Epidemiology and Public Health
Summary Report for 2-4 Project
January, 2007
(Updated December, 2008)

Introduction

During the fall term of 2006, the DGS and the divisional representatives to the Epidemiology and Public Health (EPH) Doctoral Committee met with each of the five Ph.D. degree granting divisions within EPH. The DGS also held two additional meetings with students by cohort (years 1& 2 and years 3 and beyond). Of the students in residence, 78% attended at least one of these meetings. This report includes comments from the meetings, suggestions made directly to the DGS or other representatives of the EPH Doctoral Committee, as well as input received from students who completed the online anonymous survey. We made every effort to obtain feedback from every student. Since we know that not every student provided us with feedback, we note that this report is not inclusive of every student's input.

It should be noted that although EPH is one department, there are five distinct PhD granting academic divisions. Each division has a separate set of course requirements and format for the qualifying examination. In spite of the fact that there are five divisions, several common themes emerged. We have categorized the major themes in this report outlining the specific concerns and proposed solutions.

Suggestions that have already been implemented are noted in italics.

I. Course Requirements, Course Offerings, Breadth and Depth of Course Content

1. Most students feel that the required introductory courses in EPH are not challenging and appropriate for the PhD level. These courses are designed for MPH students and much of the content does not adequately prepare the students for advanced coursework. If the faculty expected more of the PhD students and had different course requirements for the course, the students would feel more challenged. The EPH Doctoral and Education Committees and individual divisions will address this issue.

2. Particular concern was voiced regarding Biostatistics courses by those students who were not concentrating in Biostatistics. The courses were felt to be either too introductory in nature or too theoretical. There is a need for more mid-level courses within the Biostatistics division. The advanced level courses for PhD students are designed for PhD students concentrating in Biostatistics Courses in this category include: Categorical Data Analysis (BIS 625), Theory of Survival Analysis and Its Applications ((BIS 643), Applied Regression Analysis (BIS 623) and Longitudinal Data Analysis (BIS 628). Students would benefit from an applied course vs. the theoretical courses. The Biostatistics faculty has begun to review their course offerings and will take this suggestion into consideration as they make changes.
   The Biostatistics Division has implemented a course change in light of this suggestion. BIS 635b, Topics in Statistical Epidemiology, is no longer being offered. Instead the faculty has decided to offer the material in this course in two half-semester courses for non-BIS students. Therefore, a mid-level course in both

Survival Analysis and Statistical Epidemiology will be available for non-BIS students, while more theoretical material can be covered in the full semester course (Theory of Survival Analysis and Its Application,(BIS 643) for BIS students. The two half-semester courses are: BIS 630b, Applied Survival Analysis and BIS 632b, Design and Analysis of Epidemiologic Studies. The Biostatistics Division has proposed a similar change for both Longitudinal Data Analysis (BIS 628) and Categorical Data Analysis (BIS 625). If approved, two-half semester courses covering the practical aspects of both courses, designed for non-BIS students, will be available in the Fall of 2008. Simultaneously, BIS students will be offered full semester courses in Generalized Linear Models.

3. In specific topic areas, students feel there could be more PhD level course offerings. In many of the academic divisions, there are a limited number of PhD level courses. Therefore, students find themselves searching for the coursework they need in other departments. The Education Committee in EPH has discussed this situation. As a result of this discussion, some course syllabi/curriculum were revised and these courses were designated as PhD level courses (i.e., CDE 517 is now CDE 617 and CDE 530 is now CDE 630). The Education Committee will be made aware of this concern and continue to review course offerings in an effort to improve doctoral level courses. On the other hand, many students voiced the opinion that they welcomed the opportunity that Yale affords to take advantage of courses in other departments and students should be aware of these opportunities.

4. Most students, with the exception of those in Epidemiology of Microbial Diseases (EMD), felt that there are too many course requirements. Students feel they are taking courses in order to prepare for the qualifying exam, rather than in preparation for independent research. Since the requirements are division-specific, the DGS has asked each division to review the number of course requirements to determine if revisions can be made to allow students more flexibility in taking electives and thus reduce the number of required courses.

II. Evaluation Process

1. EPH implemented an evaluation system for first, second and third year students. (Students beyond year three must complete the on-line Dissertation Progress Report annually). This serves as an evaluation tool for students in the early phases of their Ph.D. program. This evaluation is completed by the advisor who then meets with the student to review progress. Once this is completed, the DGS reviews and signs. The student and the advisor each receive a copy. The evaluations are tailored to address the specific areas of concern associated with the student's year. The evaluations ensure that students are on track with their academics, teaching and research. This helps alleviate problems as they occur. Copies of the evaluations are attached.

2. Consistency in grading among faculty was expressed as an area of concern among the students. This is a matter that is likely an area of concern in many departments and universities; therefore, the problem cannot be solved at this time, though it is being addressed by the EPH Education committee.

III. Teaching

1. Generally students in EPH are pleased with their Teaching Fellow experiences. It was noted that in 2005 the Graduate Teaching Center staff worked closely with EPH to develop an introductory teaching workshop for students teaching for the first time. This workshop was tailored to meet the needs of the EPH students and was held in EPH during the last week of August. It was very well received and students who attended felt that it should be offered on an annual basis. The fact that it was tailored to the TF's in EPH and was held in EPH accounted for its success. We will ensure that a similar workshop is offered each year at the beginning of the fall term.
   This course was offered at the start of the Fall 2007 and 2008 term and was very well received. An EPH student worked closely with the Teaching Fellows office to develop a customized workshop.

2. Many students have had the opportunity to prepare and present a lecture in at least one session of the course for which they are a TF. The faculty member teaching the course has been present for the lecture and has then been able to give the student feedback. It was unanimously agreed that this opportunity should be given to each student. We will communicate this to faculty members each term.
   This communication via email began in 2007-2008.

3. In EPH we require students to teach in the 2nd year. Some students felt that the timing of this was not conducive to successful teaching, since this is also the year in which they prepare for their qualifying exams and are finishing up coursework. When this has been brought to the attention of the faculty advisor and/or the DGS, flexibility in fulfilling the teaching requirement has been granted. Students were not previously aware that flexibility exists regarding the timing of this requirement.

IV. Qualifying Examination

1. The qualifying examination takes a somewhat different format in each division. Four of the five divisions (all but Epidemiology of Microbial Disease) require the students to take an in class and take home exam in specific areas depending upon their area of study. All students in these four divisions take an in class and a take home exam in Biostatistics. Previous comments in this report regarding the advanced theoretical work in Biostatistics courses relate to this exam. The necessity of taking advanced theoretical courses is to be prepared for qualifying exam. However, students in divisions outside of Biostatistics feel that appropriate mid-level applied courses could be offered that would prepare them for the qualifying exam and their research. Students in all four divisions (BIS, EHS, CDE, and HPA) feel strongly that the format of the qualifying examination is more of a comprehensive examination and less of a qualifying examination. There is consensus among students in these four divisions that there should be flexibility in administering parts of the examination so that there is a direct correlation to the student's research. With a small program such as ours, the students feel that the exam could be more tailored to meet the needs of the students and that it could involve more student/faculty interaction to assess the student's level of readiness for independent research. In light of these suggestions, the DGS will ask each of the four divisions to review the format of the qualifying examination.

2. Students within the division of Epidemiology of Microbial Disease (EMD) are satisfied with the format of the qualifying examination. The examination in this division requires that the student reads critically and in depth with three faculty members on the thesis topic and two other topics of interest to the student. This is typically done in the spring term of the student's second year. At the end of the reading period, the student submits two research proposals: one on the dissertation topic and the second based on one or both of the other reading topics. The student then presents these proposals orally to the qualifying examination committee and receives an evaluation at the conclusion of this process. All students in EMD feel this experience prepares them for independent research and is clearly an appropriate format to evaluate their readiness for the next stage in their academic careers.

V. Faculty/Student Interaction

1. In preparation for dissertation research, students must identify a research topic and an appropriate dissertation advisor and a Dissertation Advisory Committee. In doing so, students feel that there are not ample opportunities to be exposed to faculty research interests. In past years many of the divisions offered a seminar course in which all students were required to participate. Each divisional faculty member would participate by presenting his/her research. This provided students with an opportunity to learn about the variety of research being conducted in EPH as well as exposed them to many faculty members. Due to the interdisciplinary nature of some of the research, many students need to be aware of the scope of faculty research in other departments at Yale and/or other divisions in EPH. Reinstating the divisional seminar course is highly recommended. For those divisions that still offer it, we will recommend that they include all faculty members in their division as well as any collaborating faculty who may have joint appointments. We will encourage faculty participation from any department on campus as long as there is a relevant research interest. In doing so, students will be exposed to a wide range of faculty and their research and therefore be more prepared to choose a dissertation topic and advisory committee. That said, we will encourage students to seek out faculty and talk to them about their research. Ample opportunity exists in this small department to identify faculty research interests through faculty web pages, pub med etc. This could be expanded by providing a short synopsis of each faculty member's current research interests and potential projects to incoming students.
Beginning in the Spring 2008 term, the division of Chronic Disease Epidemiology reinstated the Divisional Seminar. Both the Biostatistics and Health Policy Administration divisions offer a weekly seminar series required for all students in those divisions. These seminars/colloquiums offer students an opportunity to learn about faculty research projects. The Health Policy Administration and Epidemiology of Microbial Disease divisions require that all advanced doctoral students present their research annually in a seminar or colloquium.

2. Students are also very interested in being offered the opportunity to present their research to each other. They felt that this will provide them with the opportunity to present in a more informal setting and to gain some feedback from their peers. We will assist students in arranging these informal "research in progress" talks and encourage participation by all.

VI. Prospectus/Admission to Candidacy

1. The EPH Doctoral Committee recently developed Prospectus and Dissertation guidelines. These have been distributed to all students and faculty advisors and are accessible on the EPH website. Students in EPH generally do not encounter difficulty in meeting the deadline for admission to candidacy. Nevertheless, during their third year some students have struggled with the logistics involved in determining an appropriate committee and in turn developing a prospectus. Student response to the guidelines has been favorable and should help alleviate some of the problems students have encountered. A timeline/checklist for this process was requested. We have attached a copy of the Guidelines for Prospectus and Dissertation.
   It was determined that a timeline/checklist is not necessary since the Guidelines for Prospectus and Dissertation have proven very useful and since many students have individual discussions with the DGS or their faculty advisor regarding their specific timeline.

VII. Dissertation

1. In the past, students most often met individually with their committee members until the final thesis was close to completion; this made it more difficult to identify common concerns among the faculty members or allow the faculty to benefit from hearing each others' ideas. It also created some potential problems: students might get inconsistent guidance from different committee members or have problems with particular faculty relationships that never came to light. In response, the EPH Doctoral Committee now expects that students will meet with their Dissertation Advisory Committee (DAC), as a group, at least two times per year. Regular meetings with the committee will ensure that progress is on track and that all committee members agree with the progress to date and the direction of the research. It will also ensure that there are no surprises when the student is ready to submit for graduation. Over the past year, students have begun to schedule regular meetings and have found them to be very productive. As a refinement to this process, we suggested that (a) the chair of the Dissertation Advisory Committee be someone other than the student's dissertation advisor and (b) the DAC chairperson distributes a summary of the meeting to all committee members and the student, addressing a set of questions that the Committee believes are relevant to students' progress.
   The model to assign the chair of the DAC to someone other than the student's dissertation advisor was not favorably received by the faculty and was not implemented.
   The Doctoral Committee has created a form to summarize the committee meetings, which is being distributed to all faculty since November, 2007.

VIII. Other Recommendations

1. There was consensus among the students that a set of guidelines for each division would enhance the program. Presently EMD is the only division that has a set of detailed guidelines. These guidelines outline the students' and faculty expectations in each stage of the students' academic career. In addition, it provides a clear timeline.

Presently students in the other divisions must refer to the EPH Bulletin and the Graduate School Bulletin to determine their course requirements, timeline, policies and procedures as well as reference information about choosing their DAC and readers. One handbook or set of guidelines that incorporates all this information will be a useful recruiting tool as well as a reference guide for all students. Many students offered their assistance with this process. It was also noted that many divisions previously had such a set of guidelines, but that they are in desperate need of updating. The EPH Doctoral Committee and DGS will recommend that each division begin to prepare/update such a document.

2. Students would like to have more structure in the summer between their first and second year. Though EMD requires a summer research rotation, the other divisions do not. Currently, the academic advisor is responsible for ensuring the student is productive during that summer, but some students felt that they could have had more advice on what they should be doing during that summer. The EPH Doctoral Committee in consultation with the individual divisions has begun to work closely with 1st year students and their advisors to develop a plan. *During the summer of 2007, the first year students were asked to meet with their faculty advisor to discuss their plans for the summer. This process resulted in each first year student developing a plan for the summer that was acceptable to the DGS and the faculty advisor*.

IX. Summary

The process by which the information was gathered was particularly helpful and enlightening for both the faculty and students. It is apparent that though the graduate educational process at EPH is relatively strong, there are several areas of concern. The most obvious are the limited number of appropriate courses, and, in some divisions, the less than optimal venues for communication between students and faculty. There was concern in some divisions regarding the size of the faculty and student body and the limited opportunities for research. However, on the other hand, many students welcomed the relatively small size of the student body since this avoided competition for research advisors. We look forward to taking advantage of the excellent opportunities to improve the PhD program provided by the 2-4 project.