

# EVIDENCE-BASED PRACTICES FOR LOCAL GOVERNMENTS



Evidence-based practices. Data-driven results. These terms are popping up with increasing frequency in the grant world as grant making agencies seek to use their limited resources to fund what has proven in the past to work. Does this mean the multi-talented municipal official who already wears too many hats must now add the title of social scientist to their résumé? Not at all. In the real world, local government employees usually team up with university academics or professional researchers when seeking grants that require a research component. While they are not expected to conduct studies themselves, it is beneficial to know a bit about the process. This paper is one small step toward increasing the average grant administrator's comfort level when working with expert researchers. A little background knowledge can go a long way in making the partnership a positive experience for all involved.

## 1 What Are Evidence-Based Practices?

Evidence-based practices are empirical, which simply means that results are scientifically measured to determine their effectiveness. Let's say a school district hired reading tutors to improve test scores. These tutors become popular with students, teachers, and administrators. Evidence-based practices would require the district to go beyond simply believing that the tutors helped improve student performance to measuring student performance with and without tutors to document what impact they had.

## 2 Who Uses Evidence-Based Practices?

Evidence-based practices are becoming more common throughout a variety of industries, even some that may surprise us. It wasn't magic but metrics—[sabermetrics](#), to be exact—that may have helped reverse that pesky 108-year-old curse on the Chicago Cubs. Sabermetrics is defined as the use of statis-

tical analysis in baseball performance, and all major league teams are using it. [Medicine](#) is another area where it is popular; in fact, medicine is where it originally got started. It is a good thing, too, when we consider leeches, bloodletting, and arsenic were once popular cures. At one time, they made perfect sense to both doctors and patients alike. Yet, popular knowledge and longstanding customs have their limitations. Rigorously evaluating treatments helps us differentiate between folk wisdom and effective medicine.

In the grant world, the Office of Management and Budget (OMB) has encouraged the use of evidence-based practices in government [decision making](#) across the board. Therefore, more federal grant making agencies are taking them into consideration: the Department of Health and Human Services, Department of Justice, Department of Education, and National Institutes of Health, to name a few. Many private foundations are also beginning to require evidence-based practices. The [Anne. E. Casey Foundation](#), for example, which promotes healthy child development, is a strong advocate of data-driven results and encourages other funders to do the same.

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## 3 Practical Considerations

### Are There Different Levels of Involvement?

Yes. It is important for grant applicants to realize that there are different levels of involvement in evidence-based practice. Some funders may only fund programs that have solid evidence behind them, demonstrating they are effective service models that help mitigate the problem they intended to address. Grantees are often asked to do an outcome evaluation, or a study that determines whether or not the program is working after funding is received. That way, even though there are previous studies indicating the specific type of service model has already been successful, your outcome evaluation will add to the body of knowledge in that area. Some funders acknowledge that in science, it takes many trials and errors to find what actually works. In 2016, four federal agencies used what is known as [tiered-evidence grant making](#). That means most of their funds go to programs that are backed by scientific evaluation and found to be successful, but smaller amounts are allocated to new and innovative programs that are considered experimental. These grantees are helping to pioneer the evidence in that particular area.

### Who Are Practitioners?

You may be a practitioner! It is a term researchers use when referring to employees in the agencies they partner with. They may be administrators, law enforcement or correctional officers, fire-fighters, social workers, health professionals, educators, or officials

in nonprofit or community-based organizations.

### What Can I Expect from My Research Partner?

In the [Research That Matters Webinar: The Role of Research and Researchers in the Smart Policing Initiative](#), Dr. Scott Decker of Arizona State University offers guidelines for successful partnerships. According to Dr. Decker, a research partner should be part of the team and do more than simply provide technical know-how. Rather than being considered infallible experts, researchers and practitioners should be gaining insights from each other. Municipal officials can share their field experience, and researchers can help the rest of the team by walking them through the data, helping them identify problems, and contributing to solutions in their implementation. Researchers can also help call attention to problems by framing statistics in a way the public will find compelling.

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It should be noted that while many projects allow the grant applicant to choose their own researchers, there are times when the funding agency provides one for them, as in the case with the Byrne Criminal Justice Innovation (BCJI) program. Communities participating in the BCJI are partnered with the [Local Initiatives Support Corporation \(LISC\)](#) to help them use data to develop their crime fighting strategies.

### How Will I Know If My Program Is Successful?

The bottom line for most practitioners is knowing whether or not their own program is considered successful. Unfortunately, research is a very complicated and ongoing process. There are guidelines researchers use to determine statistical significance, but there are few absolutes in determining success

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or failure. In other words, there is no universal formula that says every single crime reduction program must show an X% decrease in crime to be effective. Different agencies have different criteria of what constitutes success. The important thing for practitioners and their research partners to know is what their particular funder considers successful. Many will make that readily available on their websites. The Office of Juvenile Justice has a [model programs guide](#) that rates previously funded programs as effective, promising, or not effective. Even so, they are careful to qualify that it is not an exhaustive list, and funding agencies are discouraged from relying on it exclusively for their decisions.

For those who would like more information on the general process, the Vera Institute of Justice has put together a guide that explains the measures [outcome evaluations](#) must include to be considered evidenced-based. While its emphasis is on juvenile justice, it is broadly applicable to many programs. Although there are common methodologies to ensure an evaluation is scientific, the final determination of the program's ultimate success or failure may still be determined by the funder.

## 4 Why Do We Need Evidence-Based Practices?

How much we buy into a concept influences how comfortable we are with it. So, let's dig a little deeper into the rationale behind evidence-based practices. One reason is fairly obvious. Most grant making agencies have limited funds and far more applicants than they can help. They want to give their money to programs that are a safe bet and have already been demonstrated to make a difference. It is no different than when we as consumers go shopping for a particular product, say a spot remover. Of course we want to buy one that will actually remove the stain, especially if we are on a limited budget. Not one of

us would want to waste money on something that does not work.

Effectiveness, however, is only one element in evidence-based practice. Many funders want programs to be both replicable and generalizable, too. "[Replicable](#)" refers to the degree to which other researchers can use your study as a blue print to set up more just like it. "Generalizable" refers to the degree to which the results can apply to more than just the specific population studied. For example, let us say that a local social services department in City X initiated a peer counseling program that was successful in helping the chronic homeless get off the streets. If it is replicable, that means other agencies will be able to use it as a model to create a similar program in their city and get similar results. If it is [generalizable](#), it will be work not just with the homeless population in City X, but in homeless populations across the country. It is easy to see why this appeals to funders. Budget constraints mean they can't give money to everyone who applies, no matter how much they want to. However, by funding research that contributes solutions to social problems, they are still able to extend their reach to countless numbers of organizations they are able to directly fund. Thus, evidence-based practices allows funders the biggest bang for their buck.

This may seem logical on the surface, but the skeptic in us may still question the need for extensive research. Aren't we easily able to tell what works through good old-fashioned common sense? The answer is NO! We all have biases hardwired into us that prevent us from thinking one hundred percent rationally. It would take forever to list in this paper all the personal, economic, and cultural biases humans are vulnerable to. Here are two just to get an idea of how they work:

- [Selective Perception](#) – Whether we are conscious of it or not, there is a natural human tenden-

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cy to select evidence that supports our beliefs and ignore or minimize what contradicts them. For example, many criminal justice researchers have been frustrated with the public's loyalty to "[scared straight](#)" programs. Despite their popularity, these dramatic confrontations between inmates and young offenders have been demonstrated to be ineffective. Oftentimes, the data actually shows an increase in recidivism in youth who participate in them. The truth is, if we strongly believe in these programs, the success stories will stick in our minds and failures will be forgotten or rationalized away. We may always have an example to share about a particular person who turned their life around, but this is known as [anecdotal evidence](#) and is not scientific. A more accurate picture involves comparing the actual number of program participants who stayed out of prison against those that did not participate. Verifiable results outweigh anecdotal evidence.

- [Availability Bias](#) – This holds that we rely on the examples in front of us to form our conclusions about something. Let's use a hypothetical example. An inmate reading program has been shown to be effective in increasing literacy and decreasing recidivism. One day, a graduate of the pro-

gram commits a high-profile bank robbery. Newscasters are quick to make the connection. Does this mean the program does not work after all? More likely it means those newscasters fell victim to the availability bias. One act by an individual, no matter how much attention it gets, does not erase all the documented positive improvements associated with the reading program. Scientific evaluation can protect beneficial projects from unfair publicity. Even when the headlines suggest otherwise, the data tells us a more complete story.

## 5

### What Makes Good Research?

Have you ever been frustrated by the way the media reports study results? One week they will decree that red wine reduces the risk of heart disease, then two weeks later they will tell us it does not. The headlines seem to seesaw back and forth indefinitely. It is always good to know a few factors to consider when evaluating a study's backstory. We can't explore every single one, but here are the basics:

#### Independent and Dependent Variables

The purpose of all [studies](#) is to test how one factor might affect another (the relationship between variables, to be more scientific). What is suspected of producing the effect is considered the independent variable; what is being affected is the dependent variable. The concept is much easier to grasp with examples. If our hypothesis is that school breakfast programs improve attendance, the breakfast program is the independent variable and attendance is the dependent variable. If the assertion is that making more naloxone available to the community helps prevent deaths from opioid overdoses, then the availability of naloxone is the independent variable and the number of deaths from opioid overdoses is the



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dependent variable.

## Confounding Variables

A [confounding variable](#) is a factor that can influence the relation between the independent and dependent variables in a way that may cause us to jump to conclusions. If that sounds way too complicated, let us provide two examples.



There is some evidence that suggests that, as a group, pet owners may be healthier than non-pet owners. Dogs, for instance, need to be walked. So is it the dog ownership or the act of walking them that improves health? To be confident it is dog ownership itself and not just increased physical activity, exercise habits must be controlled for. Researchers must make sure the dog owners and non-dog owners they compare get the same amount of exercise. If the two groups in the study get equivalent exercise, but dog owners still have a lower rate of disease, we are more confident that dog ownership (independent variable) may affect health (dependent variable) in a positive way. Exercise would be our confounding variable because it is something that needs to be considered before we can confidently assert that dog ownership

make us healthier.

In real life, confounding variables abound. It is often hard to isolate the effects of the independent variable out in the field. For instance, criminal justice researchers have found that gentrification can be a confounding variable in crime reduction studies. If gentrification occurs in an area at the same time an experimental crime prevention program is happening, it is hard to separate its effects from the program itself. Oftentimes what will happen in this situation is that the research partner will turn to a statistician in order to use statistical analysis to try and detangle the relationship. If you can not fully wrap your head around how exactly this works, do not worry! Most people cannot. In fact, the reason the research partner brings in the statistician is that they have specialized training far beyond the average researcher, let alone the average person.

## Why Randomized Control Trials Are Important

A [randomized control trial](#) is considered the gold standard in any experiment or study. When testing the effects of the independent variable, researchers often divide study participants into at least two groups: an experimental group, which gets exposed to the independent variable, and the control group, which does not. It is extremely important that random assignment is used to assign people to either group to avoid bias. A driver education refresher course will be our example. Our question is, "Will driving education refresher courses (independent variable) reduce the number of traffic accidents (dependent variable) in participants who complete them?" Study participants will complete a course, and their driving records will be monitored for accidents for the next five years. Since the point of the study is to test what difference a refresher course will make, there should be a control group with similar driving records who do not take it. That way, after the five-year period is over, the driving records of the two groups will be

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compared. If those in the experimental group had fewer accidents, perhaps the course made a difference. But instead of randomly assigning drivers to either group, perhaps the study administrator decided to put all the worst drivers in the refresher class, because they would benefit the most. While real-world logic may dictate that those with the greatest need be the ones to brush up on their driving skills, it would be a research disaster. We would never know how effective the course was, because the experimental group had more unsafe drivers to begin with. Randomized control trials helps minimize the risk that the experimental and control groups will be different in ways that prevent us from measuring the impact of the independent variable.

As crucial as they may be, random controlled trials are not always possible. In that case, researchers find alternatives, like matching groups with similar characteristics. For instance, if a police department is testing an intervention program in one city, they often compare crime statistics with a city of similar size and characteristics that did not receive the intervention. Matching is not as good as a randomized control trial, but often it is the only option available because of logistical or ethical concerns.

It is important to note that while it is good for practitioners to be aware of the importance of randomized control trials, they rarely need to concern themselves with the logistics. Researchers take care of the actual assignment of study participants to groups, usually using a computer program or random number table.

## What Is Validity?

In a very broad sense, [validity](#) refers to whether or not we are really measuring what we think we are measuring. A survey might ask respondents to estimate how much television they watch per day. Will they honestly answer that question? Or will they fudge by putting down how much time they feel comfortable

admitting to? Varying levels of validity are one reason studies on the same topic often contradict each other. They are really measuring different things.

## Conclusion

We hope that this information has made the research process just a little less mystifying. Our intention was to give a high-level overview of evidence-based practices and research principles. But we know that it won't turn you into a social scientist overnight. In fact, if you come away from this with perfect clarity and no questions at all, we probably explained it wrong. In the end, evidence-based practices are about making a more lasting difference. The more effective a program, the greater its impact on those it serves.

If you would like to read further, we've included a non-exhaustive list to continue your exploration.

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## Further Reading

[Center for Evidence-Based Practices](#) – Features applied research on how evidence-based practices in early childhood education can be implemented.

[Evidence-Based Practices in Criminal Justice Settings \(FAQ\)](#) – The “CliffsNotes” version of evidence-based practice from the Austin/Travis County Reentry Roundtable, with plenty of links to more resources.

[Evidence-Based Practices vs. Best Practices](#) – An older but brief article that contrasts evidence-based practices with best practices.

[Measuring Success: A Guide to Becoming An Evidence-Based Practice](#) – Provides steps that need to be included in an outcome evaluation to be considered evidence-based. Also includes general research principles written in lay terms.

[Promising Practices Network](#) – A useful resource of research-based information on programs related to children and families. Provides examples of how programs are evaluated.

[Smart Policing Website](#) – A variety of topics related to research can be found among the reports, guides, newsletters, podcasts, and recorded webinars on this site. A good source for those who like to learn from multimedia sources.

[The Results First Clearinghouse Database: From the PEW Charitable Trusts](#) – A clearinghouse of evidence-based programs designed to be a one-stop shop to assist policy makers in government in identifying what works.

[Tiered-Evidence Grants – Opportunities to Share Lessons from Early Implementation and Inform Future Federal Efforts](#) – A report by the General Accounting Office that describes the key features, benefits, and challenges of tiered-evidence grant making, and how they are used by federal agencies.



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