

INSTRUCTIONAL PROGRAMS

Criterion V.A.: The school shall offer programs reflecting its stated mission and goals, leading to the Master of Public Health (MPH) or equivalent professional masters degree in at least the five areas of knowledge basic to public health. The school may offer other degrees, professional and academic, and other areas of specialization, if consistent with its mission and resources.

The areas of knowledge basic to public health include:

- 1. Biostatistics – collection, storage, retrieval, analysis and interpretation of health data; design and analysis of health-related surveys and experiments; and concepts and practice of statistical data analysis.**
- 2. Epidemiology – distributions and determinants of disease, disabilities and death in human populations; the characteristics and dynamics of human populations; and the natural history of disease and the biologic basis of health.**
- 3. Environmental health sciences – environmental factors including biological, physical and chemical factors which affect the health of a community.**
- 4. Health services administration – planning, organization, administration, management, evaluation and policy analysis of health programs.**
- 5. Social and behavioral sciences – concepts and methods of social and behavioral sciences relevant to the identification and the solution of public health problems.**

V.A.1. Identification in matrix form of all of the school's degree programs, including undergraduate degrees if any, showing the areas of specialization possible and distinguishing between those considered by the school to be professional degrees and those considered to be academic degrees. If the school offers degrees in a nontraditional format, these must be included in the matrix and identified as nontraditional.

The Mel and Enid Zuckerman College of Public Health offers professional and academic degrees at the bachelor, master and doctoral degree levels. The College's academic programs include the undergraduate Health Education Program and the Epidemiology Graduate Program. The MEZCOPH MPH Program is the college's professional degree program. A program executive

committee, chaired by an elected faculty member, governs each of these programs. These programs and their degrees are identified in TABLE V.A.1-1.

TABLE V.A.1-1 MEZCOPH Instructional Programs Matrix

Programs and Concentrations	Professional	Academic	Minimum Units Required
<i>Bachelor of Science in Health Sciences (BSHS)</i>			
Community Health Education		X	120
School Health Education		X	120
<i>Master of Public Health (MPH)</i>			
Biostatistics	X		43
Environmental and Occupational Health	X		45
Epidemiology	X		42
Family and Child Health	X		43
Health Education and Behavioral Sciences	X		44
Policy and Management	X		46
<i>Dual Degrees</i>			
MD – MPH	X		38 (+ 4 Med School SBS units)
MS Nursing – MPH	X		40
MS Mexican American Studies – MPH	X		46
MD – PhD in Epidemiology		X	73
<i>Graduate Academic Degrees</i>			
MS in Epidemiology		X	33
PhD in Epidemiology		X	73

Bachelor of Science in Health Sciences (BSHS)

MEZCOPH offers the Bachelor of Science in Health Sciences degree with a major in health education. The health education major is designed for individuals who will become professional health educators in community health, public health, school health and biomedical organizations. Students in the Health Education Program choose one of two options: community health education or school health education. The community health education option provides students with competencies needed to work in public, voluntary, private, clinical and worksite health settings. The school health education option prepares students to become certified teachers in elementary, middle

and secondary school settings. 120 credit units are required for graduation; at least 42 must be upper division credit units. The program is designed as a four-year program.

In addition to preparing students for careers in public health, the health education major is utilized by students planning careers in medicine, dentistry, pharmacy, and nursing. All health education majors who successfully complete either curriculum option can sit for the examination for voluntary certification offered through the National Commission for Health Education Credentialing.

The Health Education Program was initially established at the University of Arizona in the 1950's in the Health, Physical Education and Recreation Department. At that time, the program's degree, a Bachelor of Science in Education was awarded through the College of Education. In 1977, the program was relocated to the School of Health Related Professions, and the degree changed to the Bachelor of Science in Health Sciences. In 1994, the Health Education Program moved into the Department of Family and Community Medicine within the College of Medicine, where the program's faculty appointments resided. The program moved into MEZCOPH when the college was established in 2000.

Master of Public Health (MPH)

The cornerstone of the instructional programs at MEZCOPH is the professional degree, the Master of Public Health. The MEZCOPH MPH offers a program in which students acquire a sound academic background for competent practice in the field of public health. Students are able to obtain the MPH degree through one of six concentration areas, including: (1) Biostatistics, (2) Environmental and Occupational Health, (3) Epidemiology, (4) Health Education and Behavioral Sciences, (5) Public Health Policy and Management, and (6) Family and Child Health, which includes tracks in Maternal and Child Health and International Maternal and Child Health.

The MPH degree is designed to be an interdisciplinary, graduate, professional degree in public health. The MPH Program provides opportunities for students to obtain broad knowledge and basic skills in the core areas of public health. Students are able to acquire proficiency in one or more specialized areas through advanced coursework, and gain experience in applying advanced knowledge to the solution of actual health problems in community settings during internship training.

Although each concentration area has developed its own specific learning objectives, the general MPH Program strives to have students develop an understanding of:

- The biological, physical, environmental and social factors that affect the health of the community;
- The components, operation and financing of health services delivery systems, including facilities and personnel;
- Planning, policy analysis and administration of community health service programs;
- The process for identifying and measuring community health needs; and
- Relevant concepts from the appropriate social and behavioral sciences, such as cultural diversity and social marketing.

MPH students are admitted to the MPH Program rather than to a division within MEZCOPH. All students take a series of core courses (five 3-unit courses) to provide the breadth of knowledge necessary for understanding public health - biostatistics, epidemiology, environmental and occupational health, public health policy and management, and social and behavioral aspects of public health. Students then complete a set of required concentration courses that are unique to each concentration area. Students also take electives to complete their program of study. The number of credit hours required for concentration area courses varies by the concentration selected (see TABLE V.A.1-1). The program is designed as a two-year program, however, some students require an additional summer semester to complete their internship.

All MPH students are required to complete an internship, oral presentation and a written report, as the culminating experience of their degree work. This practicum portion is served with a federal, state or local health agency, in a private health related organization, or in the industrial sector. The internship gives students the opportunity to observe and participate in the application of public health theory based on their scope of public health practice. All MPH students give an oral presentation at the MPH internship Conference and produce a written internship report. Length of the internship varies by concentration area. The variation in length of internship is due to the students' need for exposure to the practice community in their particular field of study. Faculty members determined this need by assessing the concentration area curriculum for practice presentation and content, and have adjusted the length of the internship to accommodate issues/topics not covered by course content.

Historically, faculty from the College of Medicine at the University of Arizona and the Colleges of Business, Nursing and Anthropology at Arizona State University (ASU) recognized the need for a public health program in Arizona, and initiated the program planning process in the early 1990's. The Arizona Board of Regents (ABOR) established the MPH Program, initially known as the Arizona Graduate Program in Public Health, in January 1993. Faculty from the College of Health Professions at Northern Arizona University (NAU) joined

the effort shortly thereafter. The MPH Program was the first tri-university instructional program in Arizona. The MPH Program was initially administered through the University of Arizona College of Medicine, where the majority of program faculty were appointed, and moved into MEZCOPH when it was established in January 2000. The MPH Program earned full accreditation from the Council on Education for Public Health (CEPH) for five years in 1997. In the initial years of the MPH Program, ten concentration areas were established (Community Health, Community Health Nursing, Cultural and Behavioral Dimensions of Public Health, Environmental and Occupational Health, Epidemiology, Health Administration and Policy, Health Education/Health Promotion, International Health, Public Health Nutrition, and a Generalist track for clinicians). In fall 1999, after analyzing trends in MPH applicant interest and assessing the strength of various faculty cohorts, the MPH Program realigned the concentrations to better utilize the resources of the MPH faculty and to better meet the needs of students and the mission of MEZCOPH. Additionally, a Biostatistics concentration was added so that all 5 core concentrations were available.

The Public Health Policy and Management concentration was established at the University of Arizona in Fall 2003 to meet the CEPH mandate described in the official site visit report, that all core concentrations be offered at the University of Arizona. A proposal was provided to the MPH Program Committee that outlined the concentration, its learning objectives, and proposed courses, which was approved at the December 10, 2003 meeting. The concentration's goal is to prepare leaders of public and private health systems to manage effectively and to create and implement policies that promote the public's health. The concentration develops health planning, organization, administration, management, evaluation and policy skills for all levels of practice, including local, state, national and international. Several students transferred to this concentration from the existing ASU Health Administration and Policy concentration. Applicants were reviewed in Spring 2004 and a new class was accepted into the concentration for the 2004-2005 academic year. Thus the CEPH mandate to offer all 5 core concentration areas at the University of Arizona has been met. Development of this concentration preceded the decision to make the transition from a collaborative college to a single university college.

In Fall 2004, a working group was formed to further study the composition of the MPH concentrations and the faculty in Public Health Policy and Management and Community Health Practice. Faculty members in both concentrations conducted this review, in consultation with the MPH Program Chair and the Associate Dean for Academic Affairs. The objective was to ensure a strong faculty component for the core Health Services Administration concentration. The working group strengthened the Policy and Management concentration by transferring the faculty strength of the Community Health

Practice concentration to the Public Health Policy and Management concentration. This transfer was reviewed by the MPH Program Committee and approved at its March 10, 2005 meeting.

Due to the dissolution of the tri-university agreement during the 2003-2004 academic year, MEZCOPH accepted its last class of students into the collaborative program with NAU in Fall 2003. These students pursuing an MPH in the Health Education and Behavioral Sciences Concentration have graduated. Similarly, the last class of students entering the Health Administration and Policy concentration at ASU was admitted in Fall 2003. The last class accepted into the Community Health Practice concentration at the ASU campus was in Fall 2004. Many of these students are pursuing the dual MS Nursing – MPH degree. It is anticipated that most of the students who were accepted at ASU will complete their degrees during the 2005-06 academic year, with a few students completing during the 2006-2007 academic year.

Graduate Academic Degrees

MEZCOPH offers the following graduate academic degrees with a focus in epidemiology: Master of Science (MS) in Epidemiology, Doctorate (PhD) in Epidemiology, and a PhD Minor in Epidemiology.

The PhD program in Epidemiology trains individuals for careers in research and teaching in academic settings, research institutes, government agencies and industry. It has been designed for students whose careers will focus on conducting investigator-initiated and collaborative epidemiologic research. The doctoral program typically requires three to five years for completion. The first two to three years are usually devoted to coursework, the qualifying examination, the written and oral comprehensive doctoral examinations, and development of doctoral research. The overall course of study is developed by the student and the advisor, and is approved by the student's Graduate Committee and Chair of the Epidemiology Graduate Program. A minimum of 73 units is required; 46 units in the major, at least 9 units for the minor (depending on the minor department requirements), and at least 18 dissertation units.

The MS degree in Epidemiology is designed for individuals who seek training in epidemiological research. It is anticipated that graduates will occupy positions as research administrators, program managers, analysts, and evaluators in universities, health departments, governmental agencies, and similar organizations. The MS program typically requires two years for completion. The first year is focused on core coursework and completion of the qualifying examination. The second year is focused on remaining coursework and development of the master's thesis research. A minimum of 33 units is

required; at least 18 in epidemiology, 6 in biostatistics, 3 elective, and 6 thesis units.

The PhD minor in Epidemiology is designed for individuals from other University of Arizona doctoral degree programs who wish to obtain graduate training in Epidemiology. It requires completion of the first year Epidemiology and Biostatistics courses, 2 additional Epidemiology elective courses, 1 year of Epidemiology Seminar, and completion of the qualifying examination.

The Epidemiology Graduate Program was established in 1991 as an official interdisciplinary program located in the University of Arizona Graduate College with faculty from throughout the University. Following the creation of the College of Public Health, the program moved into MEZCOPH. Faculty members within the Program are from MEZCOPH, as well as from the Colleges of Medicine, Agriculture, Sciences, and Social and Behavioral Sciences. The structure and organization of the Epidemiology Graduate Program conforms to the Guidelines for Academic Programs established by the Arizona Board of Regents and the Graduate College. The Executive Committee supervises the other committees of the program as well as faculty and student participation in the program. Current committees include: curriculum and evaluation, admissions, student progress, and the qualifying examination.

V.A.2. The school bulletin or other official publication, which describes all curricula offered by the school for all degree programs.

The Health Education Program abides by all of the University of Arizona policies and procedures that govern undergraduate programs. The most recent catalog is published at <http://catalog.arizona.edu/2004-05/0405cal.html> and the applicable pages are included in APPENDIX V.A.2-1 of this document. The UA Graduate College Catalog is published online at <http://grad.admin.arizona.edu/catalog/toc.html> and the catalog information pertinent to MEZCOPH graduate programs is found in APPENDIX V.A.2-2. Individual bulletins and handbooks outlining admissions, grading policies and program curricula have been developed for each of the MEZCOPH educational programs. They are found in APPENDICES V.A.2-3 (Health Education), V.A.2-4 (MPH) and V.A.2-5 (Epidemiology MS and PhD). They are also available to students on the programs' websites at the following URL addresses:

TABLE V.A.2-1 MEZCOPH Instructional Program Websites

Program	URL
MEZCOPH Home Page	http://www.publichealth.arizona.edu/
Health Education Program	http://www.publichealth.arizona.edu/academics/undergrad_health_ed.htm
MPH Program	http://www.publichealth.arizona.edu/academics/mph_pro

	gram.htm
Epidemiology Graduate Program	http://www.publichealth.arizona.edu/academics/epi_graduate.htm

V.A.3. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

MEZCOPH offers the Master of Public Health degree, with concentrations in all of the core areas basic to public health. The “not met” from 2003 has been rectified by the development and implementation of the Public Health Policy and Management concentration (the required Health Services Administration concentration). This development has allowed MEZCOPH to better emphasize our strengths in policy, in addition to providing the necessary courses in health services administration and management.

MEZCOPH also offers an academic program in epidemiology, culminating in either an MS or PhD degree.

The college’s undergraduate Health Education program offers the Bachelor of Science in Health Sciences degree, with options in Community Health Education and School Health Education.

Weaknesses

Some of the current Community Health Practice concentration students have felt “under-valued” with the transfer of the University of Arizona Community Health Practice faculty to the Public Health Policy and Management concentration. MEZCOPH will ensure that all necessary courses for these students will be offered, and that appropriate internship supervision will be provided.

The dissolution of the tri-university agreement led to “orphan” status for some MPH students from ASU and NAU. Continued commitment to students from faculty at these institutions and the continued presence of a MEZCOPH senior program coordinator at the University of Arizona Phoenix campus have helped mitigate student concerns.

Although the Health Education program attracts a large number of undergraduate students, evolution to a broader Public Health focus may increase enrollment and serve as a more effective conduit to the MEZCOPH graduate programs.

Recommendations

MEZCOPH will monitor the progress of continuing University of Arizona Community Health Practice and ASU students to ensure that necessary courses are provided, and that appropriate internship supervision is available.

MEZCOPH should assess broadening the BSHS degree to include a Public Health major. This assessment should include the necessary faculty requirements, the potential benefit to MEZCOPH in University of Arizona financial resources, and the potential for additional student interest in MEZCOPH graduate programs.

Criterion V.B.: Each professional degree program identified in V.A., as a minimum, shall assure that each student a) develops an understanding of the areas of knowledge which are basic to public health, b) acquires skills and experience in the application of basic public health concepts and of specialty knowledge to the solution of community health problems, and c) demonstrates integration of knowledge through a culminating experience.

V.B.1. Identification of the means by which the school assures that all professional degree students have a broad understanding of the areas of knowledge basic to public health. If this means is common across the school, it need be described only once. If it varies by degree or program area, sufficient information must be provided to assess compliance by each program.

MEZCOPH assures that MPH students have gained the understanding and skills required of professional students by using the following procedures:

- a. Students are required to take and pass a set of required courses whose contents have been matched to MPH competencies.
- b. Students are required to complete and discuss an annual progress report with their faculty advisor to review their course work and other activities that further their public health education.
- c. Students are required to complete an internship that integrates their knowledge and skills into a field experience. Their preceptor and two faculty members evaluate this internship.

These procedures are discussed further in the following paragraphs.

The MEZCOPH MPH Program requires that students have a broad understanding of public health upon graduation. This is accomplished through a curriculum that requires each MPH student to complete a set of five core courses and by having a set of competencies that are integrated

throughout the curriculum. The core courses provide information on the basic foundation of public health, and include: (1) Sociocultural and Behavioral Aspects of Public Health, (2) Basic Principles of Epidemiology, (3) Biostatistics in Public Health, (4) Fundamentals of Industrial and Environmental Health, and (5) Public Health Policy and Management. In addition to the core courses, all MPH students must complete a set of required concentration area courses and a culminating internship.

The academic standards for successfully completing the MPH are based upon four principles. First, the curriculum meets the UA Graduate College standards for rigor. Second, students who fail a course are withdrawn from the program. Third, students cannot graduate with a grade point average lower than 3.0 on a 4.0 scale. Finally, students are not able to graduate if an incomplete grade for a required course remains on their academic record. By maintaining these standards for course requirements and requiring students to successfully complete an internship experience, the MPH Program assures that students have maintained the minimum standards for receiving the MPH degree.

In addition to ensuring successful completion of the MPH courses, the MPH program has implemented an annual progress report that students complete and discuss with their advisor (discussed in V.D.1). This report assures not only academic progress but also stimulates discussion between the student and advisor of “gaps” in the student’s understanding and skills. The internship report evaluation form (discussed in the next section) also addresses the issue of how well the competencies expected of MPH students were met in the internship report. Thus, the evaluation extends beyond completion of courses to an assessment of successful mastery of the required competencies.

MEZCOPH faculty continuously review the core competencies that are integral to the MPH curriculum. This process of reviewing MPH Program competencies was initiated in 1998 when a series of survey instruments was completed by program faculty and students. The review process continued with a series of faculty retreats, the first being held in Rio Rico, Arizona. Faculty members from all the MPH program concentrations were involved in this review. Faculty members were divided into work groups to review sections of the competencies outlined in the Institute of Medicine’s, *Public Health Faculty/Agency Forum*. The faculty then regrouped and discussed specific competencies in terms of current relevance to program goals and objectives, assessed where and how competencies were addressed, and determined areas that needed additional emphasis or development. A competency committee was formed to review recommendations of the faculty and to derive a comprehensive set of public health competencies that served as a foundation for the MEZCOPH MPH program.

The competency committee used several resources to evaluate the proposed MPH competencies. These included our previous MPH competencies, the *Public Health Faculty/Agency Forum* recommended competencies, the *Council on Linkages Between Academia and Public Health Practice* Competencies, and the draft version of competencies developed by the Association of Schools of Public Health. The revised competencies were presented at a faculty retreat in Fall 2001. The revised competencies were discussed and approved by faculty vote.

In Fall 2003, the MPH Program participated in the ASPH Institute of Medicine (IOM) Survey documenting how MPH core and concentration courses addressed the eight new areas of interest in public health presented by the IOM Report "Who Will Keep the Public Healthy?" This review included input from each core course instructor and the concentration directors. Our results suggested that our curriculum was extremely strong in the content areas of community based participatory research, cultural competence, global health, and policy. More recently, faculty members from MEZCOPH are serving on the ASPH Education Committee Core Competency Committees for Biostatistics, Environmental and Occupational Health, and Social and Behavioral Sciences. When the competencies from all 5 core areas are finalized, we will review our core courses to ensure that all required competencies are being adequately addressed.

The MPH Program has measured the extent to which the competencies are covered in the program's core curriculum. This was accomplished by surveying faculty of the core courses and students who had taken the core courses. The competencies, matched to MPH core curriculum, are found in APPENDIX V.B.1-1.

V.B.2. Description of the school's policies and procedures regarding practice placements, including criteria for selection of sites, methods for approving preceptors, approaches for faculty supervision and methods of assessment of students.

The Internship Manual (APPENDIX V.B.2-1) provides policies and procedures used to place students in practicum placements. An Internship Subcommittee was formed in 2001 to review and revise the manual and internship procedures. Furthermore, the MPH Program Committee regularly reviews internship policies and procedures during its monthly meetings. Each internship site must have a signed affiliation agreement with the University of Arizona. Selection of internship sites is a joint process involving the student and his or her faculty advisor. The student's academic advisor does not necessarily serve as the internship advisor. The primary criterion for selecting an internship site is an agency's ability to furnish the resources and activities for the student to complete the agreed upon learning objectives. An internship site must allow a student to: 1) experience public health work in his or her concentration area, 2) apply classroom knowledge to practical problems in the

field, 3) acquire additional skills and knowledge in public health services, 4) carry out a project mutually useful to the internship site and the student, and 5) interact regularly with public health professionals as a means of increasing knowledge and skills. The site preceptor must be able to monitor the progress of the student directly and communicate periodically with the faculty advisor.

An internship committee is formed for each student. This committee consists of two faculty members who are identified as the primary internship advisor and the committee member. These faculty members work with the student and the field preceptor to develop the internship project. The faculty members are responsible for accepting their student's final internship report. A standardized evaluation of internship reports was developed in spring and Summer 2002 and implemented in Fall 2002. The Internship Report Evaluation Form can be found in APPENDIX V.B.2-2. An internship field experience cannot be started until completion of at least 3 core courses and a set of courses identified by each concentration as prerequisites for conducting an internship.

The student, advisor and site preceptor sign a contract specifying learning objectives and activities to be completed during the internship. The Internship Manual is provided to all students and internship site supervisors to explain the program's policies and expectations for an internship. Faculty members are requested to visit the internship site at least one time during the student's internship experience. At the completion of the internship, the site supervisor must evaluate the student and the student must evaluate the internship site. Forms used for the evaluation process are provided in the Internship Manual.

Beginning in Fall 2003, all MPH internship candidates are required to be certified for human subjects training. In addition, their internship project must be submitted and approved for human subjects review or non-applicable status prior to their starting their field experience. Students, in discussion with their faculty internship advisor, may apply to the office of the Associate Dean for Research to have their internship deemed "not applicable" for human subjects review by the University of Arizona Human Subjects Committee (not applicable means that no private information from individuals or organizations will be collected). Internships that cannot be considered "not applicable" undergo expedited review (if minimal risk to subjects) or full review by the University of Arizona Human Subjects Committee. These reviews require the submission of a "Project Approval Form" or "Project Review Form" with drafts of participant consent documents and any questionnaires that will be used. All faculty advisors and MPH internship candidates are provided training in these procedures.

Analysis of the site supervisor evaluations of MPH interns who completed internships during the past three years is shown in Table V.B.2-1. Their

evaluations document a high level of satisfaction with intern skills and abilities. Responses for all areas questioned were heavily aggregated in the “agree strongly” and “agree” categories. Of particular interest is a strong upward shift, ranging from 2.7 to 10.5 points, in the percentages of “agree strongly” evaluation scores of current interns, in contrast to those reported in the last Self Study. This increase occurred in all areas questioned except that related to the “students’ understanding of the components of the field agency”, which decreased 6 percentage points. Additionally, a strong downward shift in the percentages of answers aggregated in the “not applicable” category occurred this reporting period, possibly indicating increased expectations of MPH interns. Two areas related to “negotiating and resolving conflict” and “ability to coordinate the efforts of a task-oriented group” continue to receive a high percentage of “not applicable” scores, suggesting that interns are not routinely expected to perform these tasks in their internships.

TABLE V.B.2-1 Evaluation of MPH Interns (2002-2004) by Site Supervisors
(n=154; 5 site supervisors submitted narrative evaluations unrelated to evaluation questions)

Question	Agree Strongly %	Agree %	Disagree %	Disagree Strongly %	Not Applicable %
Student demonstrated ability to identify tasks to accomplish goals.	79.2	18.8	1.3	0.6	0
Student demonstrated the ability to coordinate and implement tasks to accomplish goals or objectives.	78.6	20.1	0.6	0.6	0
Student demonstrated the ability to evaluate and to improve the effectiveness of his/her own work.	71.2	26.1	2.0	0.7	0
Student demonstrated the ability to make decisions or recommend decisions based on his/her assessment of a situation.	69.7	28.9	0	1.3	0
Student accepted responsibility.	86.9	10.5	1.3	1.3	0
Student was adaptable and worked well in difficult situations.	75.0	20.4	0.7	1.3	2.6
Student demonstrated effective time management skills.	68.0	29.4	1.3	0.7	0.7
Student understood the significant components of the field agency including the mission statement, organizational structure, job design, motivation and reward system.	60.8	32.7	1.3	1.3	3.9
Student demonstrated ability to use the agency’s resources (human and material), procedures and structures, effectively.	68	25.5	0.7	1.3	4.6
Student worked effectively in task-oriented groups reflecting diverse people and perspectives.	70.4	15.1	0.7	0.7	13.2

Question	Agree Strongly %	Agree %	Disagree %	Disagree Strongly %	Not Applicable %
Student demonstrated ability to work effectively with a spectrum of citizens and/or consumers served by the agency.	60.4	18.2	0.6	0.6	20.1
Student demonstrated ability to present ideas in a professional manner.	73.4	19.5	0	1.3	5.8
Student demonstrated ability to negotiate and to resolve conflict.	43.4	26.3	2.0	0.7	27.6
Student demonstrated the ability to coordinate the efforts of a task-oriented group.	51.6	19	0	0.7	28.8
Student demonstrated effective written communication skills.	70.2	21.2	2.6	0.7	5.3
Student demonstrated effective oral communication skills.	73.2	18.3	2.0	0.7	5.9
Student adhered to commitments made to the agency, colleagues and citizens (clients/consumers)	76.6	16.9	0	1.3	5.2
Student acted in accordance with high standards of professional integrity and impartiality.	81.2	12.3	1.3	0.6	4.5
Student was respectful, fair and courteous.	86.2	7.2	0.7	1.3	4.6

V.B.3. Identification of agencies and preceptors used for formal practice placement experiences for students, by program area, over the last three years.

During the past three years (Spring 2002 through Fall 2004), a total of 166 MPH internships were initiated. Of those, 159 projects have been completed and seven are rearing completion. A table listing interns, internship sites, names of the site supervisors, titles of the internship reports, and the students' concentration areas is found in APPENDIX V.B.3-1.

Of the internships completed during this period, 145 internships (87%) were community based (internship site outside of the University of Arizona). A more thorough analysis of the classification of the focus of MPH internships can be found in Table VII-9 in the Service Section.

V.B.4. Identification of the culminating experience required for each degree program. If this is common across the school's professional degree programs, it need be described only once. If it varies by degree or program area, sufficient information must be provided to assess compliance by each program.

There is an identifiable culminating experience for each concentration in the MPH program, which is the practicum, oral presentation and written report. The number of units required varies by concentration as summarized in TABLE V.B.4-1.

TABLE V.B.4-1 MPH Program Culminating Experiences by Concentration Area

Programs	Culminating Experience
<i>Master of Public Health (MPH)</i>	
MPH – Biostatistics	3 units ¹
MPH – Environmental and Occupational Health	3 units ²
MPH – Epidemiology	6 units
MPH – Family and Child Health	6 units
MPH – Health Education and Behavioral Sciences	6 units
MPH – Public Health Policy and Management	6 units
<i>Dual Degree Programs</i>	
MD-MPH	12 units
MS Mexican American Studies-MPH	6 units
MS Nursing-MPH	6 units

1. Biostatistics also requires students to take a biostatistics consulting class that provides them with a closely mentored field experience before their internship.
2. Environmental and Occupational Health also requires students to conduct a research-based project, which also includes additional field experience.

Beginning in fall 2005, all concentrations are adding a one-unit internship preparation course. This course covers internship policies, human subjects protection training, advice on working with the site preceptor and academic advisors, and additional training in oral presentations. This preparation course is taken the semester before or concurrent with the initiation of the internship.

Each student must submit a written report and make an oral presentation of his or her internship activities. The format for the report is provided in the Internship Manual. This report and oral presentation serves as the final documentation for the faculty that students have met the goals and objectives of the MPH Program. The internship report may include, but is not limited to, a technical review of public health issue(s) related to the organization which hosted the internship, a research project completed during the internship, or a policy analysis related to the internship experience. Along with the internship itself, the development and formal presentation of the internship report represent the culminating experience for the MPH degree.

In 1999, the MPH faculty determined that there was inconsistency in the quality of the student internship presentations and in the venues in which the presentations were taking place. A committee comprised of faculty, students and staff was formed to develop a means of improving this situation. In fall

1999, the MPH Program debuted its first Internship Conference. The format of this conference, held each fall, spring and summer semester, is similar to a scientific meeting. A keynote speaker selected by the students opens the meeting and the remainder of the conference is comprised of several concurrent sessions of student internship presentations centered on specific themes. Faculty judges evaluate student presentations. Sample conference programs are available on site for review. Following the presentations, a buffet luncheon is held for participants and guests. MPH student volunteers play a major role in the planning, facilitation and implementation of the Internship Conference (see Section IX.D., Student Roles).

In the six years of its existence, the MPH Internship Conference has grown in professionalism and significance to MEZCOPH. The Internship Conference has become the centerpiece of “Public Health” days, allowing a blending of activities across the educational programs. The summer Internship Conference is held one day prior to New Student Orientation, so that newly admitted incoming students can participate. An evening welcoming reception follows, with New Student Orientation the next day. In the spring semester, the Epidemiology Graduate Program sponsors an afternoon Epidemiology Forum after the morning Internship Conference (with a buffet luncheon provided to all participants). MEZCOPH uses these events as a public health networking opportunity by inviting public health practitioners, partners and alumni throughout the state to participate. Employers have the opportunity to assess new MPH and Epidemiology graduates and, reciprocally, graduating students have an opportunity to talk to potential employers.

V.B.5. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

All MPH students must pass a series of core and concentration specific courses that have been matched to public health competencies.

Students must complete an annual progress report and discuss it with their faculty advisor to review their academic progress.

Students must demonstrate that they integrate their skills and knowledge through their internship project presentation and report. Their site preceptor and internship advisor evaluate the field portion of the internship. The internship advisor and another faculty member evaluate the written report.

All MPH students must be certified in human subjects protection training before beginning their internship. The University of Arizona Human Subjects

Committee must approve all MPH internship projects that involve the collection of private information from individuals or organizations.

There is a high level of satisfaction with intern skills and abilities based on site supervisor evaluation.

The MEZCOPH Internship Conference serves as a formal mechanism for MPH students to present their internship results, and has become the centerpiece of “Public Health” days for MEZCOPH.

Weaknesses

There is not a mechanism for the systematic matching of the skills and experiences of MPH students to potential internship sites.

Although requiring the internship report evaluation form has standardized this evaluation, no systematic procedures are in place to address deficiencies.

Recommendations

Review the newly adopted ASPH discipline specific competencies to determine their coverage in the core courses and concentration specific courses.

Explore the possibility of modifying the existing MEZCOPH internship database to be searchable by students as part of the MEZCOPH web site, and to allow outside agencies to post projects with their desired student qualifications and skills.

Develop systematic procedures for requiring students to address deficiencies in their internship report.

Criterion V.C.: For each program and area of specialization within each program identified in Criterion V.A., there shall be clear learning objectives.

V.C.1. Identification of a set of learning objectives for each program of study identified in the matrix for V.A. If individualized learning objectives are used, identification of a sample set that is typical of each program of study and that can be verified through on-site inspection.

Learning objectives/competencies tailored to each MPH concentration area have been developed and are found in APPENDIX V.C.1-1. Learning objectives for the Health Education Program and the Epidemiology Graduate Program are found in APPENDICES V.C.1-2 and V.C.1-3.

In addition to developing learning objectives for their specific concentration area and educational program, faculty are required to provide learning objectives as part of each course syllabus. In response to comments from our last CEPH site visit, a standardized syllabus format was developed and implemented by the MEZCOPH Education Committee, which includes a section requiring delineation of learning objectives for each course. Specific learning objectives have been developed for individual courses and are available for review on site.

V.C.2. *A description of the manner in which learning objectives are developed, used and made available to students.*

Undergraduate Program

The Health Education Program Committee's Curriculum Subcommittee is responsible for designing and managing the learning objectives for courses based on the *Entry Level Health Education Roles, Responsibilities, Competencies, Sub-Competencies And Objectives*, by the National Commission For Health Education Credentialing, Inc. (APPENDIX V.C.1-2). In every course, students receive a course syllabus at the beginning of the semester that lists the learning objectives, description of the course content, assignments, due dates, test dates, and the grading scale for the course. The students in the Health Education major are required to complete the CPH 350 course, Health Education and Health Promotion Principles, in which they are introduced to the entry-level health education competencies that will form the basis of the subsequent course of study.

Master of Public Health Program

In the MPH program, faculty in each concentration meet regularly to discuss the concentration's curriculum, with potential changes brought to the MPH Program Committee for discussion. The learning objectives of the MPH program were developed through faculty retreats, and college-wide work groups that consisted of faculty members, community public health practitioners, and students. MPH concentration areas have created learning objectives for their curriculum. Each concentration has developed a matrix that identifies how their curriculum addresses the learning objectives for the students (APPENDIX V.C.1-1). A pilot project has been undertaken to develop an on-line system where students assess how well they perceive concentration learning objectives are being delivered in the curriculum. This project was developed for the Family and Child Health Concentration and will be tested at the end of the Fall 2005 semester. Furthermore, each concentration reviews their learning objectives and where and to what extent they are addressed in their courses.

This review, conducted every three years, will identify how the competencies are being taught to every student in the MPH program.

Graduate Academic Programs

The Epidemiology Graduate Program developed and approved a set of competencies and learning objectives for each of the degree programs (MS, PhD, PhD minor) in 2002. This set of competencies was developed through a series of faculty meetings and was based on similar work being done at other institutions. The competencies were designed to assist students in developing their academic program and experiences, and to assist faculty in student advising and in course development and evaluation. This set, organized within 12 general domains or skill areas, is found in APPENDIX V.C.1-3. The competency list is provided as part of the Student Handbook during orientation. The competencies, in the form of a Competency Assessment Form, are a required component of the annual student progress report.

The Epidemiology Graduate Program recently began a process to evaluate the current program competencies and to determine how they are addressed in the required courses. In January 2005, the Curriculum Committee was asked to review the existing set of competencies and evaluate how this list corresponds to similar work ongoing within the Association of Schools of Public Health and the American College of Epidemiology. With faculty and student review, the committee mapped competencies to experiences obtained through individual classes, independent studies and capstone experiences of the Program. Over the course of the coming year, the Curriculum Committee will use this mapping to determine gaps in the curriculum of the various degree programs and to identify areas that need change. Degree and course requirements from other Epidemiology Programs are being identified to assist in the curriculum review process.

V.C.3. A description of the manner in which the school periodically assesses the changing needs of public health practice and uses this information to establish the learning objectives for its educational programs.

Each concentration in the MPH Program, and the Health Education and Epidemiology Graduate Programs are responsible for determining the needs of students in their area of study. Ongoing assessment of the changing needs of public health practice are made through a variety of strategies, including focused evaluation by each specific program, ongoing evaluation by faculty regularly participating in state and national public health organizations, regular surveys of students as they leave the degree programs, and alumni surveys.

Prospectively, the faculty uses several methods and resources to keep abreast of the changing needs in public health practice. First, the faculty relies on its experience in public health and continual involvement with local, state, national and international professional organizations to know the current and emerging issues in public health. This experience is acquired by serving on community and professional boards, attending professional conferences and providing consultative services to public health agencies. The strong service orientation of faculty members provides the foundation for the internal assessments of the changing needs in the learning objectives and the educational programs of the MEZCOPH. For example, faculty members in the Family and Child Health concentration are members and regularly attend meetings of the Association of Teachers of Maternal and Child Health. Faculty members in the Public Health Policy and Management concentration regularly provide contractual services for the Arizona Department of Health Services, which provides first-hand experience with the public health needs of the State. The ASPH funded Academic Health Department grant allowed MEZCOPH to fund 10 internships at the Arizona Department of Health Services for MPH and Epidemiology students. The feedback received from students who participated in these internships has been invaluable in identifying the recently changing needs of public health practice.

Another source of information for understanding the growing needs of public health practice and how to modify the educational programs to meet these needs is review of alumni surveys. The MPH and Epidemiology alumni surveys assess the additional training MEZCOPH graduates believe they need with regard to their public health skills. The results from the most recent surveys have reinforced the need to increase the biostatistics and data analysis portion of the curriculum. This review resulted in additional courses in Statistical Consulting, Clinical Trials, Survival Analysis, and a Doctoral Seminar. In addition, MPH alumni were asked to assess the frequency at which they perform the Ten Essential Services of Public Health. The extensive information provided by MPH alumni is used to develop new and modify existing curricula.

In addition to the students and communities we serve, major sources of information about changing needs of public health are two national professional organizations—the American Public Health Association and the Association of Schools of Public Health. For the last four years, the MEZCOPH Dean, Associate Deans, Assistant Deans and several faculty members have attended the annual ASPH meeting at the APHA meeting. Furthermore, MEZCOPH is active in ASPH with Dean Swanson serving on the Board of Directors; Assistant Dean, Chris Tisch serving as Chair of the Student Services Council; and Director of Development, Kim Gunn, serving as Chair of the Development and Alumni Affairs Council. Additionally, Associate Dean for Academic Affairs, Denise Roe, regularly attends the annual retreat for Associate Deans for Academic Programs. The topics addressed there, such as faculty

recruitment, retention, diversity, mentoring and accreditation have been invaluable in shaping the programs of the College. Finally, Dean Swanson and Associate Dean of Academic Affairs, Denise Roe, have been trained as CEPH site visitors and Dean Swanson was selected to serve on the CEPH Board of Councilors. These opportunities will allow us to identify common practices in other Schools of Public Health.

Furthermore, faculty members in MEZCOPH are active in their professional organizations and attend annual meetings that keep them abreast of current public health issues that need to be part of the MPH curriculum. All of these activities provide extensive and current information regarding evolving public health issues.

In this day of electronic media, all of our faculty, staff and students follow emerging and current public health issues through a variety of online sources: the American Public Health Association (APHA), the World Health Association, the Pan American Health Association, the U.S./Mexico Border Health Organization, the Centers for Disease Control and Prevention, the National Institutes of Health, and the U.S. Surgeon General's Office. We also follow private websites, such as the American Cancer Association, the American Heart Association, and the American Lung Association.

In addition to the general strategies identified above, the Epidemiology Graduate Program developed a strategy to engage epidemiologists throughout the state and to ask state public health practitioners about their specific need for epidemiology training. A series of meetings between MEZCOPH and Arizona Department of Health Services (ADHS) epidemiologists were held. One outcome was a needs assessment survey to determine level of need and interest in further training in epidemiology degree programs and short-courses. Surveys were sent to targeted ADHS supervisors working in areas of public health practice who were asked about their perceived need for further training by their staff. In addition, individual surveys were sent to ADHS staff and distributed to attendees at the Arizona Public Health Association winter meetings. An online version of the survey was also placed on the MEZCOPH website.

While this survey is ongoing, three additional outcomes have resulted. One is presentation of the annual 'Epidemiology in Arizona' research forum; the second is the development of a distance learning (or online) version of the basic epidemiology course; the third is the development of Project SERT or Student Epidemiology Response Teams (SERT). The Epidemiology in Arizona Research Forum began in 2002 and targets current students, alumni working within the state, faculty, and practicing epidemiologists and public health workers. This forum is coordinated by students within our various epidemiology programs and held in spring of each year. The online version of the basic epidemiology course will be available for Fall 2005 and will target users outside of the

Tucson campus, including ADHS staff. Project SERT targets current students, and seeks to increase their awareness of public health practice within the state. It was developed as part of a MPH internship in Fall 2004 and Spring 2005, and received partial funding by the Academic Health Department grant received from ASPH. It is a student organization, sponsored by the Epidemiology Graduate Program, that provides training and infrastructure for graduate students to work with state and county public health practitioners on short-term outbreak investigations or short-term high need problems.

V.C.4. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

Learning objectives for all MEZCOPH academic programs and MPH concentrations were developed and mapped to individual courses. Course specific learning objectives also were developed.

A standardized MEZCOPH course syllabus format was developed and implemented by the Education Committee.

The Health Education Curriculum Committee, MPH Program Committee, and Epidemiology Program Curriculum Committee provide ongoing review of curricula and continued evolution of course learning objectives to address evolving public health issues and needs at the local and national levels.

Weaknesses

None identified.

Recommendations

Each Program Committee should meet annually to assess the relevance of their learning objectives, to update them to reflect evolving public health issues and needs, and to determine gaps and redundancies in their curriculum.

Criterion V.D.: There shall be procedures for assessing and documenting the extent to which each student has attained these specified learning objectives and determining readiness for a public health practice or research career, as appropriate to the particular degree.

V.D.1. Description of the procedures used for monitoring and evaluating student progress in meeting stated learning objectives.

Undergraduate Program

Each student must complete all of the required courses for the Health Education major. Successful completion of each course at a grade of "C" or better is considered evidence of meeting the learning objectives in each course. Students must apply for admission to the Health Education major with a minimum overall grade point average of 2.25 in a 4.0 system, two formal letters of recommendation, and a written statement of their career goals and objectives. Upon admission to the major and before the internship experience, the student meets with their advisor and completes a self-assessment of the entry-level health educator responsibilities and competencies and objectives. Identified areas of weakness and plans for strengthening these competencies are addressed in planning the student's internship experience or the student teaching experience.

In the Health Education Program, each undergraduate student submits a formal work plan for the internship experience that is reviewed and approved by the faculty internship advisor and the site preceptor. The work plan includes the internship learning objectives. One faculty advisor is assigned to monitor all student internship experiences and student teaching. This faculty member is responsible for regular communication with the student intern and the site preceptor. The site preceptor evaluates the student's performance at mid-term and at the end of the student's internship. The student also submits a final report of the experience and the project that he/she completes for the agency. The faculty advisor assigns the student's grade based on the preceptor evaluations, the faculty advisor's observations of the student's work, the student's fulfillment of the learning objectives, and the quality of the final report.

Master of Public Health Program

The procedure for assessing and documenting how MPH students have met specified learning objectives involves three processes. The first review process is to determine that students have met the requirements listed in section V.B. Each student must (a) pass all courses, (b) maintain a 3.0 GPA, and (c) have no incompletes in his or her coursework. Students who have a GPA less than 3.0 are put on academic probation and additional work by the student, supervised by his or her faculty advisor is promoted. The second process is the successful completion of an internship, including an oral presentation and a written report. As discussed in section V.B.2 above, the internship contract specifies learning objectives and activities to be completed during the internship, with evaluation by the site supervisor of student success in meeting these learning objectives at the end of the internship. The third and final process is the

degree check to determine if all program requirements have been appropriately completed.

In addition to the current review of interns by site supervisors and the reading of MPH internship reports by the student's internship faculty committee, MEZCOPH has now begun a more formal evaluation of the internship reports, using a standardized form (APPENDIX V.B.2-2). This form specifically addresses the areas of 1) public health knowledge and relevance, 2) integration of public health skills, 3) technical writing, and 4) assessment of learning objectives.

The MPH Program has also developed a student progress review process, modeled after that developed by the Epidemiology Graduate Program. The process requires students to meet with their faculty academic advisor each spring to review their progression in courses completed, internship identification and completion, projects conducted, and service activities. This review is considered an important tool to ensure that students make academic progress and are successful in meeting the MPH learning objectives. Finally, graduating students are asked for their self-assessment of whether they have achieved each of the MPH competencies as part of the exit survey.

Graduate Academic Programs

The evaluation of students in the MS, PhD and PhD minor programs is primarily conducted through individual student graduate committees, which are under the supervision of the Epidemiology Executive Council of the Epidemiology Graduate Program and the Graduate College.

All students are assigned an initial academic advisor. As the student progresses, he/she then identifies a research advisor and graduate committee. Individual student graduate committees are responsible for assisting in the development and monitoring of a plan of study, and assuring completion of appropriate theses/dissertation research.

Each of the MS, PhD and PhD minor students is required to prepare an annual progress report. This report is reviewed by the advisor and then reviewed by the Student Progress Committee, a standing committee of the Epidemiology Graduate Program. As part of the annual report, each student is asked to review the Epidemiology Competency Form to assist in a self-evaluation of the established learning competencies for the Epidemiology Graduate Program. The Student Progress Committee is composed of faculty within the Program and seeks to assure that all students are progressing in a timely fashion and that the graduate committees are monitoring student progress.

All students in the Epidemiology program (MS, PhD, PhD minor) must successfully pass a qualifying examination. This one-day, written exam is typically taken after the first year of epidemiology and biostatistics courses, and has been designed to evaluate basic concepts and learning objectives. MS students prepare a written thesis and must present a seminar and oral defense. PhD minor students must pass an oral comprehensive examination, hosted by their major department, in which the Epidemiology faculty committee members question the student to ensure that they have met their learning objectives. All Epidemiology PhD students must complete an individualized written and oral examination prior to initiating dissertation work. This written examination requires the student to develop and write an epidemiological research proposal different from the dissertation research, with the oral examination focused on the breadth of epidemiology and the minor field. The defense of the student research dissertation project is the final assessment that students have met their learning objectives.

V.D.2. Identification of outcomes which serve as measures by which the school will evaluate student achievement in each program, and presentation of data assessing the school's performance against those measures over the last three years.

Undergraduate Program

Success of students in the Health Education program is determined by grade point averages, and graduation and attrition rates.

Students may be admitted to the Health Education Program once they complete 56 units of lower division curriculum and achieve a GPA of 2.25 (Community Health Track) and 2.5 (School Health Track). However, students must complete all pre-health education requirements and prerequisites before they are admitted. Students can complete all of the Health Education required courses up to the 400 level (senior year) before they are formally admitted to the program. Students often take a mix of prerequisites and Health Education courses until the semester or two before they graduate, and then officially apply to the major to complete their 400 level required courses and internships. Therefore, the validity and usefulness of degree completion rates in these circumstances are questionable. Nevertheless, there is less than 5% attrition in students who are admitted to the Health Education Program and the program continues to graduate a large number of Bachelor of Science candidates. Another measure of success is the ability of Health Education students to achieve higher than necessary admission grade point averages and improve their GPAs while in the program (TABLE V.D.2-1).

TABLE V.D.2-1 Average Incoming and Final GPAs of Graduates of the Health Education Program (2002-2005)

	Entering GPA	Final GPA
2002-03	2.92	2.99
2003-04	2.88	2.93
2004-05	3.09	3.10

Graduate Programs

The primary outcome measures by which we assess graduate student achievement are graduation rates, attrition rates and job placement. The graduation and attrition rates for students in the MEZCOPH graduate programs, across the life of each program, are shown in the following TABLES V.D.2-2 and V.D.2-3.

Graduate and Attrition Rates:

As shown in TABLE V.D.2-2, the MPH Program graduates in excess of 80% of its students. Additional tables in APPENDIX V.D.2-1 present details that demonstrate the cumulative graduation rate (weighted average) for MPH students between 1992 and 2004 is 84%. Of note, 21 students entering in this timeframe continue in the program and are not yet reflected in the graduation rate. It is expected that these students will graduate and that the cumulative graduation rate will increase to 86.4%. The majority of students who drop out do so within the first two years of the program; 80% of MPH students who graduate complete the curriculum within 3 years of starting the program; the average MPH student finishes in 2.6 years. Interestingly, those students who take longer than three years to finish the degree do not appear to be at higher risk of attrition. Student perseverance, a liberal Graduate College policy allowing six years for degree completion, and strong faculty and student services support contribute to the eventual program completion by most of these students. Examination of the reasons for students' non-continuance shows great variability and includes realization that public health is not the student's desired field, family issues, job pressures, and non-awareness of the amount of time graduate studies require. Review of the ethnicity breakdown of students who have dropped out shows an almost exact match of the ethnicities of the student population of the MPH Program.

Analysis of the graduation and attrition rates of the Epidemiology Graduate Program yields some interesting findings. While the view across the life of the program (TABLE V.D.2-3) reflects a less than satisfactory attrition rate, closer analysis (APPENDIX V.D.2-2) reveals instability in the early years of the program and a slow and steady improvement since 1999. Of the 53 students admitted since fall 1999, 18 have graduated, 30 continue to work toward

degree and only 5 have dropped out. Transitioning the Epidemiology Program from interdisciplinary stature to an academic program within the college has provided the structure necessary for successful administration. Program faculty and college administrators continue to closely monitor the graduation and attrition rates of this program.

**TABLE V.D.2-2 Graduation and Attrition Rates of MPH Students Entering
Between 1998-2004**

Cohort of Students		98-99	99-00	00-01	01-02	02-03	03-04	
1998-99	# Students continuing at beginning	66						
	# Students <i>new</i> at beginning	65						
	# Students withdrew, dropped, etc	0						
	# Students graduated	3						
	Cumulative graduation rate	5%						
	Cumulative attrition rate	0%						
1999-00	# Students continuing and <i>new</i> at beginning	62	67					
	# Students withdrew, dropped, etc	3	2					
	# Students graduated	28	2					
	Cumulative graduation rate	48%	3%					
	Cumulative attrition rate	5%	3%					
2000-01	# Students continuing and <i>new</i> at beginning	31	63	66				
	# Students withdrew, dropped, etc	1	2	3				
	# Students graduated	18	24	2				
	Cumulative graduation rate	75%	39%	3%				
	Cumulative attrition rate	6%	6%	5%				
2001/02	# Students continuing and <i>new</i> at beginning	12	37	61	58			
	# Students withdrew, dropped, etc	1	3	3	5			
	# Students graduated	8	20	24	0			
	Cumulative graduation rate	88%	69%	39%	0%			
	Cumulative attrition rate	8%	10%	9%	9%			
2002/03	# Students continuing and <i>new</i> at beginning	3	14	34	53	76		
	# Students withdrew, dropped, etc	0	0	1	3	3		
	# Students graduated	2	5	21	19	1		
	Cumulative graduation rate	91%	76%	71%	33%	1%		
	Cumulative attrition rate	8%	10%	11%	14%	4%		
2003/04	# Students continuing and <i>new</i> at beginning	1	9	12	31	72	80	
	# Students withdrew, dropped, etc	0	0	0	1	3	5	
	# Students graduated	0	7	9	16	25	1	
	Cumulative graduation rate	91%	87%	85%	66%	34%	1%	
	Cumulative attrition rate	8%	10%	11%	16%	8%	6%	
	Cohort of Students	98-99	99-00	00-01	01-02	02-03	03-04	1998-2004
	Total Graduates	59	58	56	35	26	1	235
	Total Withdrew and Drops	5	7	7	9	6	5	39
	Total Continuing	1	2	3	14	44	74	138

TABLE V.D.2-3 Graduation and Attrition Rates of PhD and MS Students Entering Epidemiology Program Between 1998-2004

	Cohort of Students	98-99	99-00	00-01	01-02	02-03	03-04
1998-99	#Students continuing from 1991-1997 cohorts - 15						
	# Students continuing and <i>new</i> at beginning	5					
	# Students withdrew, dropped, etc	0					
	# Students graduated	0					
	Cumulative graduation rate	0%					
	Cumulative attrition rate	0%					
1999-00	# Students continuing and <i>new</i> at beginning	5	10				
	# Students withdrew, dropped, etc	2	0				
	# Students graduated	1	0				
	Cumulative graduation rate	20%	0%				
	Cumulative attrition rate	40%	0%				
2000-01	# Students continuing and <i>new</i> at beginning	2	10	12			
	# Students withdrew, dropped, etc	0	0	0			
	# Students graduated	1	4	0			
	Cumulative graduation rate	40%	40%	0%			
	Cumulative attrition rate	40%	0%	0%			
2001-02	# Students continuing and <i>new</i> at beginning	1	6	12	3		
	# Students withdrew, dropped, etc	1	0	0	0		
	# Students graduated	0	0	1	0		
	Cumulative graduation rate	40%	40%	8%	0%		
	Cumulative attrition rate	60%	0%	0%	0%		
2002-03	# Students continuing and <i>new</i> at beginning	0	6	11	3	19	
	# Students withdrew, dropped, etc	0	0	1	0	1	
	# Students graduated	0	0	4	1	0	
	Cumulative graduation rate	40%	40%	42%	33%	0%	
	Cumulative attrition rate	60%	0%	8%	0%	5%	
2003-04	# Students continuing and <i>new</i> at beginning	0	6	6	2	18	9
	# Students withdrew, dropped, etc	0	1	0	0	1	1
	# Students graduated	0	2	2	0	4	0
	Cumulative graduation rate	40%	60%	58%	33%	21%	0%
	Cumulative attrition rate	60%	10%	8%	0%	11%	11%

	Cohort of Students	98-99	99-00	00-01	01-02	02-03	03-04	98-04	1992-98 (Not Shown)	All Years
	Total Students Entered	5	10	12	3	19	9	58	39	97
	Total Graduates	2	6	7	1	4	0	20	21	41
	Total Withdrew and Drops	3	1	1	0	2	1	8	18	26
	Total Continuing	0	3	4	2	13	8	30	0	30

Similar to MPH students, the majority of MS students graduate between the 2nd and 3rd years in the program. Doctoral students have had a ten-year time limit to degree. This year, the Graduate College policy regarding time to doctoral degree is being revised to state that the degree must be completed within five years from the completion of comprehensive exams. With this information in mind, the Epidemiology Program faculty leadership can better calculate the advising and teaching load to determine the preferred ratio of MS and PhD students.

Job Placement:

MEZCOPH graduate program alumni are successful in finding employment in the public health field. One hundred ninety three students have graduated since December 2001. The college has maintained alumni information on 90% of these graduates. Over one fifth (22%) of those tracked are pursuing further graduate education or training and approximately 68% work directly in public health, either in research, clinical or community settings or in federal, state, local or tribal agencies.

Although many of our graduate program alums are serving in responsible public health positions, two notable alumni of our MPH program are 1998 graduate, Dr. Richard Carmona, who now serves as the U.S. Surgeon General and 1994 alumnus, Dr. Mark Smolinski, who is the editor of the *Healthy People 2010 Report*.

V.D.3. If the outcome measures selected by the school do not include degree completion rates and job placement rates, then data for these two additional indicators must be provided, including experiential data over the last three years. If degree completion rates, in the normal time period for degree completion, are less than 80 percent, an explanation must be provided. If job placement rates, within 12 months following award of the degree, are less than 80 percent, an explanation must be provided.

MEZCOPH outcome measures include degree completion rates and job placement rates as discussed in the previous section. Additionally, MEZCOPH assesses student success in meeting stated learning objectives as discussed in section V.D.1.

V.D.4. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

Health Education undergraduate students and Epidemiology graduate students provide self-ratings of their mastery of the required learning objectives, which are discussed with the appropriate faculty member. MPH students provide self-ratings of their mastery of the required learning objectives as part of their exit interview.

MEZCOPH has graduated 513 individuals from the MPH program, with 139 students continuing. The graduation rate for the MPH program between 1992 and 2002 is 84%.

MEZCOPH has graduated 41 individuals from the Epidemiology MS and PhD program, with 30 students continuing.

Almost 90% of the alumni tracked are pursuing further graduate education/training or working directly in public health.

Weaknesses

Since MPH students provide self-rating of their mastery of the required competencies as part of the exit interview, faculty cannot use this information to help individual students remedy identified deficiencies.

The graduation rate for the Epidemiology MS and PhD program between 1991 and 2004 is 61%. However, of the 53 students admitted since fall 1999, 18 have graduated, 30 continue to work toward degree and only 5 have dropped out (9.4%).

MEZCOPH continues to administer program specific alumni surveys across the graduate programs. Data could be better utilized if the survey instruments were standardized.

Recommendations

Expand the MPH student progress review to include a self-rating of competency mastery, with appropriate remediation steps if required.

Epidemiology program faculty and MEZCOPH administrators should continue to closely monitor the graduation and attrition rates of the Epidemiology program. A standardized alumni survey should be developed and implemented. Efforts should be made to develop additional alumni tracking mechanisms, strengthen

allegiance of current students to MEZCOPH, and provide institutional encouragement and appreciation for alumni participation in MEZCOPH programs.

Criterion V.E.: If the school also offers curricula for academic degrees, then students pursuing them shall have the opportunity and be encouraged to acquire an understanding of public health problems and a generic public health education. These curricula shall cover as much basic public health knowledge as is essential for meeting their stated learning objectives.

V.E.1. Identification of all academic degree programs, by degree and area of specialization. The matrix in V.A. may be referenced for this purpose.

The two MEZCOPH academic programs are the undergraduate Health Education Program, which offers a B.S. in Health Sciences and the graduate Epidemiology Program, which offers Ph.D. and M.S. degrees. See TABLE V.A.1-1.

V.E.2. Identification of the means by which the school assures that students in research curricula have the opportunities and are encouraged to acquire a public health orientation. If this means is common across the school, it need be described only once. If it varies by degree or program area, sufficient information must be provided to assess compliance by each program.

MEZCOPH offers the Public Health Seminar Series, described in Section VII, as a forum for student and professional development, exchange and dissemination of information about public health priorities in the southwest, discussion of promising public health practices, and as a means of connecting MEZCOPH to our community partners. National, regional and local speakers are invited to present public health and prevention oriented topics. Seminars are presented over lunch each 1st, 3rd and 5th Tuesday during the fall and spring academic semesters. This seminar series affords students the opportunity to learn of faculty service and research interests, and to interact with faculty, academic professionals, public health experts and community partners.

The Academy Without Walls, described in section VII, also provided students the opportunity to participate in field-based public health training for frontline public health professionals. Briefly, MEZCOPH developed, delivered and evaluated competency-based curricula in three domains: Basic Public Health Sciences, Cultural Competency, and Community Dimensions of Practice. Approximately 10 epidemiology and public health students participated in the delivery of these trainings. The students gained a greater understanding of

practical applications of public health at the local level, and gained experience in the training of frontline public health professionals.

Undergraduate Program

The Health Education Program is designed to assure that students completing the Health Education curriculum will have the knowledge and skills to perform as entry-level health educators in community health, public health and school health settings. The courses include the basic sciences of chemistry, biology, anatomy and physiology, the behavioral sciences, college algebra, biostatistics, and the major health education courses. The health education courses provide a foundation in personal health and wellness, community health, public health and school health, and address the responsibilities and competencies for the entry-level health educator.

Graduate Academic Degrees

MS and PhD students in Epidemiology obtain a public health orientation through required and regular interaction with the MPH Program, through the incorporation of public health concepts and examples in the Epidemiology course sequence, and through attendance in required Epidemiology Seminars. The public health content in the Epidemiology graduate program has been strengthened in response to the last CEPH site visit report, particularly in the Epidemiology Seminars. In addition, Epidemiology PhD students are encouraged to complete their MPH degree as part of their PhD tenure at the University of Arizona. In the past year, we have also developed a specific Public Health minor for those students who are interested in public health but do not have the resources to complete the entire MPH coursework.

All epidemiology MS and PhD students are required to complete two of the MPH core curriculum courses, Basic Principles of Epidemiology and Introduction to Biostatistics. The faculty of these courses have developed group exercises and projects that encourage collaboration between students and focus on public health issues. The combination of public health and epidemiology students in the classroom insures a rich diversity of opinions and viewpoints related to the public health curriculum presented. More recently, we have added a course in Public Health history as an elective for the Epidemiology graduate students. This course entitled “Public Health Over the Centuries” is taught by Dean Swanson, and provides a global history of public health in the socio-cultural and economic history of the time period considered. The initial course offering was provided to 7 students; 2 were Epidemiology doctoral students. Additional MS and PhD students expressed interest but were unable to incorporate it into their schedules. Dean Swanson is planning to develop an on-line version of the course so that Epidemiology doctoral students can more easily incorporate it into their schedules (particularly while performing field research). The

Epidemiology Curriculum Committee will evaluate a proposal to make this course a requirement for all MS and PhD students in Fall 2005.

All epidemiology students are required to attend Epidemiology Seminar. These seminars have been designed to cover topics across broad areas of public health. Students receive 1 unit of course credit for each semester that they attend. Many Epidemiology students also attend the Public Health Seminar Series. Beginning in Fall 2005 they will be able to receive 1 unit of course credit for each year that they attend (since the seminar is offered bi-weekly).

As part of their academic training, Epidemiology students perform research in areas of public health significance. As part of the background readings and discussions, they acquire a public health orientation to those and related problems. As part of the discussion and presentation of their results, they include the public health orientation and significance.

Finally, our recently developed Project SERT or Student Epidemiology Response Teams will serve to broaden the public health orientation of Epidemiology students. As discussed previously, this student organization will provide training and infrastructure for graduate students to work with state and county public health practitioners on short-term outbreak investigations or short-term high need problems. This partnership not only will provide benefits to public health practitioners within Arizona, but also to our students in increasing their awareness of public health practice within the state. A third of the 15 students involved in the initial planning and implementation were Epidemiology MS or PhD students.

V.E.3. Identification of the culminating experience required for each degree program. If this is common across the school's academic degree programs, it need be described only once. If it varies by degree or program area, sufficient information must be provided to assess compliance by each program.

Undergraduate Program

Each student in the Health Education Program, Community Health Education Option, must complete two internships as culminating experiences. Each experience is six (6) units of course credit, and equals 270 hours of contact time within a community health agency. Students are supervised by a site preceptor and monitored by a faculty internship advisor. Students develop a work plan, with goals, objectives and proposed activities for each internship experience with the cooperation of the site supervisor and the faculty internship advisor. Students are encouraged to complete the internships in two different sites in order to broaden their experiences. At the end of each experience, students submit internship reports about the experience and the

projects that they developed and completed. The student is guided throughout the experience by the faculty internship advisor and the Internship Manual for Health Education. A list of undergraduate student internships during the past three years is presented in APPENDIX V.E.3-1.

Each student in the Health Education, School Health Education Option, completes a student-teaching experience in cooperation with the College of Education as the culminating experience. The student-teaching experience occurs in one semester and is valued at 12 units of credit.

Determination of undergraduate internship sites is based on the prospective agency's ability to offer the intern a quality-supervised experience for a community health educator for 270 contact hours per semester, and the agency's ability to offer insurance coverage for the intern's services. The student makes the final choice from among these agencies.

Graduate Academic Degrees

The MS degree program in Epidemiology requires each student to conduct a research project. This project is a quantitative study that requires the collection of original data and/or a quantitative analysis of existing data. The thesis is written under the supervision of an academic advisor and thesis committee. Students are required to provide a public oral defense of the thesis.

The PhD degree program in Epidemiology requires that the student also conduct a research project. This project is a quantitative study that requires the collection of original data and/or a quantitative analysis of a substantial existing data set. The dissertation is written under the supervision of an academic advisor and a dissertation committee. Students are required to provide a public oral defense of the dissertation.

V.E.4. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

MEZCOPH provides opportunities for students in the academic programs to acquire a public health orientation, through structured classroom experiences, interaction with MPH students, and the Public Health and Epidemiology seminar series.

The public health content in the Epidemiology Seminar series has been strengthened, in response to the last CEPH site visit report. Additionally, a

Public Health minor has been added as an option for the Epidemiology PhD students.

The recently developed Student Epidemiology Response Teams (SERT) broadens the public health orientation of Epidemiology students, by providing training and opportunities for students to work with state and county public health practitioners on short-term outbreak investigations or short-term high need problems.

Both academic degree programs are well established at the University of Arizona, with well-designed and documented culminating experiences.

Weaknesses

Although opportunities are provided and students are encouraged to acquire a public health orientation, not all academic students take advantage of them.

Recommendations

The Epidemiology Curriculum Committee should consider converting the “Public Health Over the Centuries” course to a required course for all MS and PhD students.

Criterion V.F.: The school shall offer at least one doctoral degree, which is relevant to one of the five specified areas of basic public health knowledge.

V.F.1. Identification of all doctoral programs offered by the school, by degree and area of specialization. The matrix in V.A. may be referenced for this purpose. If the school is a new applicant and has no active doctoral program, a description of plans and a timetable for offering a doctoral program must be presented, with university documentation supporting the school's estimate.

The Epidemiology PhD Program requires students to obtain a broad educational experience in epidemiology and biostatistics and specialization in a more focused area. The area of specialization is centered around the dissertation work, with coursework developed by the student and advisor and approved by the student’s Graduate Committee.

All students are required to complete at least one minor. These minors typically correspond to areas of specialization in epidemiology. Examples of recent minors include: cancer biology, nutrition, genetics, pharmacoeconomics, toxicology, infectious disease, health services, geography, and psychology. Requirements for the minor are established by the minor department; however, the Epidemiology Program has recently developed two program-specific minors:

public health and quantitative methods. The Program has recently begun a process to define suggested coursework for specific epidemiological specialization areas. These criteria will assist in the appropriate advising of students.

Students in the PhD program are also required to complete at least one semester as a teaching assistant in the basic epidemiology and/or biostatistics core courses.

V.F.2. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

The Epidemiology doctoral program has been active since 1992 and has been well integrated into MEZCOPH since 2002.

Weaknesses

At least two additional doctoral programs must be added to the Epidemiology doctoral program to meet the recently revised CEPH accreditation criteria.

Recommendations

MEZCOPH must add at least two additional doctoral programs to meet the recently revised CEPH accreditation criteria.

Criterion V.G.: If the school offers joint degree programs, the required curriculum for the professional public health degree shall be equivalent to that required for a separate public health degree.

V.G.1. Identification of joint degree programs offered by the school and a description of the requirements for each.

Dual Degrees

MEZCOPH provides the public health complement of four dual degrees: the MD/MPH, the MS in Mexican American studies/MPH, MS in Nursing (ASU)/MPH, and the MD/PhD in Epidemiology. These dual degree programs are described below.

MD/MPH

The UA College of Medicine/MEZCOPH MD/MPH dual degree program, established in 1998, is a five-year program offered to entering medical students who are interested in pursuing both degrees during medical school. The Director of the program, the Associate Dean for Curricular Affairs in the UA College of Medicine, and the Chair of the MPH Program Committee oversee this program. The program is designed to provide clinical leadership skills for future physicians. Up to five entering medical students are selected annually based on academic performance, experience and leadership potential. The program integrates public health and medicine curricula throughout the experience. The MPH portion of the program has its own set of required courses in addition to the core MPH courses. There also have been several MD students who have been in the MPH program concurrently via one of the existing concentrations. However, these students were not in the dual MD/MPH program, but registered simultaneously in the two degree programs.

A total of 38 units is required for the MPH portion of the degree. The MD/MPH students take four of their MPH core courses from MEZCOPH (Biostatistics, Epidemiology, Public Health Policy and Management, and Environmental and Occupational Health). The UA College of Medicine has its own two-year Social and Behavioral Sciences Course, and the MD/MPH students take this course in conjunction with a supplementary (1 unit) public health course to meet the requirement for their core course in social and behavioral sciences. In addition to these core courses, the MD/MPH students take 6 units of required courses (Issues and Trends in Public Health, and Clinical Leadership and Administration), and 6 units of MPH elective courses. An evening seminar series for MD/MPH students provides an opportunity for them to meet informally with mentors in the medical and public health fields. They are also required to complete a 12 unit culminating experience, which includes the practicum, oral presentation, and written report.

The MD/MPH students take an additional class each semester of their first two years of medical school, then spend their third year taking public health core and elective courses and completing a public health internship. The students then return to the traditional clinical medicine rotation schedule for their fourth and fifth years. Loan and scholarship assistance from the College of Medicine for MD/MPH students is available for the extra year.

MS in Mexican American Studies/MPH

In January 2005, a dual degree program was approved by the MPH program committee with the Mexican American Studies (MAS) program. All the students in this program will be in the Policy and Management concentration of the MPH program, and must complete all requirements for this

concentration. The MAS Master of Science curriculum is a dynamic course of study that has been developed to advance the understanding of the large Mexican American and Latino populations in the United States, and includes a focus on Latino Health. The concentration in Latino Health prepares students to conduct culturally competent health research, and to develop health programs targeting Latinos. These students will now be able to also obtain an MPH degree through the dual program. This program provides subject and research competency on Mexican Americans as well as applied skills for working professionals and graduate students interested in better serving the Mexican American population of the Southwest. Students will take courses from both programs to receive the two degrees. Students applying to the dual program must meet the admission criteria for each program.

MS in Nursing (ASU)/MPH

The MS in Nursing/MPH degree is offered by MEZCOPH and the Arizona State University College of Nursing. The ASU portion is funded by a HRSA grant. The purpose is to prepare advanced practice community/public health nurses for interdisciplinary leadership positions in governmental, managed care and community primary health care agencies, particularly in the Southwest. Students in the program have the opportunity to work with faculty with excellent community health clinical and academic experience. The program builds upon very slight modifications to the ASU Community Health Nursing graduate curriculum and the MEZCOPH MPH curriculum. All students complete the requirements for the Community Health Practice concentration (15 units core, 12 units concentration specific, 6 units internship). The MS degree is awarded by ASU and the MPH degree is awarded by the UA. Due to the dissolution of the tri-university agreement, the final class of students for the dual degree program was accepted in Fall 2004.

MD/PhD

MEZCOPH participates in an MD/PhD program, administered by the College of Medicine. The MD/PhD dual degree program is a six-year program for entering or third-year medical students interested in pursuing both degrees during medical school. Only two medical students are allowed into the program per year. The MD/PhD program is designed to train medical investigators who want a research career, academic or otherwise. The MEZCOPH PhD degree in Epidemiology is one of the programs that can be selected by medical students pursuing this dual degree. Although there has yet to be a student pursuing the Epidemiology PhD degree as part of this program, we have had one MD student who concurrently enrolled in the Epidemiology MS degree program. The requirements are the same as for the Epidemiology PhD program.

V.G.3. Assessment of the extent to which this criterion is met.

This criterion is met.

Strengths

The MPH and the Epidemiology PhD programs cooperate with the Colleges of Medicine and Social and Behavioral Sciences at the University of Arizona, and the College of Nursing at Arizona State University to offer dual MD/MPH, MD/PhD, MS in Mexican-American Studies/MPH, and MS in Nursing/MPH degrees.

All dual degree programs were developed around existing public health curriculum and are equivalent to the established MPH and PhD programs.

Weaknesses

MD/MPH students often have difficulty in attending the core MPH courses due to the demands of their clinical training.

Recommendations

Pursue the development of on-line versions of the core courses to assist MD students and other working professionals.

Criterion V.H.: If the school offers degree programs using nontraditional formats or methods, these programs must a) be consistent with the mission of the school and within the school's established area of expertise; b) be guided by clearly articulated student learning outcomes that are rigorously evaluated; c) be subject to the same quality control processes that other degree programs in the school and university are, and d) provide planned and evaluated learning experiences that take into consideration and are responsive to the characteristics and needs of adult learners. If the school offers nontraditional programs, it must provide needed support for these programs, including administrative, travel, communication and student services. The school must have an ongoing program to evaluate the academic effectiveness of the format, to assess teaching and learning methodologies and to systematically use this information to stimulate program improvements.

MEZCOPH does not offer degree programs using nontraditional formats.