Procedures are described that have been implemented in evaluating minority medical education programs operated by the University of Virginia School of Medicine since 1984. Both process and outcome evaluation procedures have been used. Results of evaluation efforts are reviewed by program staff to design program improvements and modifications. Methods used in process evaluation have included: mid- and end-of-program interviews with program participants and program personnel; observation of program activities by the evaluator; informal contacts by the evaluator with students and program staff throughout the program, to allow ongoing feedback about program operations. Program outcomes are assessed primarily through two means: student scores on knowledge tests, and students' educational and career choices following participation in the program. A computerized student tracking system has been developed to document post-program outcomes. (KM)
Using Evaluation Findings to Improve Minority Education Programs

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A Roundtable Presentation at the
American Evaluation Association Annual Meeting
Boston, Massachusetts
October 1987
Abstract

This paper describes procedures implemented in evaluating minority medical education programs operated by the University of Virginia School of Medicine since 1984. Both process and outcome evaluation procedures have been used. Results of evaluation efforts are reviewed by program staff to design program improvements and modifications.

Methods used in process evaluation have included: mid- and end-of-program interviews with program participants and program personnel; observation of program activities by the evaluator; informal contacts by the evaluator with students and program staff throughout the program, to allow ongoing feedback about program operations. Program outcomes are assessed primarily through two means: student scores on knowledge tests, and students' educational and career choices following participation in the program. A computerized student tracking system has been developed to document post-program outcomes.
Using Evaluation Findings to Improve Minority Education Programs

Since 1984, the University of Virginia School of Medicine has operated a variety of educational programs for minority students at the high school, undergraduate, and medical school levels. Throughout the course of these programs, evaluators have monitored program processes and assessed program outcomes. Evaluation findings are regularly reported to program administrators, who use the information in making decisions about program change and improvement. The purpose of this roundtable presentation is to illustrate the methods of process and outcome evaluation used by the School of Medicine's minority education programs over the course of several years, and to demonstrate how evaluation data have actually been used in ongoing program development. The report will focus on the past two years, during which the author served as evaluator for the programs.

The University of Virginia School of Medicine's minority education programs are subsumed under the Assisting Students Achieve Medical Degrees (ASAMD) Project. The primary purpose of this project is to enhance the opportunities for minority and disadvantaged students to enter, remain in, and graduate from medical and health professions schools. The ASAMD Project is funded by the Health Careers Opportunity Program (HCOP) of the U. S. Department of Health and Human Services' Division of Disadvantaged Assistance, Bureau of Health Professions. The major components of the ASAMD Project are summer programs for high school and undergraduate students; ongoing support programs are also offered for minority students enrolled in the University of Virginia School of Medicine.

At the high school level, through the Summer High School Academic Reach-up Program (SHARP), students take a 6-week schedule of enrichment courses in writing and communication skills, math, and science. A lecture series gives
the students the opportunity to hear successful minority professionals talk about various educational and career options available to them. In addition, apprenticeship programs sponsored by NIH and the University of Virginia School of Medicine provide several highly motivated students with an 8 to 10-week supervised research experience. The major goals at the high school level, then, are to bolster students' basic academic skills and to motivate them to stay in school beyond the high school years.

At the undergraduate level, program goals are more specifically oriented towards medical education. A 6-week residential summer program (the Medical Academic Advancement Program, or MAAP) provides advance exposure to the content, pace, and volume of the medical school curriculum. Two types of courses are offered: (1) "bridging" courses developed around concepts and principles which mediate between undergraduate and medical school basic science courses, and (2) brief sections of first-year UVA medical school courses, presented by School of Medicine faculty in the same format that they use with first-year medical students. Included in the MAAP is a lecture series which introduces students to clinical aspects of many areas of medicine. Students also receive training in study skills, time management, and stress management. In short, the MAAP provides students with academic enrichment, exposure to medical school, and a unique opportunity for self-assessment of their interests and abilities.

The approach to evaluating the ASAMD programs has included both process and outcome assessment. During the conduct of the summer programs, the evaluator is intensively involved in monitoring program activities. To this end, she observes each of the SHARP and MAAP classes and speaks informally with program instructors and students. At the beginning of the third week of each program, the evaluator schedules group interviews with the students in
both the SHARP and the MAAP. Students are asked for feedback about their satisfaction with all aspects of the programs. The evaluator also interviews program instructors at this point in the program. The information gained through these interviews is summarized and reported to program administrators who may make mid-program changes on the basis of the findings, or may plan revisions in future program offerings. In the past, for example, schedule changes have been made mid-program as a direct result of these interviews. At the end of each program, students complete comprehensive questionnaires evaluating the programs.

Program outcomes are assessed primarily through two means: student scores on knowledge tests, and students' educational and career choices following participation in the program. To be more specific, for the MAAP, students take a pre- and post-test of their knowledge in chemistry and quantitative relationships, and receive grades in each of the MAAP courses. In the high school program, students also receive course grades. These, however, are short-term indicators of program success; more important in evaluating the effectiveness of these programs is documenting post-program student outcomes. To this end, a computerized student tracking system is being developed. To date, we know that approximately 75% of the students who have been through the MAAP have entered medical school or graduate school in biomedical research, and the retention rate of these students is nearly 100%. The data on the high school students' entry into college are not yet complete. Future evaluation plans are to refine the student tracking system, and to begin to compare educational outcomes for minority students who have and have not participated in University of Virginia School of Medicine educational programs.