

Criterion VI – Research

Criterion VI

The school shall pursue an active research program, consistent with its mission, through which its faculty and students contribute to the knowledge base of the public health disciplines, including research directed at improving the practice of public health.

Expected Documentation

1. A description of the school's research activities, including policies, procedures and practices that support research and scholarly activities.
2. A description of current community-based research activities and/or those undertaken in collaboration with health agencies and community-based organizations. Formal research agreements with such agencies should be identified.
3. A list of current research activity, including amount and source of funds, over the last three years.
4. Identification of measures by which the school may evaluate the success of its research activities, along with data regarding the school's performance against those measures over the last three years.
5. A description of student involvement in research.
6. Assessment of the extent to which this criterion is met.

Criterion VI – Research

1. Research Policies, Procedures and Practices

As a Research I institution, UIC has a distinguished research portfolio to which the School of Public Health makes a major contribution. All research conducted at UIC is guided by established and enforced policies: Conflict of Commitment and Interest (<http://tigger.uic.edu/depts/ovcr/research/conflict/>); Academic Integrity (<http://tigger.uic.edu/depts/ovcr/research/conflict/>); Ethical Conduct (<http://tigger.uic.edu/depts/ovcr/research/conflict/>); Cancer Related Research (<http://www.uic.edu/htbin/cgiwrap/bin/cancer/members/facilities.php>); and Animal Care (<http://tigger.uic.edu/depts/ovcr/research/protocolreview/acc/policies/index.shtml>).

School of Public Health Research Policy

The school recognizes research as a primary factor in the pursuit of its mission to enhance the quality of life by improving the public's health. The school is committed to advancing understanding in the disciplines comprising public health and to disseminating research findings to practitioners, academicians, policy-makers, as well as other appropriate groups and to the public they serve. Research is an integral part of the school's education and service functions. As an academic institution preparing individuals for careers in this interdisciplinary field, the school encourages interdisciplinary research and research with direct application to practice. The school places a strong emphasis on community and believes that community-based research should be done in partnership with the community.

The school's research activity is guided by the following principles:

- Reflecting the university's status as a Research I institution and the university administration's stated goal of enhancing that status, the school is committed to supporting and facilitating research activities conducted by its faculty and students.
- As part of a land-grant university in an urban setting, the school places priority on research that furthers community involvement.
- The school is committed to faculty autonomy in developing a personal research agenda.
- The school's emphasis on research is an important factor in consideration for promotion and tenure.
- The school encourages faculty participation in interdisciplinary research activities that include faculty in other academic units within the university, faculty outside the university, or collaborators affiliated with public or private agencies and organizations outside academe. Collaboration is fostered through the school's system of centers that serve as loci for interdisciplinary initiatives and collegial, as well as community, partnerships.

- The school encourages participation in research activities by students as appropriate to their academic program and career interests, and provides support through tuition waivers.
- The school is committed to the protection of human subjects.

Research support for faculty and students is provided in the divisions, centers and institutes, the SPH Office of Research Services and the Office of the Vice Chancellor for Research. Any and all of these offices may be called upon to support the research endeavor.

SPH Office of Research Services

The goal of the SPH Office of Research Services (ORS) is to encourage, increase and support SPH investigator-led proposal development and to increase the success ratio for submitted proposals. SPH ORS offers a menu of services (ranging from scientific grant review to budget development to “one-stop shopping”) that investigators can choose from to meet their proposal development needs. We encourage investigators to contact the SPH ORS early in the process so that adequate time is available for optimal proposal development. To accommodate the scientific grant review effort, ORS will work with faculty in SPH, UIC and the greater metropolitan area to develop a panel of scientists willing to review proposals. Services provided include:

- Reviewing the sponsor’s RFP/RFA specifications
- Obtaining the required information (biosketches, letters of support, etc.) required for the proposal.
- Scheduling scientific/technical grant team meetings as necessary.
- Scheduling and coordinating requested scientific grant review.
- Developing budget and budget justification.
- Coordinating the provision of biostatistical services for the proposal with the Quantitative Methods Support Core for Biomedical Researchers.
- Managing the proposal development process.
- Formatting the contents of the grant (abstract, graphs, images, tables and appendices) using the necessary software.
- Completing the Proposal Approval Form (PAF), including securing the necessary signatures and obtaining approval of the UIC Office of Research Services.
- Preparing and submitting the proposal to the sponsor by the deadline via courier or electronic transmission.
- Revising budgets as requested and required by the sponsor.

- Requesting account setup (upon award) or anticipation account setup (upon notification of award pending).
- Forwarding the budget to the SPH Campus Data Group to develop report template.
- Transferring the project to the unit with final budget, account, and budget report template.
- Maintaining a proposal development calendar.

2. Community-Based Research Activities

Our community partnerships are found in a variety of local, statewide, national and worldwide geographic locations (http://www.uic.edu/sph/research_community_connections.htm). Abstracts of our awarded research, service and training projects are accessible through our map database (see example in Appendix VI.2.1). The school places a high priority on partnership with the community. Many research projects are community-based, and function with community participation through a range of mechanisms, including community advisory boards, joint research design, joint field work and joint evaluation. Our public service-sponsored projects are definitely community-based but many of our research projects have community participation and/or are based in research settings in the community. Examples of community-based research include the Chicago Project for Violence Prevention and the Community Outreach Intervention Projects. These are described briefly in the response to Criterion II.B.2.

Formal research agreements with health and municipal agencies exist with the Chicago Department of Public Health, the Chicago Public Schools, the Cook County Department of Public Health, Stroger Hospital, various other county health departments in Illinois and surrounding states, the Illinois Department of Public Health, Health and Human Services, the Centers for Disease Control, the Environmental Protection Agency, the Pacific American Health Organization and the World Health Organization.

3. Current Research Activity

Appendix VI.3.1 contains the list of awarded research activity for fiscal years 2002-2005. Information provided on this list includes: the division or center where the research is conducted, the principal investigator, the title of the project, the sponsor, the direct costs, the indirect costs (F&A) and the total costs. Table VI.3 provides a summary by unit of the total dollars awarded and the number of awards made. A list of submitted proposals for that same time period is available in the Resource file.

Of note, the SPH faculty is among the most productive group of researchers at this institution. On a per capita basis, the SPH faculty out-performs all other colleges on campus and is second in terms of total research dollars only to the College of Medicine, which has a considerably larger faculty than SPH. Further, a recent report issued from the UIC vice chancellor for research's office indicated that the SPH had the largest increase in NIH funding in FY2004 (an increase of almost 25%, to over \$14 million).

Across the centers/institutes, the largest amount of funded activity is, not surprisingly, the

Institute for Health Research and Policy, averaging approximately \$ 12 to 15 million per fiscal year. Among the academic units, the largest amount of funded activity is in epidemiology and biostatistics averaging approximately \$5 million per fiscal year.

In the 2004-2005 academic year, we issued the first sponsored activity report (available on site in the Resource file). The report highlighted one faculty member from each academic division and gave data on successes in garnering sponsor support for research, education and service projects. Further, the report seeks to demonstrate how the school is progressing towards strategic goals. Finally, the 2005-2006 report includes sections on student research (available at the time of the site visit in the Resource file).

Table VI.3
Total and Number of Awards, Fiscal Years 2003-05
Dollars in 00's

Unit	FY02		FY03		FY04		FY05	
	Amt	#	Amt	#	Amt	#	Amt	#
Chicago Project for Violence Prevention	2,889	7	1,510	10	4,741	9	6,017	10
Community Outreach Intervention Projects	3,345	10	3,530	13	5,641	12	1,555	9
Community Health Center	2,725	13	1,749	19	406	13	1,055	9
Center for the Advancement of Distance Education	100	1	3,229	2	387	4	6,535	5
Environmental & Occupational Health Sciences	4,887	9	695	9	4,556	11	412	5
Epidemiology & Biostatistics	9,587	22	2,783	27	6,494	18	3,100	29
Great Lakes Center	903	4	116	4	882	7	210	7
Health Policy & Administration	940	9	1,452	7	6	1	617	12
Institute for Health Research & Policy	12,962	45	21,271	34	18,959	44	5,066	29
International Center for Health Leadership Development	73	2	12	1	-	-	-	-
Dean's Office	270	5	754	4	322	5	151	3
Total	38,681	127	37,101	130	42,394	124	24,718	118

4. Measures of Research Activity

Research Outcome Measures

Some measures are per FTE faculty (in this case, we have included faculty from Groups A and B, and for those faculty in Group A who have a split line (tenured and research) we have included both percentages for their FTE).

Participation in External Funding (see Table VI.4)

- Grants submitted
 1. Number
 2. Dollars requested
 3. Success rate
- Grants awarded
 1. Number
 2. Dollars

Publications

- Number of peer-reviewed journal articles per FTE (see Table VI.4) and the total number of books in which a faculty member was the sole author or editor (no book chapters or

conference proceedings included in this section).

- List of journals in which all faculty has published in last three years (see Appendix VI.4).
- Number of conference presentations (see Table VI.4).

Training Grants

- Faculty members have been quite successful in garnering training grant funds that support pre-doctoral students and post-doctoral fellows. The SPH has had continual funding for its Maternal and Child Health Program for more than 25 years. This T76 grant supports master's and doctoral students studying maternal and child health issues. In more recent years, the MCH program has garnered funding (through a T03 mechanism) for doctoral students pursuing degrees in our MCH epidemiology program. SPH has one of the original NIOSH ERCs and has had continued funding for this T42 for over 15 years. This resource provides funding for master's and doctoral students in environmental and occupational health sciences. Further, in our EOHS division, a T83, Air Pollution Training Institute, has been funded for over 15 years by the U.S. EPA. A large T32 grant supports gerontology research (PI: Dr. Thomas Prohaska) and provides support for both pre-doctoral students and postdoctoral fellows. In 2004, SPH successfully competed for a T01 grant with the CDC to fund four pre-doctoral students and eight post-doctoral fellows in interdisciplinary public health research. Finally, through the R25 mechanism in the area of cancer education and career development (NCI funding), the IHRP has funded several pre-doctoral candidates and postdoctoral fellows. Since our last self-study, there has been a very large increase in the number of postdoctoral fellows studying with our faculty. This is a measure of the success of our faculty research and their respective reputations.

Research Service/Recognition

- Service on national and local grant review committees by SPH faculty is extensive. Faculty members participate in many different international, national and local grant review committees. Some faculty are standing members of NIH and/or CDC study sections/panels that meet multiple times in any given year (e.g., National Institute for Justice, National Institute on Drug Abuse, NIOSH, NIH Study Section on Rehabilitation Medicine, Behavioral Science Panel of NIH Office of AIDS Research, Centers for Disease Control, Division of HIV/AIDS Prevention, United Nations International Drug Control Program, NIMH Clinical Centers and Special Projects Review Committee, Maternal and Child Health Bureau, National Council for Child Abuse and Neglect, National Science Foundation, Department of Defense, Bureau of the Health Professions of HRSA, Department of Energy, National Institute on Aging, Army Medical Research Committee-Breast Cancer Section and Chicago Department of Public Health).
- Service to journals—editor, editorial boards, and reviews by SPH faculty—is similar to service on grant reviews, quite extensive. Faculty has served as journal editors (or associate editors) and/or has served on journal editorial boards. Faculty have noted significant participation in manuscript review (e.g., AJPH, JAMA, JASA, AJE, Milbank, Environmental Toxicology and Chemistry, Archives of General Psychiatry, Maternal and

Child Health Journal, Social Science and Medicine, American Anthropologist, Journal of Public Health Policy, Ethnicity and Disease, Health Services Research, Annals of Emergency Medicine, Annals of Internal Medicine, Journals of Gerontology, The Gerontologist, The Journal of Aging and Health and Medical Care).

Table VI.4
Outcome Measures for Research Activity

Outcome Measure	FY 2003	FY 2004	FY 2005
Grants submitted*	2.95	2.76	3.07
Grants awarded*	2.12	1.79	1.77
Success rate	72%	65%	58%
Research dollars (in millions) requested*	1.72	1.94	1.48
Research dollars (in millions) awarded*	0.61	0.61	0.37
Peer-reviewed publications*	4.42	3.96	3.75
Number of books	7	10	11
Number of conference presentations	164	221	205

* Per FTE faculty member (Faculty Groups A and B; 61.31 FTE, 69.13 FTE, and 66.74 FTE each year respectively).

Evaluating these outcome measures has revealed some real strengths and a concern. The grant activity measure indicates that we clearly have been, and we remain, successful in writing grants as approximately 65% of our grants submitted were awarded. There is concern over the downward trend in the success rate which is a reflection of national trends. Our research objectives, as discussed in the response to Criterion I, demonstrate our strategic thinking with regard to successfully garnering external research funding in the current national climate. The number of grants submitted per FTE has remained constant over the last three years while the number awarded has declined slightly, again reflecting national trends. With respect to research dollars requested and awarded, the trend in dollars requested per FTE is up for both requested and awarded categories and the data shown here are significantly greater than reported in our previous self-study wherein our research dollars awarded per FTE faculty averaged \$200,000 as compared with current three year average of approximately \$500,000.

With respect to peer-reviewed publications, while there is a downward trend in the table above, our faculty is averaging approximately four peer-reviewed publications per year, approximately 2.5 times greater than our previous self-study. The downward trend above may reflect the influx of new junior faculty with publication rates somewhat lower as they start their respective careers. The major change since the last self-study is clearly a more research productive faculty. This increased productivity has fit nicely within our new and more stringent promotion and tenure criteria and has resulted in all faculty going up for promotion and/or tenure since the last self-study being successful in that quest.

Finally, the number of conference presentations demonstrates our visibility. Compared with our last self-study, we give twice as many presentations, more than 200 per year.

5. Student Involvement in Research

Research is an important part of the education of students pursuing the MS, DrPH and PhD

degrees; a research thesis or dissertation is required of these students. Appendix VI.5.1 lists the titles of master's theses and doctoral dissertations in the last three academic years. MPH students are not required to be involved in research while pursuing their degree, although many do through research assistantships and/or field experiences.

Students may be involved in research with the faculty through research assistantships. Many students also have secured their own research funding through NIH and foundation dissertation grants. The number of students with research assistantships varies over time, mirroring the flow of research activity. Over the last completed academic year (05/06) 136 SPH students had assistantships (most as research assistants) earning over \$1.1 million plus tuition.

Many students successfully compete for funding (both external and internal) for their respective research. Examples include:

Michelle Choi, DrPH student CHS (Sponsor: Sharon Davies Memorial Awards Program), Diana Grigsby, PhD student in CHS, (CDC Prevention Research Center Minority Fellowship), Annann Hong, PhD student in HPA (Sponsor: Social Science Research Council), Jennifer Marks, MPH CHS, (Albert Schweitzer Fellowship), Italia Rolle, PhD student in CHS, (Oak Ridge Institute for Science and Education Fellowship), Mark Grant PhD student in Epidemiology (Sponsor: Retirement Research Foundation), Katrine Wallace, PhD student Epidemiology (Sponsor: Department of Defense). Kamal Eldeirawi, PhD student in Epidemiology, Sarah Forrestal, MS student in CHS, and Janel Heinrich, PhD student in CHS all received the UIC Provost's Award for Graduate Research. Caryn Etkin, PhD student in CHS and Katrine Wallace, PhD student in Epidemiology, have received seed monies from the Midwest Roybal Center in the IHRP. George Fitchett and Katrine Wallace, both PhD students in Epidemiology, received monies from the Paul D. Doolen Scholarship Fund for the study of aging.

Some SPH students also are successful in competing for Student Paper Awards at national meetings, e.g., two PhD students in biostatistics (Kwan Hur and Li Qi) were awarded the "Distinguished Student Paper Award" from the International Biometric Society, Eastern North American Region (ENAR).

Student Research Forum Poster Competition: In April 2006, we had our first research forum poster competition. All students were invited to participate in this competition, and 25 students competed in this first competition. Faculty judges awarded two \$300 awards to doctoral students who competed and two \$200 awards to master's students who competed. The doctoral student winners were Charlotte Joslin an Epidemiology PhD student whose poster was entitled "Epidemiological Characteristics of a Chicago-area Acanthamoeba Keratitis Outbreak" and Christine Taggart, a Community Health Sciences PhD student whose poster was entitled "Youth Participation in a Local Campaign for a Clear Indoor Air Ordinance: Lessons Learned". Charlotte Joslin's poster was also selected to represent our Lambda Chapter of Delta Omega in the 2006 Delta Omega Poster Competition. The masters student winners were Sarah Forrestal, a student in Community Health Sciences, whose poster was entitled "Using Children's Focus Group Feedback for Questionnaire Development" and Sarah Duggan Goldstein, a student in Health Policy and Administration, whose poster was entitled "Assessing Statewide Themes and Strengths: Using the Illinois Project for Local

Assessment of Needs (IPLAN) for the State Health Improvement Plan”. A copy of the program from this event is in Appendix VI.5.3

6. Assessment

The school has an active research program that is completely consistent with its mission. The large proportion of our research activity that is community-based reflects clearly who we are, and our increased emphasis on national sources of funding further supports our academic mission. The new SPH Office of Research Services has provided excellent support (over and above the division support) for faculty and student research endeavors. It is with this level of support that the SPH will be able to be even more research productive. This criterion is met.