

Evidence-Based Practices to Better Ensure Impact



ARIZONA GRANTMAKERS FORUM

Learning Objectives



By the end of the session, you will be able to:

- * Describe evidence-based interventions.**
- * Identify the approved sources of evidence**
- * Find evidence for your intervention.**
- * Assess the utility of evidence you have located.**
- * Understand how you might use evidence.**

Presentation Overview



- **What is evidence?**
- **What are evidence-based interventions?**
- **What are sources of evidence?**
- **What are the criteria for assessing evidence?**
- **How can funders use evidence?**

Philanthropy & Evidence



- * **Using evidence to select grantees**
- * **Building evidence (via evaluation) of grantees**
- * **Using evidence to determine investment parameters**

What Is Evidence Based Practice?



- **“Evidence based practice is the preferential use of interventions for which systematic empirical research has provided evidence of statistically significant effectiveness as treatments for specific problems.**
- **Evidence based practice is an approach that tries to specify the evidence there is for a treatment or intervention and to rate how scientifically sound it may be. Its goal is to eliminate unsound practices in favor of those that have better outcomes” says Wayne Parker.**

Historical “Enemies” of the Approach



- **Enemy #1: Current Practice typically consists of making the same mistakes year after year with increasing confidence and a resulting decreasing need to make any improvements.**
- **Enemy #2 Innovation. Wait, is that so? Yes! Many funders and advocacy groups extol the virtues of innovation rather than effectiveness. Beware the claims of the originator of an innovative intervention even if reputable and associated with a research institution!**

Fighting the Enemy: Consider the alternative!



- **Evidence based practice is the result of systematic validation of interventions by rigorous research and reviews by independent researchers who have no vested interest in the results.**
- **The downside of evidence based practice is that it requires highly technical evaluation of the research design and statistics of outcome research.**
- **The upside is that there are governmental and non profit organizations that have done this work for you**

The Case of Chocolate



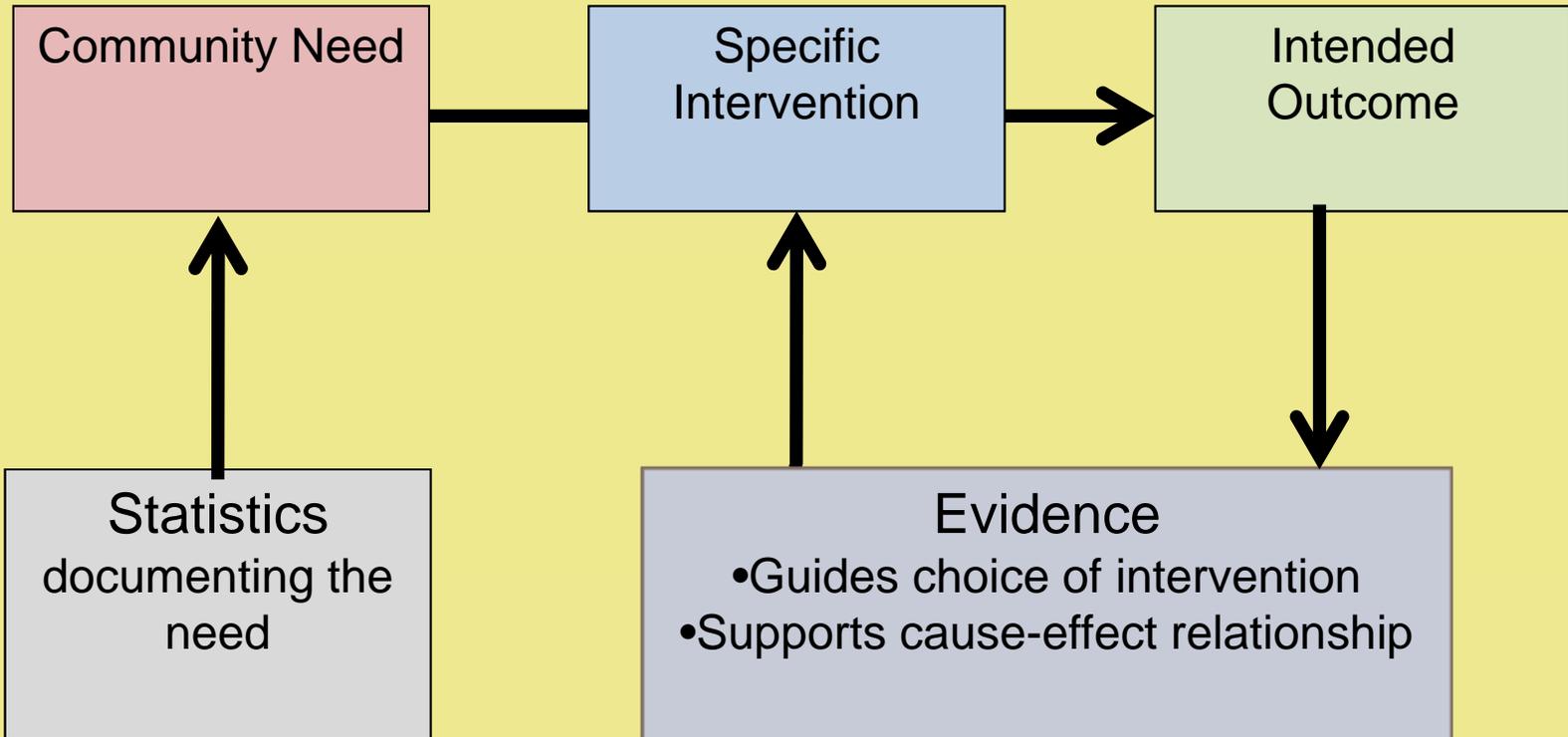
- **Shall we consider the case of chocolate?**
- **Scenario: As a funder you want to look for innovative and evidence based programs to help blood pressure be lowered in the United States. You have heard that dark chocolate is the healthy chocolate. This is very exciting, Willy Wonka move over! Chocolate is not only fun and makes you happy, it is healthy. Who says so?**
- **Some expert or experts, I believe. I heard it somewhere...**

Chocolate Study



- **Question: Does dark chocolate rather than white chocolate or milk chocolate can lower your blood pressure.**
- **Open the envelope in front of you. Eat your chocolate**
- **Lets consider theory of change and our chocolate as our intervention.**

Theory of Change





Evidence Based Intervention



- “Evidence-based intervention” is a term used to describe service activities that are *supported by research*.
- These interventions indicate a high likelihood that these activities will address the need, *and* result in intended changes. In other words, evidence should show the intervention is likely to work.
- Evidence demonstrates that the proposed intervention (design, dosage) is likely to lead to the outcome. ($X \rightarrow Y$)



Everyday Example

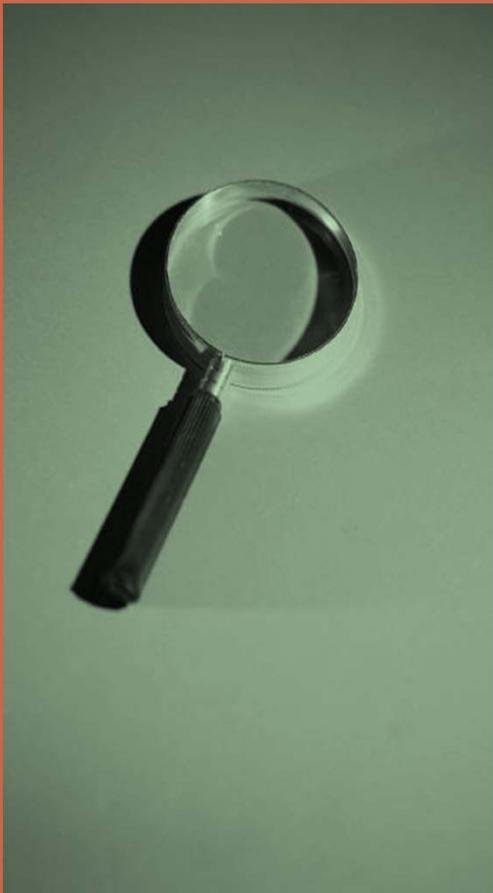


Let's revisit an example of a theory of change from our chocolate case.

- **I have high blood pressure = statement of the problem / need.**
- **I take eat dark chocolate for medicine = intervention.**
- **I will be healthy (i.e., low blood pressure. = outcome.**

Medical evidence suggests that taking dark chocolate will solve the problem.

Back to Evidence



- **EVIDENCE:** Information that supports your choice of a specific intervention and its ability to produce your intended outcome. It is NOT enough to just say “we believe” our intervention is “likely” to be successful. You need to justify your choice with evidence. Here is some chocolate evidence.
- Dark chocolate -- not white chocolate -- lowers high blood pressure, say Dirk Taubert, MD, PhD, and colleagues at the University of Cologne, Germany. Their report appears in the Aug. 27 issue of *The Journal of the American Medical Association*.
- Dark chocolate -- but not milk chocolate or dark chocolate eaten with milk -- is a potent antioxidant, report Mauro Serafini, PhD, of Italy's National Institute for Food and Nutrition Research in Rome, and colleagues. Their report appears in the Aug. 28 issue of *Nature*. Antioxidants gobble up free radicals, destructive molecules that are implicated in heart disease and other ailments.

<http://www.webmd.com/diet/news/20030827/dark-chocolate-is-healthy-chocolate>

Back to Evidence



Studies showed:

- Taubert's team signed up six men and seven women aged 55-64. All had just been diagnosed with mild high blood pressure -- on average, systolic blood pressure (the top number) of 153 and diastolic blood pressure (the bottom number) of 84.
- Every day for two weeks, they ate a 100-gram candy bar and were asked to balance its 480 calories by not eating other foods similar in nutrients and calories. Half the patients got dark chocolate and half got white chocolate.
- Those who ate dark chocolate had a significant drop in blood pressure (by an average of 5 points for systolic and an average of 2 points for diastolic blood pressure). Those who ate white chocolate did not.
- In the second study, Serafini's team signed up seven healthy women and five healthy men aged 25-35. On different days they each ate 100 grams of dark chocolate by itself, 100 grams of dark chocolate with a small glass of whole milk, or 200 grams of milk chocolate.
- An hour later, those who ate dark chocolate alone had the most total antioxidants in their blood. And they had higher levels of epicatechin, a particularly healthy compound found in chocolate. The milk chocolate eaters had the lowest epicatechin levels of all.

Evidence Lessons



- Evidence provides a “reality check” for theory of change elements. Therefore, all programs should find and use evidence to explain outcomes.
- For new nonprofit programs:
 - What is the recommended design and dosage (frequency, intensity, and duration) needed to achieve an intended outcome?
- For existing programs. Should we think about our evidence enemies?
 - Is there sufficient evidence for the intervention to continue its use?
 - Based on the evidence, are there modifications to the intervention that should be considered to have greater impact?
 - Do you need to choose a new intervention?

Evidence Questions



Have you identified the possible sources of evidence that can help you make the case that an intervention is likely to achieve the desired result?

Yes, I went to WEBMD and found to smart Europeans say dark chocolate is the cure!

Finding the Evidence



- **Ask: How do I do this?**
- **Answer: You should look for evidence that program models or interventions like yours have been successful.**
- **We will come back to this in a few minutes.**

The Evidence Cycle



Assessing the Evidence

Research
Evaluations

- **What to look for.**

Impact
Evaluations

- **What to look for.**

Criteria include:

- **Relevant:** Cites comparable intervention with similar beneficiaries and results
- **Compelling:** Persuasive, shows clear likelihood of success
- **Up-to-date:** Recently published or most recent available
- **Objective:** Source with no stake in outcome and published in a peer reviewed journal or by a credible organization

Assessing the Evidence



While reviewing an article or report about another program, you need to assess whether certain criteria are met before it becomes useful evidence.

You need to be sure that the intervention that was studied in the article or report is relevant. Was the intervention similar in design (the specific activities provided), dosage (frequency, intensity and duration), the type of beneficiaries served, and outcome achieved? If not, it may not be relevant enough to use as evidence for your Theory of Change

Assessing the Chocolate Evidence



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- You need to be sure that the intervention that was studied in the article or report is relevant. Was the intervention similar in design (the specific activities provided), dosage (frequency, intensity and duration), the type of beneficiaries served, and outcome achieved? If not, it may not be relevant enough to use as evidence for your Theory of Change.

Assessing the Chocolate Evidence



- Oh No- Enemy Number #2, Innovation. You were so thrilled about chocolate that you funded the oompah Loompah programs that gave a never ending supply of dark chocolates to a *horde of chocaholics!*
- The mission statement was. Oompah lumpah, O have another piece of chocolate for you.
- No one consider how much was needed and other relevancy questions.
- The chocoholics are now obese! Let's look at some obesity evidence and think about funding the Oompah Loompah program again.

Going Deeper....



Evidentiary weight also depends on...

THE METHODOLOGY

Or the research design's ability to determine causality. Did *X produce* or *cause* *Y* outcome?

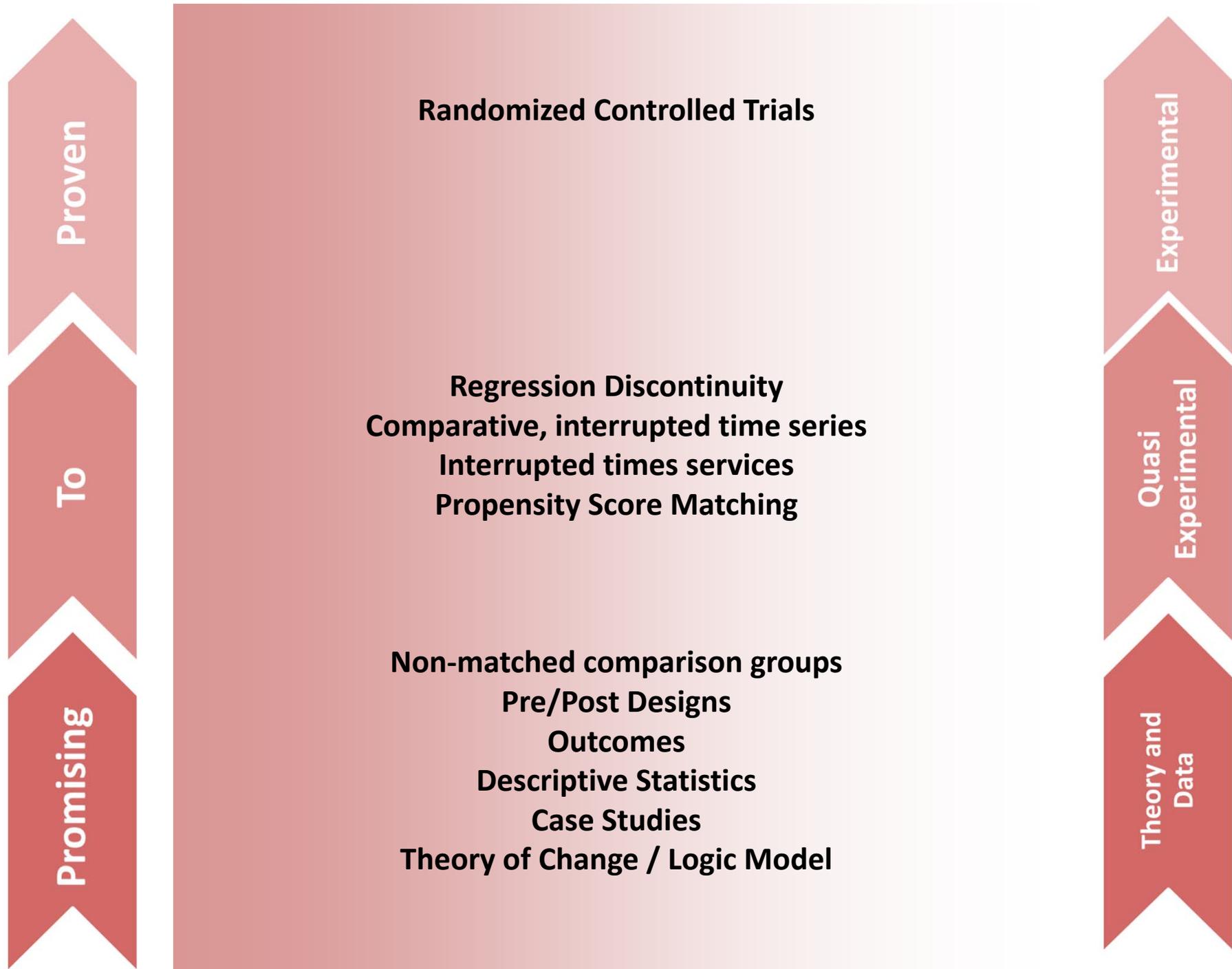
Causation



- **Difficult to prove for many philanthropic strategies:**
 - advocacy, public will building, public interest litigation, diplomacy.

However...

- **Well-established hierarchy of evidence for programmatic investments**
 - What Work's Clearinghouse & Invest in Innovation



Proven

To

Promising

Experimental

Quasi
Experimental

Theory and
Data

Randomized Controlled Trials

Regression Discontinuity
Comparative, interrupted time series
Interrupted times services
Propensity Score Matching

Non-matched comparison groups
Pre/Post Designs
Outcomes
Descriptive Statistics
Case Studies
Theory of Change / Logic Model

EXAMPLE



Promising

To

Proven

Performance measurement shows that 75% of girls age 14-16 participating in the Shape Up program made more healthy food choices.

A 2005 evaluation by evaluators found that after 12 weeks, the girls in the program made 50% more healthy food choices than the comparison group, created based on propensity scoring.

A 2010 impact evaluation by University of MN using experimental design found after 12 weeks, the girls in the experimental group made 50% more healthy food choices than control group girls.

Where to find evidence?



- **Government**
- **Universities**
- **Evaluation firms and think tanks**
- **Online research: Google scholar & ERIC**

Key Points



- **The term “evidence-based intervention” describes activities that are supported by research to indicate a high likelihood that the intervention will address the need and result in intended outcomes.**
- **Evidence is information or documentation that a specific intervention (design and dosage) will produce your intended outcome.**
- **Please note that random control trials or design and dosage are not the only evidence based protocols.**

Key Points to Remember

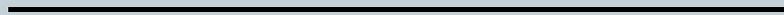


- **When assessing evidence, check to be sure it is relevant, compelling, up-to-date, and objective.**
- **The strongest evidence clearly proves that the intervention caused the positive change by using an experimental design.**
- **The evidence continuum is important just because something changed or happened it may not have occurred because of your funding intervention.**

The End



THANK YOU



QUESTIONS