. In Understanding Evidence, the Continuum is applied specifically to the field of violence prevention, but it can be used to inform evidence based decision-making in a wide range of health-related areas.

Introduction

In order to best use this interactive continuum, you may want to:

Complete the learning modules on this site, particularly Best Available Research Evidence.

Collect the most comprehensive and recent research evidence available on the strategy you would like to assess (e.g. journal articles, research summaries) or ask someone to join you who is knowledgeable about the research evidence on this strategy (e.g. Technical Assistance provider).

Take a moment to think about the impact you are hoping to achieve in your community or population and whether the strategy you are considering is likely to achieve that impact.

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

Remember that we may ask questions that you cannot answer with the research evidence that is available to you. Please answer to the best of your knowledge, and you will be able to map the strategy you are considering onto as many dimensions as you can.

Question

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

Yes No

Answer: No. However, the Gun Lobby may argue that the law is harmful because it believes it will lead to gun confiscation similar to what occurred in Germany after WWI and during WWII. See references Harcourt and LCAV.

Question

In the cases where the strategy was found to be associated with harmful effects, was the strategy implemented the way it was intended?

Yes No

Answer: NA. Since response to first question was No this question was skipped.

Question

Does the available research on this strategy include **two** or more well-conducted studies (Randomized Control Trials or Quasi-experimental designs)?

Randomized Control Trial – A trial in which participants are assigned to control or experimental (receive strategy) groups at random, meaning that all members of the sample must have an equal chance of being selected for either the control or experimental groups (i.e. Flipping a coin, where “heads” means participant is assigned to the control group and “tails” means they are assigned to the experimental group). This way, it can be assumed that the two groups are equivalent and there are no systematic differences between them, which increases the likelihood that any differences in outcomes are due to the program, practice, or policy and not some other variable(s) that the groups differ on.

Quasi-Experimental Designs - Experiments based on sound theory, and typically have comparison groups (but no random assignment of participants to condition), and/or multiple measurement points (e.g., pre-post measures, longitudinal design).

Yes No

Answer: No. Assumes studies on laws in Missouri and Connecticut were not Quasi-experimental.

Question

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

Yes No

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

Question

Do the study findings indicate short and/or long term preventative effects in the areas you are concerned about?

Yes No

Answer: Yes. Studies were for several states and over 6 to 10 years.

Question

Is the study you are reviewing a Randomized Control Trial?

Yes No

Answer: No.

Question

Does the study you are reviewing use a Quasi-Experimental design?

Yes No

Question

The replication of a program involves implementing the program with participants who are different from the original evaluation (e.g., in a different school with other students). Program replication in research evidence is stronger when it is done independently, meaning the program is put in place and evaluated by researchers/practitioners who are not affiliated with the original program and who do not have any conflicts of interest in implementing or evaluating it.

Has the program or strategy been implemented in more than one setting?

Yes No

Answer: Yes. Different states.

Question

Was the strategy implemented with high fidelity (i.e. in almost exactly the same way) in both settings?

Yes No

Answer: Yes. Like yes since laws might be implemented in similar ways.

Question

Programs that demonstrate the most reliability (ability to repeatedly produce the preventive effects) are those that have been replicated at least once by independent practitioners/ researchers, in a similar setting to the original program, using a rigorous research design (randomized control trial or quasi-experimental design), and with high fidelity to the original program (i.e., conducted in the same way as the original evaluation of the program).

Has the program or strategy been evaluated in almost exactly the same way in both of these settings?

Answer: Yes. See references for authors Vernick and Webster.

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

Yes No

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.

Answer: Yes. Likely yes because laws could be expected to be implemented according to similar legislative guidance.

Yes No

Question

If formal systems to support implementation are in place, are these resources available and accessible?

For example, are there program manuals and/or trainings readily available at no or low cost?

Yes No

Question

Has the program or strategy been implemented in two or more applied ("real world") settings?

Yes No

Question

Are the study settings significantly different from one another with different populations and/or physical/geographical locations?

Yes No

Complete!

Thank you for completing the assessment questions. Once you close this window, the highlighted boxes will show you where your answers mapped to each dimension. This will give you an indicator of the strength of evidence informing the various aspects of the strategy you are considering. Click on the white boxes to learn more about your results.

NOTE: See the resulting strategy map on the next page. On the web page you click on the boxes before completing the assessment and after it when the white boxes are shown. A sample for is shown.

CONTINUUM of EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

Final Strategy Map

	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	Practice 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-analysis / 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 / diferent settings	Possible applied studies - similar / different settings

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

continuum results for:
EFFECT

some evidence of effectiveness

Some programs may not have two or more rigorous evaluations to demonstrate short- and/or long-term preventive effects, but they are based on sound theory and have been rigorously evaluated, and the results indicate that they may produce preventive outcomes. These programs show some evidence of effectiveness, although these effects cannot be considered as compelling as those that have been subjected to two or more rigorous evaluations and show short- and/or long-term preventive effects.

RELATED RESOURCES:

Effect 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 to the right may be helpful.

In addition to those more general resources, please visit our resource center for links specific to your area of violence prevention.

RESOURCE LINKS

- Community-Campus Partnerships for Health
ccph.info
- The Community Toolbox
http://cfb.ku.edu/en/doingwork/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/find_an_evaluator/evaluator_search.asp
- Innovation Network
http://www.innonet.org/index.php?section_id=4&contentid=16

CONTINUUM *of* EVIDENCE OF EFFECTIVENESS

Strategy Map on the Continuum for a Federal Law Requiring a License for Any Purchase of a Handgun

References

- Defilippis, E. and Hughes, D. How This Piece of Paper Fights Gun Crimes and Saves Lives. TheTrace. Accessed on July 8, 2015 from <http://www.thetrace.org/2015/07/gun-permit-to-purchase-permits-van-hollen-federal/>.
- Harcourt, B. On gun registration, the BRA, Adolf Hitler, and Nazi gun laws: exploding the gun culture wars (a call to historians). Fordham Law Review. Vol 73, No 2, Article 11, 2004 (entire article is worth reading, see at least pp 668-771). Accessed on July 9, 2015 from <http://ir.lawnet.fordham.edu/cgi/viewcontent.cgi?article=4029&context=flr>.
- Legal Community Against Violence (LCAV). 10 myths about gun violence in America (see #8 regarding confiscation). Access on July 9, 2015 from http://smartgunlaws.org/wp-content/uploads/2012/05/Ten_Myths.pdf.
- Rudolph, K et al. Association between Connecticut' permit-to-purchase handgun law and homicides. American Journal of Public Health: August 2015, Vol. 105, No. 8, pp. e49-e54. doi: 10.2105/AJPH.2015.302703
- Van Hollen, C. Handgun Purchaser Licensing Act. 114th Congress, 1st Session, H.R. _____. Accessed on July 8, 2015 from <http://vanhollen.house.gov/sites/vanhollen.house.gov/files/Handgun%20Purchaser%20Licensing%20Act.pdf>.
- Webster, D. and Vernick, J. (eds). Updated Evidence and Policy Developments on Reducing Gun Violence in America. Center for Gun Policy and Research, Johns Hopkins Bloomberg School of Public Health. Accessed on July 8, 2015 from http://www.jhsph.edu/research/centers-and-institutes/johns-hopkins-center-for-gun-policy-and-research/resources/digital_update_Webster_Vernick.pdf.