

## **Outcomes Assessment for School and Program Effectiveness: Linking Planning and Evaluation to Mission, Goals and Objectives\***

The Council on Education for Public Health (CEPH) views the planning and evaluation process as essential to enhancing the overall effectiveness of schools of public health (SPH) and public health programs (PHP) in reaching their stated missions. The process requires gathering, monitoring and analyzing data to demonstrate that the actual outcomes of its efforts and activities are congruent with stated goals and objectives, which, in turn, is important to inform decision making and resource allocation. Furthermore, assessment provides SPH/PHPs with a mechanism to document the assertions of quality made in its self-study and represented to its constituents. Successful planning and evaluation efforts will vary among institutions but should be compatible with each institution's mission and available resources. It is important to recognize that planning and evaluation is not a one-time activity. It should be a regular, ongoing and incremental process.

Criterion 1.1 (Mission) and Criterion 1.2 (Evaluation and Planning) are inextricably linked and, although addressed separately in the self-study, should be conceptualized together. CEPH requires only that SPH and PHP have a) a mission, b) goals addressing at least education, research and service, and c) supporting objectives for each goal. The SPH/PHP may choose to have goals addressing other important aspects of its mission. In fact, many institutions that CEPH accredits have goals ranging from those required to goals addressing administration and program development, resources, leadership, marketing and diversity. SPH and PHP are evaluated by CEPH based on their own missions, goals and objectives, allowing for individuality among educational, research and service programs. Mission, goals and objectives can and should reflect the unique niche of each institution. They also establish strategic direction, providing focus and, in some cases, limiting activities. See Figure 1 for important definitions of mission, goals and objectives.

**Figure 1: Mission, Goals and Objectives<sup>1</sup>**

**Mission:** A statement of purpose.

**Goal:** A long-term target or direction of development. It states what the institution wants to accomplish or become over the next several years. Goals provide the basis for decisions about the nature, scope, and relative priorities of all projects and activities. Everything the institution does should help it move toward the attainment of one or more goals.

**Objective:** A measurable target or benchmark that must be met on the way to attaining a goal.

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\* This is a technical assistance document, intended to be helpful to institutions seeking accreditation and to site visit teams in evaluating schools and programs. It is not a policy paper and does not supplant formally adopted criteria that guide the decision-making process of the Council on Education for Public Health. Interested parties should refer to *Accreditation Criteria for Schools of Public Health, June 2011*, or *Accreditation Criteria for Public Health Programs, June 2011*, for the accreditation criteria.

<sup>1</sup> Bryson JM, Alston FK. *Creating and Implementing Your Strategic Plan: A Workbook for Public and Nonprofit Organizations*. San Francisco: Jossey-Bass Publishers; 1996.

While vocabulary relating to these concepts and to the types and levels of evaluation described subsequently in this paper may differ within fields, CEPH encourages institutions to use these concepts as tools for employing multiple layers of evaluation.

CEPH requires that SPH/PHP undertake a systematic, broad-based and integrated evaluation of its stated mission, goals and objectives. The results of this process must be linked to and systematically used to inform the institution's processes by which it plans for the future. For evaluation to be effective, it should be included as an integral part of the planning process. When mission, goals and objectives are developed carefully, the objectives usually provide implicit evaluation standards. These are the standards by which evaluation achievements can be assessed.<sup>2</sup> In other words, the objectives provide outcome measures. For more information on outcome measurement as it relates to the accreditation process, see the technical assistance paper titled *Establishing, Presenting and Using Outcome Measures*.

### ***Planning and Evaluation***

Many models for planning and evaluation exist, often referred to in higher education as outcomes assessment, depending on the "unit" of evaluation. In some cases, evaluation can be simple, for example, evaluating whether a student has learned the information presented in a given course. When evaluating the effectiveness and impact of SPH/PHP and all of their individual components in an organized and collective fashion, however, this becomes more complicated. Data collected on individual components must be organized and analyzed so that together they paint a picture of the institution overall. Evaluation must be based on information collected and, most importantly, used so that adjustments can be made based on the results.

The first step in planning for outcomes assessment is the establishment of a clear mission, goals and objectives. It is important for all stakeholders to agree on what they collectively are trying to accomplish. The next step is establishing indicators or measures for meeting the goals and objectives. Instead of merely naming indicators or outcome measures, it is important to establish targets or benchmarks by which success can be measured. This will ensure that key stakeholders know when and if goals and objectives have been accomplished. The third step is to measure and monitor the data. Methodology must be established, data collected and analyzed, and findings shared with the responsible individuals or committees for further action. Decisions should be made at an early stage in the process about the methods for assessing the data, when and how often the data will be measured and whose responsibility it will be to track the data. Institutions may find it helpful to develop a schedule of all data to be collected throughout the year.

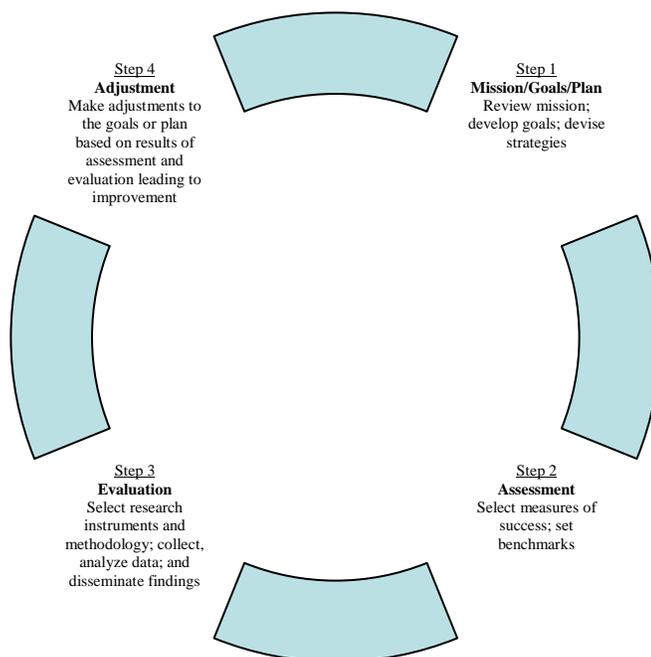
Once the data have been recorded, there should be a systematic way in which they are reviewed and evaluated. Examples might include yearly faculty retreats, regular strategic planning or vesting evaluation and planning in a committee or several committees. It is important, however, that the evaluation and planning process include participation by major constituent groups including administration, faculty, students, alumni and the community. A wide variety of methods of achieving input is possible, but examples include placing different stakeholders on important committees or soliciting regular feedback via surveys or interviews. Regardless of who is involved in the process or how the process takes place, the data should be reviewed and key questions should be considered. Questions might include: Was the goal reached? Why or why not? What went well? Were there extenuating circumstances? What should be changed? From CEPH's perspective, this is the most important, and most often ignored, part of its expectation for evaluation and planning. Finally, adjustments to the SPH/PHP and programs within it must be made based on the findings of evaluation. Revisions will also likely need to occur in the stated goals and objectives. Some may be met

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<sup>2</sup> Dignan M.B, Carr P.A. *Program Planning for Health Education and Health Promotion*. Philadelphia: Lea & Febiger; 1992.

and others may need to be added, removed or new targets set based on additional information gleaned from the evaluation process. Once the new goals and objectives are established, the cycle begins again. A comprehensive yet simple evaluation and planning process can be accomplished in a cyclical manner as illustrated in Figure 2. Whether or not the SPH/PHP meets its objectives, it is important to use the information collected to make decisions about school improvement. If a goal or objective has not been met, the institution is often reluctant to report it to CEPH. In fact, the process by which the institution evaluates its success or failure (rather than its actual success or failure) and the decisions made based on that experience is what CEPH will evaluate to determine whether or not the SPH/PHP has an organized and systemic process for evaluation and planning. Using the evaluation and planning process to inform efforts for continuous quality improvement is critical.

**Figure 2: Outcomes Assessment for Institutional Effectiveness<sup>3</sup>**



### ***Types of Evaluation***

Evaluation generally falls into two categories: formative and summative. **Formative evaluation** focuses on the process of institutional development. It collects continuous feedback from school or program constituents to make revisions as needed. Its purpose is to strengthen or improve implementation or procedures as they are occurring and to uncover obstacles, barriers or unexpected opportunities that may emerge. Examples of this type of evaluation, in the context of SPH/PHP, might be meeting with student leaders to gather impressions about some aspect of school functioning; conducting a survey of recent alumni to assess whether they feel prepared for public health practice; interviewing junior faculty to find out their needs for mentoring and development opportunities; inviting a group of practicum preceptors from local health organizations to discuss the new student internship manual before it is finalized; or conducting a focus group to assess student satisfaction and needed improvements in the career counseling center.

<sup>3</sup> Adapted from Alan Sturz. A User's Guide to Institutional Effectiveness. Paper presented at the North East Association for Institutional Research conference; November, 1998; Philadelphia, PA.

**Summative evaluation** focuses on documentation and evidence. It examines the effects or outcomes and seeks to determine its overall impact and ability to do what it was designed to do. Summative evaluation relies on data and measurement and therefore, early adoption of appropriate data collection methods is very important.<sup>4</sup> To make a case that the SPH/PHP has achieved a positive impact, summative evaluation requires that targets be set, baseline measurements taken and progress monitored at various points along the way. Identifying and monitoring various outcomes such as faculty and student numbers, faculty and student diversity, research productivity, graduation rates and job placement rates are not as important to demonstrate success as using those numbers to answer important questions. For example, institutions are required to keep track of the numbers of students who apply, are admitted and enroll each year. Using these data to determine whether the percent of accepted students who enroll is increasing year to year would be one way to answer an important question about whether the school is a top choice for highly qualified students. Coupling this measure with others (eg, increasing average GPAs and GRE scores of accepted students), would provide a further measure of the school's overall competitiveness.

Three types of program evaluation fall into the two categories of formative and summative evaluation: process (sometimes referred to as implementation), outcome and impact (Figure 3) and this framework is particularly useful for evaluation of institutional functioning. SPH/PHP will likely articulate objectives that lend themselves to process and outcome evaluation, but impact evaluation, to the extent it can be accomplished, is also important to assessing success.

**Figure 3: Performance Measurement and Evaluation<sup>5</sup>**

**Process (or Implementation) Evaluation** – Assesses the extent to which the institution is operating as it was intended. Typically assesses institution's conformance to statutory/regulatory requirements, program design, and professional standards or consumer expectations.

**Outcome Evaluation** – Assesses the extent to which an institution achieves its outcome-oriented objectives. It focuses on outputs and outcomes (including unintended effects) to judge school effectiveness but may also assess various processes to understand how outcomes are produced.

**Impact Evaluation** – A form of outcome evaluation that assesses the net effect of an institution by comparing outcomes with an estimate of what would have happened in absence of the institution.

**Process or implementation objectives** often refer to basic requirements or expectations of either the SPH/PHP or of the university or of CEPH. They are generally formative in nature and assess whether the SPH/PHP is proceeding with implementation as planned or expected. They can usually be measured in terms of “yes” or “no” or “completed” or “not completed.” For example

- Accept first class into a DrPH program in health behavior by September 7, 2013.
- Hire an epidemiology department chair by December 31, 2012.
- Assign every MPH student to a faculty advisor during their first semester in the program.

<sup>4</sup> Bhola HS. Evaluating “Literacy for Development” projects, programs and campaigns: Evaluation, planning, design and implementation, and utilization of evaluation results. Hamburg, Germany. UNESCO Institute for Education; DSE [German Foundation for International Development]. 1990; xii: 306.

<sup>5</sup> US General Accounting Office. *Performance Measurement and Evaluation: Definitions and Relationships*. Washington, DC: US General Accounting Office; 1998. Publication GAO/GGD-98-26.

**Outcome-oriented objectives** are summative in nature and address those aspects of functioning that measure “effectiveness” as defined by the institution. All SPH/PHP strive to be effective in providing education, contributing to the body of knowledge in public health and serving the community. What defines “effective” for the institution? How does the institution know that it is “effective?” Examples include

- Increase graduation rates of MPH students from 75% to 90% by May 30, 2014.
- Increase the number of peer-reviewed publications per year per FTE faculty member from 1.5 to 2.5 by July 1, 2015.
- Maintain the 95% overall rating of each continuing education program as “excellent” or “very good.”

Impact evaluation, while more difficult to measure, is also important in assessing the overall mission. **Impact-oriented objectives** are usually not accomplished in months but years. For example, if the mission is to improve health and well-being of the public in its home state, an impact objective may be to “increase the percent of state and local health department positions filled by individuals with formal public health training from 5% to 20% by 2015.” This objective seeks to compare this outcome with an estimate of what would have occurred in absence of the SPH/PHP. Impact evaluation is often an estimate because the institution cannot always control external factors (eg, did the newly hired/trained employees receive formal training in public health from this school or another?, have there been state budget cuts limiting the number of positions that could be filled by individuals with graduate education in public health?).

Often, when asked to identify their evaluation and planning methods, institutions refer to formative evaluation: feedback on student course evaluations, informal student discussions with their advisors, meetings between the program director and members of the student association. While these are all important in assessing needs of various constituents and affecting continuous program development and improvement, they are not useful in demonstrating the intended effect or impact. Similarly, simply listing the required documentation of numbers of FTE faculty and students, research dollars obtained by the SPH/PHP, ethnicity and rank of faculty or square feet of space available to the school does not provide evidence that the institution is using those numbers to evaluate success and plan for the future.

### ***Writing Clear and Measurable Objectives***

The first step in linking mission, goals and objectives to planning and evaluation is setting clear and measurable objectives. One concept that has been widely used in describing useful goals and objectives, and that is also particularly useful in the context of institutional objectives, is “SMART” – all objectives should be specific, measurable, agreed-upon, realistic and time framed (Figure 4). When program objectives are written in this manner, outcome measures and evaluation criteria write themselves. Ideally, there should be a corresponding evaluation measurement and discussion in Criterion 1.2 for each objective listed in Criterion 1.1.

#### Figure 4: Writing SMART Objectives

**Specific** – The objective should be well-defined and clear to anyone who has basic knowledge of the school. It states exactly what the institution wishes to accomplish.

**Measurable** – The objective should provide a benchmark or target so that the institution determines when it has been reached, by how much it has been exceeded or by how much efforts have fallen short.

**Agreed Upon** – Important stakeholders must be in general agreement with the institution’s mission, goals and objectives. Stakeholders may include university, school administration, faculty, students, alumni and/or community members.

**Realistic** – Objectives should be within the availability of resources, knowledge and time. Objectives should neither be easy nor impossible to attain, but somewhere in between.

**Time Framed** – An objective should include a specific date by which it will be completed. It is important to allow enough time to successfully implement the steps needed to achieve the objective, but not so much to elicit procrastination.

The following two examples could be objectives listed under the “research” goal in Criterion 1.1 in the self-study.

*Example #1 – Objective*

Increase amount of sponsored research obtained by faculty.

*Example #2 – SMART Objective*

Increase amount of research funding obtained by faculty from \$70,000 to \$100,000 per FTE faculty by July 1, 2016.

Both objectives have the same intended effect – increasing research productivity by faculty – but only the second example is sufficient to provide an evaluation standard. In the first example, it is impossible for the program to measure success against the objective. Does “amount” refer to dollars? Number of projects? Does “faculty” refer to headcount or FTE? “Increase” from what to what? How do faculty know when they are doing well or not doing enough? By when should this occur?

The second example is SMART. It is specific and measurable. It is clear that the objective refers to FTE faculty and research dollars, both of which can be quantitatively measured. Based on the description in the self-study of how the mission, goals and objectives were developed at this institution that key stakeholders have agreed on this objective. It appears to be realistic and is time framed. Assuming that this objective was written on July 1, 2011, the school expects a net increase in research funding per FTE faculty member of \$30,000 in five years. It is extremely important to set a “target” or a goal. It is very difficult to measure success if there is no target.

***Recording and Presenting the Data***

After objectives have been set, the SPH/PHP must collect and record data on the outcome measure related to this objective (ie, research dollars/FTE faculty) each year. In addition to looking for measurable objectives and their resulting outcome measures, CEPH also expects the institution to have a system for data collection. The system will be different at each institution and consistent with its available resources. It does not have to be complicated or expensive, but can be in the form of an Excel spreadsheet, an Access database or some other data management system that is regularly updated and can systematically

track the identified data points. CEPH expects there to be an individual or group of individuals in whom responsibility is vested to see that appropriate data are collected. Examples of data that CEPH requires SPH/PHP to collect are faculty headcount, demographic information and FTE; student headcount and FTE; number of students (including demographic characteristics) that apply, are accepted, enroll, graduate and find employment; number of students in each degree program; school income and expenditure; research income; field experience sites and preceptors; service activities; and workforce development activities and number of students served. Types of data collected are likely to vary widely among SPH/PHP; however, the institution would likely identify others that would contribute tracking progress toward achieving its individual goals and objectives.

Data should be presented in the self-study in a way that readers can assess at a glance what the institution hoped to accomplish, whether its objective had been met and, if not met, an assessment of the contributing factors. The *General Template* in CEPH's Accreditation Criteria data templates (available at [www.ceph.org](http://www.ceph.org)) present a possible model for data presentation, as exemplified below:

Objective	Current (2005)	Target (by 2010)	2006	2007	2008	2009	2010
Increase amount of research funding obtained from \$70,000 to \$100,000 per FTE faculty by July 1, 2016	\$70,000	\$100,000	\$80,000	\$75,000	\$95,000	\$97,000	\$100,000

In presenting the data, it is important to identify the intended objective, the target and the measurements. This should be followed by a short discussion and analysis of the data.

***Linking Mission, Goals and Objectives to Planning and Evaluation***

The goals and objectives presented in Criterion 1.1 in the self-study should reflect the outcome measures presented throughout the self-study and the evaluation and planning process in Criterion 1.2. and vice versa. Similarly, the discussion presented in the self-study about how the mission, goals and objectives were developed and the discussion about the process of planning and evaluation should be seamless. Every objective should be measurable and associated with key indicators. Each indicator should be coupled with a plan for how and when data will be collected on it. And, most importantly, each of these will be linked to an individual or committee who is responsible for both analyzing the data related to that objective and for making adjustment and revisions as needed to the objective and its related goal.

Institutions with effective planning and evaluation strategies are well positioned to identify strengths, weaknesses and opportunities for growth and development. This information results in the ability to make informed decisions about redistributing resources, both human and fiscal, to achieve their missions.

Approved for distribution: February 13, 2005  
 Updated: June 22, 2011  
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