Graduate Programs in Epidemiology at the University of Iowa

Through its graduate programs, the Department of Epidemiology strives to educate highly competent and committed public health professionals and research scientists in epidemiology. The academic program is focused on two principles: 1) the core of the curriculum is the concept, theory and methods of epidemiology with focused application, and 2) the curriculum and evaluation are based upon competencies expected for epidemiologists. Eight degree initiatives make up the academic program: MS degree in Epidemiology (with and without thesis), PhD in Epidemiology, MPH in Epidemiology, MS in Clinical Investigation (began in 2004), joint MPH degrees in Nutrition and Exercise, Maternal and Child Health, and Aging. The MPH graduate programs will be addressed in a separate MPH report to the Task Force; this report focuses on the PhD and MS programs in Epidemiology.

Mission Statement

The Department of Epidemiology strives to improve public and personal health by preparing students for careers that require specialized knowledge of epidemiologic theories, methods, and analytic techniques; by conducting innovative research addressing the magnitude, determinants, and prevention of disease and its consequences and in health promotion and evaluation; and by providing education, consultation and collaboration with public health and other programs. The Department seeks to maintain and advance its national recognition as a program that has strong research funding, educates researchers and public health practitioners and collaborates with clinicians and public health agencies in the measurement and evaluation of health status and prevention and healthcare effectiveness.

Admissions Processes and Criteria

Student interest in the graduate programs in Epidemiology remained high from 2003-2008 with the number of PhD applications increasing slightly and the number of MS applications remaining steady during those years. In recent years approximately half of all PhD applications and one-third of MS applications are from international applicants. Most domestic applications were from prospective students with undergraduate degrees from Midwestern institutions. Our recruitment plan is designed to reach a broad spectrum of prospective students throughout the Midwest with a concentration of effort on recruiting students from the University of Iowa and small, private colleges throughout Iowa. Focus on recruitment to achieve diversity is done through small colleges with a diverse student enrollment. Recruitment strategies including advertising and marketing campaigns through the College of Public Health, direct contact to prospective students through the Department website, and campus visits to undergraduate institutions.

Standards for admission include a minimum cumulative Grade Point Average (GPA) of 3.0, and a minimum score on the Graduate Record Examination (GRE) of 1050 (combined verbal & quantitative), although most successful applicants exceed these standards. In addition to these criteria, students enrolling in the MS in Clinical Investigation are required to have a clinical doctoral degree, and applicants to the PhD program must have an MS or MPH degree in a closely related field. Consideration is given to students who display strong commitment to public health and whose references confirm their intellectual maturity and scientific potential.
Once offered admission, the Department has successfully enrolled the highest quality students. Average GPAs for entering Epidemiology students are consistent with College of Public Health, Health Sciences, and all UI programs averages. Average GRE scores for entering Epidemiology students were equal or greater than College of Public Health, Health Sciences, and UI graduate programs, according to 1996-2007 data provided by the Graduate College. In comparing admitted students to those who actually enroll in a graduate program, the average undergraduate GPA of students who enrolled was 3.71 compared to 3.34 for admitted students for 2003-08. Conversely, the average GRE score for enrolled students was 1177 (combined verbal and quantitative) compared to the slightly higher average of 1208 for the pool of admitted students.

In addition to academic excellence, admitting students who contribute to the diversity of our program is an important goal of the Department. During the years of 2003-08, women made up at minimum of 55% and maximum of 72% of the student body, depending on the year. In addition, between 7% and 17% of students each year were under-represented minorities. Recruitment efforts continue to focus on attracting a diverse study body to our graduate programs.

Most epidemiology students receive some type of financial assistance during their enrollment in the program, but such assistance is not guaranteed. During the 2008-09 academic year 73% of full-time students received financial support through a research or teaching position in the College of Public Health or through collaborators in the College of Medicine. These positions are renewed on a regular basis and students are not guaranteed financial support for the duration of their program of study. Most of these Graduate Research Assistant positions are funded through external grants, although the Department provides funding for 1-3 Graduate Teaching Assistantships each semester.

**Program Outcomes**

The completion rate for doctoral students enrolling during the five-year period of 1996-00 is 73%, which is better than the College of Public Health average of 70% and well above the average for all PhD programs of 55%. Students entering the PhD program from 1996-2000 completed their degree faster than the average College of Public Health student with a median time-to-degree of 4.8 compared to the College’s average of 5.3 and the overall PhD program average of 5.8 years. One Epidemiology student, Margaret Chorazy, has been awarded the Presidential Graduate Fellowship. Two students are MSTP students funded also through CTSA training component. The number of graduate student publications has sharply risen in recent years from five publications in 2002 to 24 publications in 2008. Students in the program have published a total of 102 publications during the five-year period covered in this report.

Following graduation, doctoral graduates find employment in a variety of settings. Of the students who graduated with a PhD degree during the five-year period of August 1998-May 2003, 17% initially found positions in an academic research setting, 17% were placed with a government agency, and 17% in industry. Initial placement for doctoral graduates during the five-year period of August 2003-May 2008 shows a shift towards academic placement with 30% finding jobs teaching at a college or university. Twenty percent were placed in
industry jobs and 10% with the government. Significantly, during both of these time periods there was a 100% employment rate for recent doctoral graduates.

As of April 2009, the current employment of alumni who graduated August 1998-2003 shows that 33% are employed in academic research, 25% in a government agency, and 17% in industry, and 17% are engaged in teaching at the college or university level. Current employment for August 2003-May 2008 graduates shows a continued emphasis on academic teaching with 30% teaching at the college level, 20% employed in industry, and 10% in government. There is currently a 100% employment rate for alumni who graduated from August 1998 – May 2008.

Program Characteristics

The graduate program is currently within the appropriate size for the number of student and faculty. Across the eight degree programs our faculty advises 96 PhD, MS, and MPH students plus an additional 24 students in non-Epidemiology MPH programs. After taking into account the department’s research and administrative duties, we feel the maximum advising ratio is 3 PhD, 4 MS, and 5 MPH students per primary faculty member. We are currently at our maximum capacity for PhD students but at under capacity for advising MS and MPH students.

Strengths of the program include the diversity of its career tracks, student opportunities for research experiences, availability of research resources through the numerous research centers in the College of Public Health, and the high employability of its graduates. The program’s weaknesses include the availability of pre-doctoral stipends, the need for more study space for students, and the current lack of quality classrooms. These space issues will be alleviated with the construction of the new College of Public Health building. Current funding issues have hindered the opportunistic hiring of additional younger faculty.

Opportunities to improve the graduate program include obtaining training grants to provide funding for student research and to offer degrees with specific focus areas. We are in the process of developing defined emphasis areas for PhD students to focus their training in specific areas.

Conclusions

Distinguishing features of the UI Epidemiology program continue to be its competency-based educational foundation, its outstanding research support and resources, and its strong collaborations with other disciplines. The outlook for graduates of the UI Epidemiology graduate programs continues to be good with projected continued high rates of employability despite the current economic downturn. Due to the aging of the academic profession and the globalization and specialization of epidemiology, demand for new professionals will increase. In addition, new research paradigms in translational research and comparative effectiveness promise to provide new and exciting opportunities for graduates of the program.