



**National
College
Access
Network**

Building Connections. Advancing Equity. Promoting Success.

PROGRAM EVALUATION PRIMER FOR NCAN MEMBERS

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The mission of the National College Access Network (NCAN) is to improve access to and success in postsecondary education for disadvantaged and underrepresented students and those who are the first generation in their families to attend college. NCAN does this by supporting a network of state and local college access programs that provide counseling, advice, and financial assistance; sharing best practices among the network; providing leadership and technical assistance; and helping establish new college access programs.

NCAN college access programs serve students and families in almost every state and the District of Columbia. NCAN member programs work in inner cities, rural communities and suburbs. Through hands-on advising and financial assistance, NCAN programs share a commitment to inspiring and motivating young men and women to obtain a college education and help them pay the tuition. For assistance in establishing a college access initiative in your community or state, please contact us.

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Introduction

What is this resource?

This program evaluation primer is an extended Q&A intended to guide NCAN members toward resources that can help them to successfully complete a program evaluation. The content contained herein has been modified from an earlier NCAN Training Module titled “Data Management & Evaluation Preparedness.” That training module was funded by the Lumina Foundation, to which NCAN is grateful. This primer is being developed through NCAN’s Common Measures Learning Community, which is being funded by the Michael & Susan Dell Foundation, and to which NCAN is also grateful.

For whom is this resource useful?

Professionals who work with college access programs should be particularly interested in this resource because of the growing emphasis on program evaluation and data-driven decision making in nearly every field, including college access. The program professionals most likely to benefit from this document are those most closely involved with research, evaluation, and program-wide data analysis, especially when that analysis happens on a longitudinal (year-to-year) basis. With that said, the information contained herein can still help program professionals—from field-based staff to executive directors to board members—better understand their program and utilize a continuous improvement process for program development and growth.

What is the purpose of this resource?

The purpose of this resource is to provide college access professionals with an introductory overview of data collection and program evaluation. Through this module, readers will gain a better understanding of the importance of data and evaluation; learn about the types of evaluation and which of these may best fit their program; and understand how to implement, analyze, and use this information.

What is a program evaluation?

A program evaluation is a “systematic study conducted to assess how well a program is working...typically focused on achievement of program objectives.”ⁱ

Program evaluations in the college access field specifically:

- Help program directors and staff better understand the nature of their programs and how they impact students;
- Help program funders/investors understand the impact of their investment; and
- Help the community and policymakers understand the potential for various educational interventions.

Many staff consider data collection and program evaluation to be a “pain” or an unnecessary opportunity to point out personal and professional weaknesses. However, a program evaluation

should more appropriately be considered a unique chance to illustrate what a program can do and how well it does it.

If you want to truly determine how effective your program is, the accurate collection and analysis of data are required. Anything less provides limited findings about the usefulness and benefits of your program. There are several types of program evaluations and countless methods for implementing these activities. However, all forms require a highly disciplined and methodological approach to their conduct (although some are more costly in terms of time and resources than others). Data in some form, whether numeric (quantitative) or through dialogue or observance (qualitative), must be collected and analyzed in a thoughtful way.

Regardless of the type of evaluation selected, you will need to set program goals (if they aren't already established), identify measurable objectives to achieve these goals, and collect and analyze data on those objectives. That's a program evaluation in a nutshell.

What are the benefits for a college access program to manage data and conduct program evaluations?

Although serving students is the ultimate focus of college access programs, data provide us with critical information about how well we are doing our job and where we can make program improvements and modifications. Wise program management requires data-driven decision making, and good decision making requires superior management of data. By effectively managing data, we can be confident that our decisions are based on a sound foundation of empirical evidence.

Otherwise, we have little foundation upon which to base future decisions (other than mere hunches or gut feelings), and have even less to show for the investment of finances and human resources.

There are several important reasons to conduct a program evaluation:

- Data collection and program evaluation help us determine the true impact of a program on students, which is the key to program development and continuity.
- An evaluation helps determine whether the strategies being employed effectively meet program goals and ultimately help students. Through an assessment of program effectiveness, directors can alter certain strategies or interventions to make them more proactive for students.
- Program evaluations provide feedback to directors and staff on their practices and service. The information gathered from an evaluation can help personnel improve their efforts.
- Program evaluations provide critical information for the development of short, medium, and long-term strategic plans. Program data provide key information that can be used to make decisions about the future direction of the program.
- Program evaluations can be used to attract future funding from current and future funders/investors.

- Generally speaking, funders/investors are much more attracted to programs that can illustrate their success through data. This wasn't really the case ten years ago, but it is now as even philanthropic agencies have tightened their belts.
- Because we generally have limited time with students, it is important to ensure that our time and energy are well spent. Additionally, because programs have finite sources of funds, analyzing programs for effectiveness helps us ensure that we are using funds appropriately and effectively.

What are some different ways to design a program evaluation?

Program evaluations can range from simple designs (e.g., what did students think about the usefulness of the Saturday Academy?) to complex (e.g., what impact did the Saturday Academy have on academic progress?).

Some of these issues depend on the timeline of the evaluation.

- **Short-term** evaluations are generally more simplistic than long-term evaluations. For instance, if you want to understand the impact or utility of a College Fair night, you might simply survey everyone or a sample of those in attendance.
- One step further (**medium-term**) would be to follow up with attendees in several weeks or months to ask if that information changed the way they thought or if it led to practical, concrete steps on the way to college.
- Alternative **longer-term** evaluation may then ask what impact certain interventions, such as a College Fair or Saturday Academy, may have on future college preparation and going behaviors, including course selection, college search, applications, attendance, and ultimately, college success.

The longer the evaluation plan and design, the more complex and costly the experience is. With that said, programs usually must consider short-, medium-, and long-term evaluations in their planning. This guide will further define the following types of program evaluation methodologies later on:

- Formative evaluation
- Summative evaluation
- Outcome evaluation
- Impact evaluation
- Process evaluation
- Cost–benefit/effectiveness analysis

Shouldn't all programs or centers conduct evaluations?

Yes. Evaluation and data collection should be a natural part of all programs. For assessing the impact of the program, determining course corrections, and “selling” the program to potential funders and users, evaluation is an essential element of operating a program.

However, not all programs conduct formal evaluations or even collect basic data that they can then analyze. This is usually for a number of reasons, including:

- No expertise or knowledge in evaluation. Program directors and staff who know little about evaluation may ignore it and “hope that it goes away.” The reality is that programs must either build that expertise or find/contract it.
- The program won’t allow for it. Some programs say that they have no budget or human resources that allow for data collection and evaluation. This is unacceptable. A program must provide resources to undergo the important work of outlining what it is your program or center does. Otherwise, future funding will be very difficult to attract without necessary data evidence and your program will lack a basis of evidence that shows the work it does is effective.
- There is no interest in doing so. Some people feel that evaluations are “bad” and only cause problems. So they don’t do them. Conversely, evaluations provide more flexibility in what a program can do, allow it to use resources wisely, and illustrate to the community that the outcomes of the program are not only known but are the focus of the program. This only happens through research.

The information in this document will hopefully provide information to rectify these issues.

Should evaluation be conducted by program or center, or contracted with external evaluators?

Planning and conducting a program evaluation requires some expertise in that area. Basic data collection can be conducted by the program, as can some elements of the evaluation, but it is essential to have expertise to help in the planning, implementation, and conduct of the evaluation process. Some programs build in their evaluation and use internal resources by hiring a staff member with data or program evaluation experience. However, most programs do not find that to be a financially viable path. Organizations often contract out the design and implementation work to a consultant, university, or research organization.

There are several key considerations when determining how to conduct an evaluation and who should conduct it. An in-house evaluation is generally less expensive than an external evaluation. Additionally, it allows the data to be “at hand” and to be controlled by the program. Of course, this can also be a problem: if there is no distance between the evaluator and the program, some level of bias will be (intentionally or unintentionally) injected into the findings. This reduces the objectivity or validity of the evaluation, and this can sometimes be called into question by external stakeholders, including funders and other stakeholders. Internal evaluations also do not usually benefit from high-level analysis or design, unless special care is taken to hire an individual who has specific expertise in program evaluation.

Contracting the work externally can help ameliorate the impact of program bias on the evaluation, provide a heightened level of evaluation expertise in the design and conduct of the evaluation, and

also remove the burden of the evaluation from day-to-day program operations. Generally speaking, however, evaluation consulting can be expensive.

Where can one find resources and people to assist in the evaluation preparation process?

If the goal is to find an external partner or consultant, there are three possibilities:

1. **A university, which typically houses faculty with experience in program evaluation.** Some universities have faculty who specialize in the evaluation of pre-college programs or other educational interventions. A good start is your program's local university, especially social science departments that generally include program evaluation in their discipline (e.g., sociology, psychology, political science, economics, statistics, public administration, public policy, and government). However, if the university or the faculty are partners in your project, they won't be considered at arm's length and unbiased from the evaluation, which may matter to your stakeholders. There are some excellent university-based researchers, but not all of them can devote enough time to an evaluation project. It depends completely upon the individual and his/her workload.
2. **A research firm or organization that specializes in educational or social science research.** These firms typically perform a lot of this type of work, but they may not be able to take on small projects (e.g., less than \$25,000). While typically more expensive than a faculty researcher, firms can be more timely than academics.
3. **Former faculty or those who have amassed experience through prior occupation or independent researchers who perform freelance evaluation work.** Being an independent consultant either may mean that someone can devote more time to your project or that they could have problems juggling multiple clients and projects since they work alone. As with any kind of contractual arrangement, an up front and clear understanding of both the scope of work and an expected timeline can help to prevent issues as the project progresses.

How should we budget for a program evaluation?

Program evaluations should be budgeted for at the program level that has both the authority and the funding for evaluation and data collection. This should be assumed, but the project director/program executives and board must ensure that this funding is secured. If money is not available, then the board should make it a priority to fundraise enough money to conduct an evaluation.

What should we be spending on data collection and evaluation?

This is the million dollar question for many programs.

In general, whether you are considering internal or external evaluation, the rule of thumb is to spend between 5 and 10 percent of the total project or program's budget on evaluation and data.ⁱⁱ This varies depending on the size of the program. For instance, a smaller program sometimes has to spend a higher percentage (and less money) than a larger program who can spend more money but a smaller percentage of their total budget.

The U.S. Department of Education often suggests that 5-10 percent of program expenditures (direct program costs) be allocated to evaluation and data and has recommended as much as 20 percent for some programs. While programs should collect data on a continual basis and assess progress at least annually, comprehensive evaluation should be performed approximately once every three to five years.

The program's scope, the necessary level of analysis, and budget limitations are all key factors to consider in an evaluation's cost. For instance, if a college access program must show the impact of their program on college enrollment *and* completion, then a substantial budget must be in place to follow students. This longitudinal evaluation is generally the most expensive type to produce. However, if a program merely has to show the impact of a semester-long intervention on high school GPA, that requirement would be much less complex and relatively affordable, depending on the size of the program and access to data (e.g., course grades).

A program should have a line item in its budget for evaluation. Not including this line item demonstrates the lack of importance placed on this activity by program leadership.

What are the types of evaluation?

There are two general types of evaluations that programs can use, with several sub-types to consider.

Evaluations are generally categorized as either an “**outcome evaluation**” or a “**process evaluation**.” The names alone offer an idea of their respective focuses.

Outcome Evaluations

Outcome evaluations attempt to answer questions like, “What impact did the program have on participants? Did we meet our goals and objectives? Should the program be continued or modified?” The outcome evaluation is focused on the impact of program strategies and whether program goals were achieved.

Generally speaking, an outcome evaluation requires that the evaluation take place over the life of a program, although sometimes “historical” or “*ex post facto*” evaluations are conducted after the completion of the program. An outcome evaluation usually takes considerable time to conduct because the program has to play out and have its effect.

The terms “summative” and “impact” evaluation are often used interchangeably with the term “outcomes” evaluation, although some experts would suggest that these two evaluation methods fall under the umbrella of the outcome evaluation.ⁱⁱⁱ

An **impact evaluation** compares program outcomes with the assumed outcomes of similar students who do not participate in the intervention. This usually involves an experimental design that assigns students to either an intervention or a control group. The purpose of the impact evaluation is to measure the impact of the intervention on students who received it compared to those students who did not receive the intervention.

The **summative evaluation** essentially serves the same role as an impact or outcome evaluation, although it is not necessarily clear that an “impact” assessment must be conducted, since outcomes can be measured in many ways, and not always as an “impact” on the student or subject.

Process Evaluations

These evaluations look at a program’s operational processes and how efficient or effective these are. Process evaluations answer questions like, “What strategies or interventions in the program are more effective than others? Where can improvements be made to increase the impact of these programs? How well did the implementation of program components go? Has implementation had any effect on program continuity and impact?” Process evaluations are done throughout the course of a program and can be used to make adjustments and course corrections to the interventions that the program delivers.

“**Formative evaluation**” is a term used somewhat interchangeably with process evaluation. This kind of evaluation’s purpose is determining the value of a program while the program is in development or operation. The formative evaluation often involves gathering data and information during the formative or early stages of development and assessing whether the implementation and operation of the program is occurring as expected. This allows for the redesign or reshaping of strategies at a time when these changes can still be made. At a minimum, the formative evaluation allows staff to have feedback about their program.

Another type of process evaluation includes the “**cost–benefit/effectiveness analysis.**” This type of analysis not only looks at the effectiveness of the intervention but also at its cost. It identifies program benefits, outputs, or outcomes and compares them with the internal and external costs to produce them.

What must a program and evaluator keep in mind when conducting an evaluation?

Conducting an evaluation can be an intrusive operation for staff, stakeholders, and students. The evaluator and the program must ensure that steps are taken to protect and provide a comfort level for people involved in an evaluation. Considerations should be made to ensure that confidentiality is not broken between students and the evaluator. In fact, there are strict federal laws and, quite often, school by-laws or recommendations that control what information may be collected by evaluators and researchers and how.

The Federal Education Rights and Privacy Act (FERPA)^{iv} applies to all schools that receive federal funds from the U.S. Department of Education, which effectively covers the entire universe of public schools and many private schools in the United States. FERPA essentially requires that any release of information to an organization, including a researcher, must be accompanied by a form signed by a student’s parent or guardian or by the student if he or she is of consenting age. This can be a major hurdle for seemingly “simple” studies.

Additionally, if there is no agreement with the school or school district is in place to share data, there will be no data sharing! FERPA and other laws were in place to protect private information about students and their families.

Another important consideration is the impact an evaluation could have on students and other subjects. Some intrusive evaluations, such as the randomly designed studies (“randomized control trials”) that are considered the gold standard in experimental design, require that some students be assigned to an intervention while others are not. It is possible that the intervention may harm the student by not providing a level of learning or education commensurate with that of the student who is not receiving the intervention, or vice versa (i.e., those not receiving the intervention might experience harm or disadvantage through its absence). For example, if a student is chosen to take a semester-long experimental mathematics course, and the end result is that students receiving the intervention are found to be significantly delayed in their development due to that intervention, this raises a serious issue about the utility and the appropriateness of the research.

Finally, any evaluation almost always encounters resistance in some form from staff and other stakeholders. As mentioned earlier, people can be uncomfortable with the thought of evaluations, and therefore they may not always do everything necessary, or may not do it as intended, to intentionally or unintentionally hinder the evaluation. To prevent this from occurring, there has to be a “buy-in” process to educate staff and stakeholders about the importance of the evaluation work and how it can benefit them. Conversely, programs must also take into consideration the “Hawthorne effect,” which is a term used to describe the artificially positive findings of a program because the subjects know they are being studied.

Who should participate in the evaluation study (or at least the preparation for evaluation)?

It depends on the stage of the evaluation and whether the evaluation is being conducted internally or externally. Major stakeholders should be involved at the formative stages when decisions are made about what will be evaluated, with what resources, and by what means. As the evaluation proceeds, it is better if the project staff has less hands-on control and external evaluators have more control so as to remove bias. However, staff must be involved in any ways determined necessary by the evaluation team. Whether that involves collecting or providing data, being part of interviews, or other essential methods of observing and data collection by the evaluation team, staff must answer the call.

Conducting a Program Evaluation

How does evaluation encompass the full scope of program development?

An evaluation typically involves five basic steps, regardless of what type of evaluation it is.

Defining the Evaluation. The first step is to outline what the parameters for the study are. For instance, what is exactly to be evaluated and why? For whom is the evaluation being conducted?

How will it be executed, and by whom? These questions and others must be discussed by the program leadership, staff, and, often, with the involvement of the board.

Preparing an evaluation plan. This stage involves the process of designing the evaluation plan and readying it for implementation. Key components of the plan include finalizing the evaluation goals and objectives, preparing evaluation or research questions, deciding on an evaluation design and framework, and preparing a timetable for the evaluation.

Collecting Information. Once the plan is set, the next step is to conduct the data collection portion of the evaluation. This typically includes collecting readily available data from the program (e.g., administrative information on students like GPA, courses taken, interventions received, etc.), preparing tools for collecting new information (e.g., attitudinal surveys or inventories; skill tests), and administering those tools to collect information.

Analyzing Information. Once data are collected, the evaluation staff must analyze the information. This involves collating and “cleaning” the data; analyzing the data to determine trends, outcomes, and impact; and finally providing conclusions based on the data analysis. This step may involve simple or sophisticated data analysis on both qualitative (text-based) and quantitative (numerical) data.

Acting on the Results. The first four steps of this process are utterly useless without this step. The purpose of any evaluation is to see how a program is doing. This information should then be used to improve strategies or practices or choose a change in program delivery, which may include removing some interventions and replacing them with others.

What is backward mapping? How can it help the development of an evaluation strategy?

Backward mapping is a strategy that is often used at the outset of program evaluation design to determine what is to be measured and how. This process requires program leadership, usually with an evaluator, to step back and document the expected outcomes and/or goals of the program, and work backward from those ends to then define the measurable inputs, activities, and outputs that lead to those outcomes and goals. The term “measurable” is exceedingly important because what cannot be measured cannot be evaluated.

Step one of backward mapping involves the identification and development of the program or center’s primary goal or goals (see figure below).

Consider a program whose goal is getting low-income students to enroll at a four-year college. Once the goal is identified, ways to measure that goal must be found. In this case, it seems easy. How many, or what percent, of students from a given program enrolled in a four-year higher education institution upon completion of high school? Of course, there are often other associated questions that complicate matters. For example, did students enroll part-time or full-time? Did they enroll immediately, or was their enrollment delayed? In what type of institution did they enroll? To get the full picture of how successful a program is at enrolling students, these ancillary questions should also

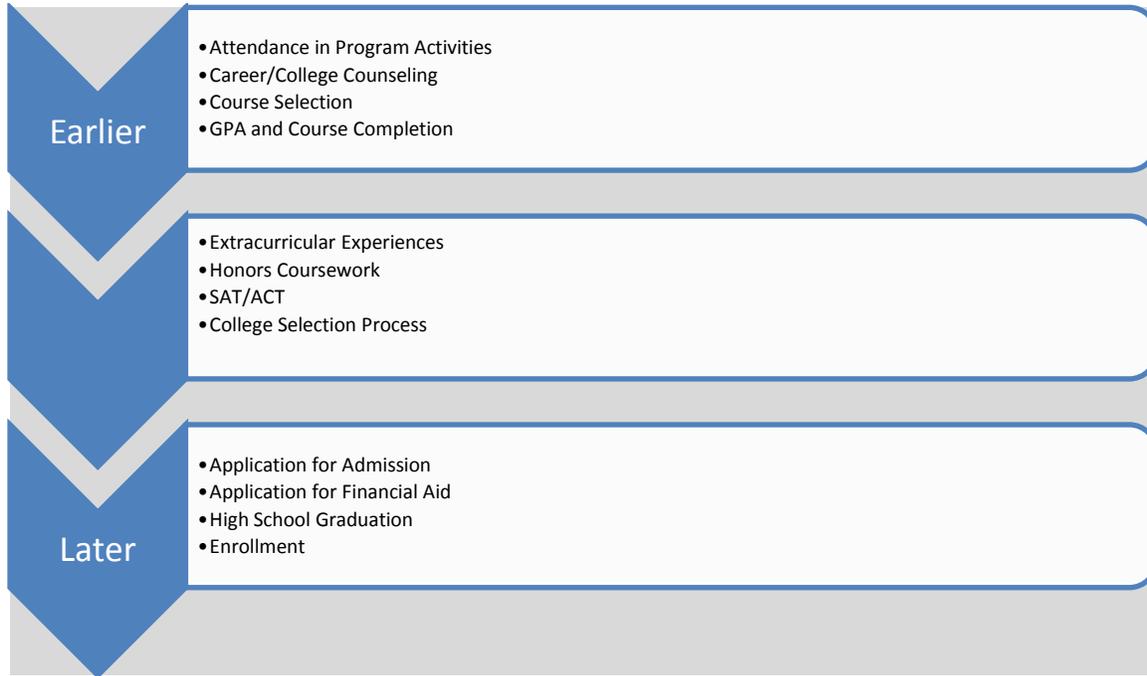
be considered, but to do so requires that a program wait until its first cohort of students is (or could be) enrolled for a certain period of time. Examining enrollment rates for the first semester following high school graduation tells you how successful a program is at enrolling students immediately, but it gives no information on delayed enrollment and may underreport a program's success. The window in which a program looks at enrollment patterns (or any other variable) is something to be discussed by program leadership and evaluators.

Because the window in which we examine success in achieving a goal can be years long, we must create sub-goals or process indicators to show how students are progressing toward that goal. In other words, we must work backwards to identify the steps, stages, indicators, or hurdles that students would have to achieve or pass in order to attain the program goal of four-year college enrollment. As in the figure, these may include, but are not limited to, the college selection process, applying for financial aid, applying for admission, academic coursework and attainment, high school graduation, and on and on. For more on these indicators and other access and success metrics, consult NCAN's Common Measures.

The next stage is to define these indicators in a measurable and observable manner. Programs must make decisions regarding what level of achievement is adequate or acceptable. Everything must be measurable and observable for analysis and comparison. An evaluation would want to know, for example, how many program students participated in college counseling and at what frequency and intensity. Were students merely presented with college counseling? Or were they actually getting something out of it? If the latter, how is "getting something out of it" determined? A measurement must be created and accepted by both the evaluator and the program. The same kinds of questions are associated with nearly any research questions or metrics (e.g., "What percentage of students chose a college-bound curriculum?" "What percentage of students took the SAT or ACT?" "What was the average score compared to other students?")

These are the types of questions that are created in a backward map. All of these lead to the ultimate goal, but they also provide some indicator of success along the way.

Figure 1. Backward Mapping for a College Prep Program



How do we develop goals and objectives? How do we implement them?

Any program should have **goals** and **objectives**. A program goal should define the broad purposes or learning outcomes of the program.

Some examples of program **goals** are: “enroll students in a two- or four-year college program” or “enroll students full-time in a four-year, private institution.” Goals can be broader, such as “prepare students for the rigors of higher education,” but those are often too ambiguous to produce real value. Develop goals with intent and direction. These goals depend on an individual program, not on anyone else’s, so think internally. Goals can be developed between a program’s staff and its board, but they should ultimately include input from those who have a stake in the program and are interested in participating.

Objectives (sometimes called sub-goals) are those indicators or targets that fall underneath the program goal(s). Together, these lead to the ultimate program goal(s). Figure 1 shows possible goals of a program that would need to be made operational so that they make sense in a measurable way. For the goal “enroll students in a two- or four-year college program,” a reasonable objective or sub-goal might be “students will complete at least two applications to institutions of higher education.” This objective is meaningful, targeted, and a progression on the ultimate goal of matriculating to higher education.

Once both goals and objectives are set and operational, the stage is set for data collection because there is an observable and measurable basis on which to perform analysis.

Developing goals and objectives is also important for laying the groundwork for a process evaluation. A process evaluation can help determine which strategies work and which do not work well enough to make these goals and objectives achievable.

What kinds of measures should be used to determine the progress and effectiveness of services?

There are various measures that can be used to determine the progress and effectiveness of services. Progress data are usually quantitative (i.e., countable). For instance, the percentage of courses completed, the number of students who took AP tests, even the number of times a student is absent from program activities. These are arguably easier types of measures because data for them are usually available, and they are easy to count. Some measures are more complex, (e.g., the level of success that a student achieves). While GPAs are easily measured, writing or essay skills are less so. For more information on countable measures, consider NCAN's Common Measures, a set of access and success indicators that are both member-developed and research-backed.

Measures for the effectiveness of services can include the indicators identified above. They often use surveys and other inventories of attitudes and perceptions about programs. Some experts do not like these types of measures as they are subjective, but personal viewpoints are often important in identifying what works and what doesn't about a program. Creating questions about the success of certain activities and asking students what they liked or didn't like, what they would change, and how they would change it all offer data and insight, even though they are softer in nature.

Does program evaluation require a database?

A long-term, longitudinal study requires large databases to track students. For example, tracking a student from 7th grade through one year after high school graduation requires seven years of data for that student alone. That data would be split into seven entries for "grade," "school," and "attendance," not to mention course specific or GPA data, if desired. This is another reason why longitudinal databases can be a huge, but important, burden for programs. For more information on examples of database solutions for college access and success programs, consult "**Data Usage and Platforms for College Access and Success: Insight from the Field**," an NCAN white paper.

What types of data can I collect?

There are many types of data that can be collected in order to evaluate and monitor a program. Some of these include: demographic data; access indicators; success indicators; and other data points related to college access program activities, college preparation, and student attitude. Which data are collected and how depends greatly on whether a program is conducting short-, medium-, or long-term evaluation projects. Here are some examples of data points that programs should consider collecting. For milestones along the path to college access and success, consult NCAN's Common Measures, which are research-backed and member-developed. NCAN's website provides the most up-to-date resources related to the Common Measures.

Demographic Data

Basic demographic data enables the program to track indicators to determine the number of clients served and to disaggregate other data according to these variables. NCAN's Common Measures recommend collecting the following demographic data points:

- Gender
- Race/ethnicity
- Language spoken in the home/ESL status
- Education level of parents/guardian/first-generation status
- Socioeconomic status (free/reduced lunch eligibility is often used before college; Pell Grant eligibility is often used after high school graduation)
- Selected vs. unselected major (for students in college)

Other demographic data points that may be useful include:

- Age (date of birth)
- Family composition (number of dependent children, number in college)
- Place of birth and/or citizenship

For purposes of longitudinal follow-up, student identifier information is extremely helpful. Student name, address, date of birth, and some kind of unique identifier are imperative.

Telephone numbers and e-mail addresses (though often changed) and campus addresses (when known) are very helpful fields of data. Social Security Numbers are extremely valuable but also controversial, and students or families can withhold that information if they wish.

Essential Access Indicators

The access indicators outlined in NCAN's Common Measures describe data points that ultimately get students to the goal of college enrollment. The Common Measures are broken up into "essential" indicators and "if available" indicators; all else being equal, programs should generally devote time and resources toward tracking essential indicators first. The essential access indicators are listed below, but the entire list of indicators is provided on NCAN's website.

- Student graduated high school
- Student is on-track to complete a rigorous college prep curriculum as defined by their state
- Student GPA
- Student took the SAT
- Student took the ACT
- Student completed college admissions applications (ideally by school type)
- Student completed and submitted a FAFSA form
- Student awarded financial aid

Essential Success Indicators

The success indicators outlined in NCAN’s Common Measures describe data points that ultimately get students to the goal of college completion. The Common Measures are broken up into “essential” indicators and “if available” indicators; all else being equal, programs should generally devote time and resources toward tracking essential indicators first. The essential success indicators are listed below, but the entire list of indicators is provided on NCAN’s website.

- Student completed a postsecondary certificate or degree
- Student enrolled in postsecondary within six months of high school graduation
- Student enrollment by institution type (2-year, 4-year), sector (private, non-profit; public, non-profit; private, for-profit), and status (full-time, part-time)
- Student placed in remedial courses (English/math)
- Year-to-year student persistence
- Term-to-term student persistence
- Student completed and submitted renewal FAFSA form
- Student awarded financial aid

Other Academic Data Points

There are some other data points outside of the Common Measures essential indicators that some programs also find useful to collect. For example, recording student participation information in academic and extracurricular pursuits during secondary education can be beneficial to measure their “engagement” in academic-related programming. This helps us to understand how students progress through the academic pipeline and measure on key indicators. Data to consider collecting include (indicators marked * are “if available” indicators in the Common Measures):

- School and school district
- Current grade level and year of intended graduation
- Attendance
- Classroom/Teacher (if applicable)
- Guidance counselor (and, if assigned, college access advisor)
- Curriculum type (college prep, general, vocational, other)
- Total credits earned
- Academic milestones (e.g., such as grade level of Algebra I and II)*
- Educational identification fields (special education, gifted/talented, honors, AP, college credit courses, ESL, etc.)
- AP/IB course work and test scores*
- College entrance exam dates and scores for PSAT, PLAN, SAT, ACT, GRE (composite, and possibly subtests)*
- Extracurricular activities (e.g., Upward Bound, Chess Club, GEAR UP, etc.)
- College placement exam dates and scores (or pass/fail) for Compass, TOEFL, etc.

Participation in College Access Program Activities

Probably the most important data to be collected that can enable programs to assess the effectiveness of services rendered concerns the participation of students in college access activities (whether provided by the program, or in conjunction with college or community partners). To quantify the provision of services for each student, it is important to attach the participation to each student (including, if possible, participation in group activities), and over time to record both the intensity and frequency of such contacts. To this end, recommended data fields might include (but not be limited to):

- Program component (e.g. advisory services, adult learners, resource center, etc.)
- Location of service
- Service category (e.g. career exploration, academic preparation, postsecondary admissions advising, financial aid advising, entrance exam information, scholarship searching, etc.)
- Duration of activity
- Specific service (e.g. financial aid overview, FAFSA assistance, unmet need calculation, etc.)
- Session type (e.g. one-on-one advising, computer search or application, assistance with forms, group workshop/school, group workshop/community such as financial aid night with parents, etc.)

College Preparation Data

Since a primary goal of most community-based college access programs is to provide clients with information and financial assistance to help them enroll in, pay for, and succeed in postsecondary education, collecting data on these issues can serve as important indicators of intent and help determine the impact of the program services toward the fulfillment of these objectives and goals. Interim outcomes for college access might include:

- Selecting colleges for application as a result of an advising session (or college fair or college visit)
- Performing an electronic scholarship search
- Shadowing with selected career mentor(s) at a worksite
- Applying for a last-dollar scholarship
- Completing the requirements for high school graduation and college admission

Postsecondary Data

If your program collects data at the postsecondary level to measure the ultimate achievement or progress of students, these are some indicators that you may want to consider collecting (indicators marked * are “if available” indicators in the Common Measures):

- Institution and type (full-time/part-time, 2-year/4-year, public/private)*
- Term and academic year
- Enrollment status (active, withdrawn, transferred, stopped-out)*
- GPA*
- Credits earned/year*
- Major or degree program*
- Graduation date and degree*

Financial Aid Data

There is a lot of variance in what is collected among even the most exemplary of programs in the area of financial data. Minimally helpful data would include (indicators marked * are “if available” indicators in the Common Measures):

- FAFSA submission date and method (paper or online)
- SAR receipt date and EFC
- College or University Award Letter date
- Unmet need (usually calculated for an individual school of acceptance)
- Last-dollar scholarship award date and amount
- Basis for financial special circumstance or hardship

More specific financial information that would be collected to calculate need and to advise students and families (or adults) about financial aid might include:

- College tuition & fees, budget type, and total cost of attendance
- Federal grants awarded (Pell, SEOG)
- State grants awarded
- Institutional grants awarded
- Subsidized or unsubsidized loans awarded, and accepted
- Work study awarded, and accepted
- Last-dollar scholarship awarded
- PLUS loans received
- Other scholarships (that are not displaced by the institution)

Attitudinal Data

In addition to the data suggested above (which are examples and not exhaustive of what could be collected), there are opportunities to ask students about how they see themselves and their future at various points, as well as how they perceived the helpfulness of program components and interventions. These can range from simple surveys to national inventories (such as the High School Survey of School Engagement) to tap in to the thoughts of students. At this time, NCAN’s Common Measures do not suggest any particular attitudinal data points for programs to collect.

What are baseline data?

Baseline data are data that are collected at the start of a program or at least at the start of an ongoing evaluation process. These data become the “baseline,” a term used to connote a reference or starting point.

The baseline data are important for measuring improvement in program impact and outcomes over time. Without a baseline, “value added” is impossible to ascertain. Collecting baseline data on students and programs is mandatory in effective program management.

Baseline data may include background demographics about the students, current grades, courses taken, standardized tests (if available), and other indicators of academic achievement and progress. However, the most important baseline data to collect are those that will give an indication of the student outcomes a program is most interested in improving.

Since increasing the college-going rate is a principal outcome for college access programs, getting the best possible baseline data for college enrollment rates before a program begins to provide services (or before a major intervention or new program component is implemented) is imperative. Taking a most recent file of high school graduates and determining how many of these students actually enrolled in a postsecondary institution in the fall following their senior year in high school would provide this major baseline indicator.

How and when should baseline data be gathered for evaluation?

Baseline data would ideally be collected for a cohort of students that graduated high school before program services begin. Since postsecondary enrollments are a major indicator of student outcomes, plans should be made as early as possible to collect these data for the most recent class of high school graduates. Several suggestions for collecting this baseline indicator are provided on the next page. Baseline data should also be collected on student outcomes associated with college access services such as FAFSA submission, college entrance exam completion, completing college applications.

Baseline data should be collected beginning with the first cohort of students as they enter the program, since the idea is to measure value added from the intervention/program. If students receive services from the program beginning in September, that is the best time to collect data, not the following May.

How should unit record data be collected to provide individual and aggregate student outcomes?

Unit record data (i.e., data collected on each individual student, such as GPA, demographics, etc.) are the best types of data to collect. It is difficult to conduct any significant analysis without unit record data. The smallest unit, whether it is unit record student data or school-level data, can always be aggregated. However, aggregate data collected only at the highest level cannot be disaggregated or compared readily by demographic variables (such as gender, ethnicity, year of graduation, etc.) In

thinking about developing a data system, think at the student level, and utilize a system that works at that level, knowing that data can be aggregated for reporting purposes.

In terms of how to collect or record that data, a small program can probably utilize Microsoft Excel or another spreadsheet program. Larger programs will require either sophisticated use of Excel, Microsoft Access, or SPSS or other statistical software. Some research organizations and universities have database warehousing capabilities to aid in this respect, as do many school districts. For more information on examples of database solutions for college access and success programs, consult “**Data Usage and Platforms for College Access and Success: Insight from the Field,**” an NCAN white paper.

Can I use other data not collected by my school or program that could help in the analysis of program effectiveness?

Yes. There are other sources that could be helpful, especially if a program covers more than one school or district. For instance, a program could attach U.S. Census data for the geographic area which provides indicators of income, poverty, and other variables. The school district may have special data on their schools that could be helpful.

How can confidentiality of student information be assured?

This guide discussed FERPA regulations in an earlier section. Simply put, it is best to get the signature of the parent or guardian, or of the student if at the age of consent, asking permission to collect personal data.

This is usually not a problem for students in a college access program, because they are almost always willing to sign such an authorization if it is carefully spelled out. What can get more complex is getting private data about students not in the program for comparison purposes. An experienced evaluator will be able to help a program navigate this process.

How can postsecondary enrollments be ascertained and verified?

There are a few methods. The National Student Clearinghouse is a 501(c)(6) nonprofit organization that serves as a repository of student enrollment and degree attainment data. Institutions participating with the Clearinghouse cover 98 percent of all students enrolled in public and private postsecondary institutions in the United States. Through the Student Tracker service (which requires a small charge), community-based organizations of all sizes can submit student identifying information and receive, if the student is matched, a record of each student’s enrollment pattern and degree receipt.

Other methods of enrollment ascertainment and verification are more complicated and less reliable overall. One of these includes working with local and or state postsecondary institutions in partnership to collect this information. Again, this will require a consent form from the student (and preferably parent) in order to get these data. This will not help with students who do not attend those institutions.

If accurate unit records are maintained for all students served, follow-up for postsecondary enrollment should be attempted for those students that do not match the National Student Clearinghouse database.

Senior exit surveys, usually administered to all students in May of their senior year, often ask for “intended institution of enrollment” and may be effective in following up for this group of students. These may, however, be unreliable and should be supplemented with official documentation from the registrar at these students’ institutions or other documentation (e.g., grades).

Other Evaluation-Related Resources

Here is a short list of other resources programs can consult with questions about program evaluation. Thank you to Dr. Chrissy Tillery from the National Council on Community and Education Partnerships for these suggestions.

- The National Science Foundation’s “2002 User-Friendly Handbook for Program Evaluations” - www.nsf.gov/pubs/2002/nsf02057/
- Experimental and Quasi-Experimental Designs for Generalized Causal Inference by Shadish, Cook, and Campbell (2002)
- A Guide to GEAR UP Program Evaluation: Optimal Research Design, Methodology, and Data Elements. (2010). CoBro Consulting.
<https://edsurveys.rti.org/gearup/ls/ColeFinal.pdf>
- American Evaluation Association Guiding Principles for Evaluators.
<http://www.eval.org/p/cm/ld/fid=51>
- Common Guidelines for Education Research and Development: A Report from the Institute of Education Sciences, U.S. Department of Education and the National Science Foundation. (August 2013). <http://www.nsf.gov/pubs/2013/nsf13126/nsf13126.pdf>
- The Program Evaluations Standards: A Guide for Evaluators and Evaluation Users (3rd Edition) published by the Joint Committee on Standards for Educational Evaluation (2011) - <http://www.sagepub.com/booksProdDesc.nav?prodId=Book230597&>
- The Institute for Educational Sciences (IES) Practice Guides - http://www.ies.ed.gov/ncee/wwc/publications_reviews.aspx
- The What Works Clearinghouse - <http://ies.ed.gov/ncee/wwc/>
- American Educational Research Association (AERA) - <http://www.aera.net/>
- American Evaluation Association (AEA) - <http://eval.org/>
- National Student Clearinghouse - <http://www.studentclearinghouse.org/>

ⁱ <http://www.opm.gov/WIKI/training/Training-Evaluation/History.aspx?Revision=70>

ⁱⁱ http://www.nsf.gov/pubs/2002/nsf02057/nsf02057_3.pdf

ⁱⁱⁱ http://www.nsf.gov/pubs/2002/nsf02057/nsf02057_2.pdf

^{iv} <http://www2.ed.gov/policy/gen/guid/fpco/ferpa/index.html>