



University of Washington
School of Public Health
and Community Medicine

UW Medicine
SCHOOL OF MEDICINE

DEPARTMENT OF GLOBAL HEALTH

ADVISORY COMMITTEE REPORT

August 19, 2005

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1. EXECUTIVE SUMMARY

Advisory Committee for the Creation of a Department of Global Health University of Washington

A. Support for the concept and potential for University leadership

A Department of Global Health will fill a tremendous unmet need at the University of Washington. The University community, both within the Health Sciences and the broader campus, expressed great enthusiasm for the creation of a Department of Global Health (DGH). Furthermore, students at every level asked how they might be involved in global health studies and encouraged the development of an expanded curriculum. After seeking advice from a wide array of individuals, groups and programs currently involved in international health activities, the following core values are recommended for a DGH:

1. Collaboration: The Department should promote and create collaborations in global health at the University of Washington in Seattle and internationally.
2. Multidisciplinary programs: The Department should create a new model for an academic department in which many disciplines are included in all of the missions of the Department.
3. Partnerships: The Department should form partnerships with existing global health programs at the UW and within the local and international community. The Department should bring added values to the University community.
4. Innovation: The Department should develop creative approaches to addressing global health issues and developing educational programs.
5. Opportunism: The Department should build on existing strengths at UW. Examples include: distance learning programs, infectious disease research in HIV/AIDS and other important pathogens (e.g., malaria), experience in faculty and student exchanges, Global Health Research Center, student global health interests, etc.
6. In-country partnerships: The Department must understand the importance of developing international partnerships. Efforts should primarily be focused in developing countries.
7. Themes: The Department should foster pursuit of the highest priorities in global health. Geographic focus was recommended by some, but generally felt to be too limiting.

8. **Accessibility:** A broad consensus expressed desire for the DGH's educational and service programs to have a campus location.
9. **Social Equity:** The Department should always work to promote social justice and health equity.
10. **Mission:** The Department must have a strong academic research focus (broader than biomedical), as well as outstanding international education, training and service programs.

Recommendations:

A1 The Committee advises the creation of a Department of Global Health to be jointly based in the School of Public Health and Community Medicine and in the School of Medicine. This joint application will allow the new Department to develop programs or centers with diverse and unique faculty perspectives.

A2 The Department of Bioengineering should be used as a model of a successful dual-School organization at the University of Washington. Many of the administrative approaches taken by the Department of Bioengineering seem to be appropriate for the DGH.

A3 The DGH should develop a global health advisory committee drawing leaders from UW and Seattle global health entities to assure collaboration and wide participation by multiple disciplines in the activities of the Department.

B. Vision for the Department

To create a new paradigm for addressing the top challenges on global health, the University of Washington (UW) will create a Department of Global Health, based jointly in the School of Public Health and Community Medicine and the School of Medicine. This Department will generate new approaches to improving the world's health by integrating faculty with diverse backgrounds, expertise and perspectives from the fields of public health, medicine, basic science, and potentially economics, anthropology, sociology, law, and others. This Department will partner with the myriad existing independent international programs at the UW to create new synergies.

B1 Global Health Education

The Department of Global Health will build on existing courses and practical experiences and expand the scope of what is offered to meet the needs of the growing programs in global health at the UW. The DGH will offer a set of core courses that will serve as a base for a variety of global programs across the UW campus. These programs include the basic curricular track of the International Health Program (IHP), (which currently includes several of the Fogarty

Programs) and a growing number of other programs, most of which intersect with the IHP. These programs will expand as the new DGH matures.

At the present time, the UW has a small but strong curriculum for global health in the SPHCM and SOM. The high-quality of this limited number of course offerings is the direct result of the dedication of the existing faculty, and the enthusiasm among the growing number of students who enroll in these courses. Currently these courses have primarily been accessible to a limited number of medical students and public health students. However, there is already a much greater demand among other students on campus and in the Seattle community, many of whom are turned away from courses due to over-enrollment. Our Committee strongly feels that we should increase the number and *scope* of global health courses to create a more robust and complete global health curriculum and full range of advising/mentoring activities for interested students. Ideally, these offerings would be available not only to traditionally matriculated students of the SPHCM and SOM, but also to students from the entire UW campus, and beyond.

Recommendations:

B1a A leader for curriculum development should be named or recruited as a high priority of the new Chair

B1b A broader curriculum of up to 35 course offerings should be developed.

B1c New global health degrees, including an MD-MPH program, will be developed.

B1d At least 5 teaching FTE (6-11 faculty) with 4-6 support staff will be recruited within the first five years.

B2 Global Health Research

Global health research is perhaps the greatest existing strength at the UW. Yet, cross-cutting research between biomedical science and public health is limited. The DGH will allow the UW to breakdown these silos and approach the problems of the world from a broader perspective, in collaboration with international programs across the UW and throughout the Seattle community.

B2a **Focus on selected countries and institutions.** There is a clear need to selectively strengthen key partnerships. This will be required to build meaningful inter-institutional partnerships characterized by sustainability, interdependence, synergies, trust, complementary strengths, and security. Beyond geography and language, strategic criteria for investment of personnel and financial resources of the new Department will include building on the largest and strongest of existing partnerships between UW

Health Sciences and Arts and Sciences faculty and institutions in other countries, such as HIV/AIDS programs in Kenya and Uganda and malaria in Tanzania.

- B2b Breadth vs. depth in the focus of biomedical and non-biomedical global health research. The new Department should clearly address, but not be limited to research on key disease morbidities in developing countries, including infectious diseases such as HIV/AIDS and other sexually transmitted diseases, tuberculosis, and malaria; injury control; nutrition; and reproductive and maternal and child health. The research should include a population-level focus, address health systems needs and opportunities, and operational research; and should also include strong emphasis on social, legal, economic and other approaches to promotion of global health.
- B2c Personnel. There is a need to develop a critical mass of full time faculty and professional staff expertise based primarily in the new Department for the biomedical and public health research areas just cited, including research outside the biomedical sector (e.g., sociobehavioral research, management, health systems, community involvement).
- B2d Facilities. New facilities will be required both in Seattle and in selected other countries to support global health research. For example, in Seattle international AIDS research programs alone are dispersed into facilities throughout the city – approximately 15,000 sq. ft. or more are currently rented; and the Fogarty Center programs and trainees are also dispersed. The new Department, the SOM, and SPHCM, and the UW and its capital campaign must work with foundations and other donors to support development of consolidated interdisciplinary global health research facilities on campus, and equally important, in selected partnering academic centers in other countries, especially in developing countries.
- B2e Overhead recapture and rationale. The formula for distribution of RCR to the Department of Global Health should be designed in a non-conventional but rational manner to reflect the fact that at least $\frac{1}{2}$ of the research funds generated by this Department will likely be expended in developing countries; which in turn have much greater infrastructure needs (libraries, IT, parking, buildings, etc.) than does the UW.
- B2f Linkages to the Bill and Melinda Gates Foundation, the Program for Appropriate Technologies in Health (PATH), and other global health enterprises. Formal planning should be undertaken early by the new Department to achieve mutual benefits in research and research training, based upon the complementary strengths and the needs of these agencies and the UW.

B3 Global Health Care and Public Health Practice

Achieving global health equity is an important mission of the Department of Global Health. To accomplish this goal, global health care and technical assistance must be a priority for the Department. At most universities, this type of service is given less recognition than research or teaching for faculty promotion. Formal international medical and public health literature also neglects this aspect of professional activity. Nonetheless service activities have great potential to contribute to lowering the burden of death and disability globally. The quality and success of existing programs, both at UW and in the Seattle area, provide an ideal environment to provide leadership and to create new initiatives.

Recommendations:

B3a Develop UW grants management infrastructure for implementation of projects in developing countries, given the complex and unique exigencies of IRB policies, importation of equipment/supplies, exportation of samples, visas and GCP training.

B3b Develop global health faculty and staff consultants and reward faculty global health technical support.

B3c Develop a global health advocacy program through consensus statements, testimony to affect national and international policy and reward global health faculty for advocacy efforts.

B3d Train local and international professionals and students through internships, coursework and participation in international programs.

B3e Recruit at least 2 FTE faculty to lead service programs as centers, along with 2 FTE staff support.

C. Organization of the Department

Resources allocated to start the new Department should visibly demonstrate the serious commitment of the Schools of Medicine and Public Health and Community Medicine as well as the University, to this important Global Health initiative. The Department will require adequate space and resources to recruit key faculty leaders in the areas of education, research and service. The Department must have a visible and accessible location on or near the University campus.

Recommendations:

C1 Adequate space, in the short term, should accommodate and co-locate the existing translational research and teaching programs related to Global Health

that are currently dispersed in off-campus sites, as well as new faculty and staff that will be recruited. The Committee estimates that this will initially require at least 20,000 square feet to establish a functional department that integrates and catalyzes campus-wide participation. During the first five years, departmental space should increase by approximately 10,000 additional square feet to accommodate the new faculty and staff that will be recruited.

- C2 Any additional needed laboratory space could be accommodated on the Portage Bay campus or at other UW-affiliated sites (e.g. South Lake Union area, Harborview Medical Center R&T Building) adjacent to existing related laboratories.
- C3 To develop necessary new curriculum in the priority program areas, the Committee estimates that 10-15 new, currently uncommitted faculty positions will be required during the first 5 years. An equal number of related program and curriculum staff will be essential for development of this new Department.
- C4 The Chair, the Deans, and the University must develop a plan to secure adequate funding for the Department and its programs from diverse funding agencies, foundations, and institutions. As a first priority, the plan should include a strategy for recovery of indirect costs needed for the unique challenges and mission of this new Department.
- C5 The organization of the Department should promote the integration of research, teaching, and service focused on the highest priorities in global health.
- C6 The Department of Global Health should serve as a coordinating center for local and international global health research, education, and service programs within the Health Sciences and other Schools, Departments, and Programs of the University.
- C7 The Chair and Department faculty must develop academic pathways and promotion criteria to allow recognition and academic advancement for successful global health faculty. Teaching in international settings, public health practice and global advocacy must be valued and rewarded.

2. BACKGROUND

In November 2001, Patricia W. Wahl, PhD, Dean of the School of Public Health and Community Medicine, commissioned a committee chaired by King Holmes, MD, PhD and Steve Gloyd, MD, MPH to develop a strategic plan for international health in the School of Public Health and Community Medicine (SPHCM). This concept emanated from a variety of discussions around: 1) the increasing evidence of the importance of health as a factor in global development, 2) the nearly universal agreement of the importance of international health as a fundamental component of the training of all persons involved in the health care field and, 3) the recognition that a variety of governmental agencies and foundations were placing increasing emphasis and resources in the area of global health. The Committee was charged with performing an environmental scan of the international health initiatives within the School of Public Health and Community Medicine and to develop a five-year strategic plan for building a greater presence for international health in the School. The strategic plan expressed the realization that recent trends in globalization have affected domestic public health and that solutions provided by international health are critical to the health of the domestic population as well. Given the high interest of international health throughout the University of Washington (UW), the School of Public Health and Community Medicine desired to become an international leader in this arena.

In January 2003, this strategic planning committee presented a report recommending the creation of a Center for Global Health within the School of Public Health and Community Medicine. The proposed Center's mission would be to achieve global health equity. The report suggested wide-reaching programs in the areas of education, research, public health service and coordination of global health programs. It was anticipated that the Global Health Center would serve as a multi-disciplinary resource cutting across many programs in many Schools within the University of Washington community. Subsequent to this report, Dean Wahl and Paul G. Ramsey, MD, Vice President for Medical Affairs and Dean of the School of Medicine, determined that global health was a strength and priority for faculty and students throughout both Health Science Schools. A decision was made to explore the possibility of developing a unique Department based in both the School of Public Health and Community Medicine and the School of Medicine (SOM). Advantages of forming a Department were that a Department could develop a broader infrastructure than a Center, have greater visibility and opportunities to collaborate within both Schools, could develop a larger funding base and could develop a dedicated and diverse faculty to pursue key issues in global health. As a result of this vision, the Deans obtained a significant gift from the Gates Foundation to explore and develop the concept of a Department of Global Health which would span public health and medicine.

3. CHARGE TO THE GLOBAL HEALTH ADVISORY COMMITTEE

In November 2004, the Advisory Committee to establish the Department of Global Health in the School of Medicine and the School of Public Health and Community

Medicine was created by Deans Ramsey and Wahl. They presented the following charge to the Committee members.

Charge to the Committee:

- Assess the support for the concept of a new Department and potential for involvement with the Department among academic leadership in the School of Medicine and Public Health and Community Medicine, other Health Sciences Schools and other relative units of the University.
- Define the mission of the Department and the scope of its programs and provide the Deans with a statement of the Committee's conclusions.
- Serve as a search committee to the founding Chair of the Department.

4. GLOBAL HEALTH ADVISORY COMMITTEE WORK PROCESS

The Global Health Advisory Committee held its first meeting on November 29, 2004 and subsequently on approximately a bi-weekly schedule. The initial two meetings were focused on the expected responsibilities and personal skills required for the first Chair of the Department. Consultation was sought from Lee L. Huntsman, PhD, President Emeritus of the University of Washington and former Chair of the Department of Bioengineering, and Richard Klausner, MD, PhD, Executive Director of Global Health from the Bill and Melinda Gates Foundation. The Committee developed a list of potential candidates, published an advertisement for soliciting candidates for the Chair position and sought nominations widely from the University community. Subsequent Committee meetings included interviewing two candidates for the position, evaluating these and other candidates and developing a plan for obtaining community input concerning the vision of the Department. Three sub-committees were formed to review the previous Task Force Report for the School of Public Health and Community Medicine. The charge to these sub-committees was to determine where School of Medicine programs would enhance the first Task Force Report, update the Task Force Report, review global health activities at other institutions and survey the University community for advice and guidance for creating the new Department.

5. VISION OF DEPARTMENT

The importance of the health of the world's population has gained broad recognition after recent global social, political and environmental crises. Furthermore, the HIV/AIDS and SARS epidemics also have emphasized the world-wide impact of disease. At the UW, many educational and service programs have made outstanding commitments to creating or improving public health systems in various developing countries. Independently, UW biomedical research programs have advanced our knowledge of global pathogens and nutritional disorders. These programs generally have been based either in the School of Public Health or the School of Medicine. This disparate system is typical of global health programs nationally. Public and private funding, through

visionary foundations (e.g., the Gates Foundation or the Wellcome Trust) have made extraordinary contributions to these important efforts. Yet, the focused, balkanized approach to global health has created gaps between biomedical advances and public health systems and has limited global health educational opportunities for a growing number of highly motivated medical and public health students, who have more integrated views and interests in global health.

To create a new paradigm for addressing the top challenges on global health, the University of Washington (UW) will create a Department of Global Health, based jointly in the School of Public Health and Community Medicine and the School of Medicine. This Department will generate new approaches to improving the world's health by integrating faculty with diverse backgrounds, expertise and perspectives from the fields of public health, medicine, basic science, and potentially economics, anthropology and others. This Department will partner with the myriad existing independent international programs at the UW to create new synergies.

Through expanded educational programs, the DGH will teach and mentor the next generation of physicians and public health scientists/practitioners who will emerge with a new, expanded vision of global health.

The Advisory Committee believes that the UW provides a unique environment for the successful formation of a world class Department of Global Health because of:

- Existing research and educational strengths in the School of Public Health and Community Medicine and School of Medicine
- Excellent global health programs in the Schools of Nursing, Pharmacy and Dentistry
- Excellent international education and service programs in the Schools of Law, Business, Arts and Sciences and others
- A record of successful cross-disciplinary collaboration at the University of Washington
- A vast array of outstanding global health enterprises in the broader Seattle community (e.g., the Fred Hutchinson Cancer Research Center [FHCRRC], the Program for Appropriate Technologies in Health [PATH] and Seattle Biomedical Research Institute [SBRI])
- The extraordinary and pioneering expertise in information technologies at the UW, and
- The ubiquitous interest and enthusiasm of UW undergraduate students, medical students, graduate students and residents for global health.

The UW currently lacks a unique center leading a cross-cutting vision for advancing global health and facilitating collaborations across the UW, as well as with international partners. The DGH will fill this void by developing inter-related local and international educational programs, multidisciplinary research centers, and programs in global health care and practice (Figure 1). Each of these DGH missions is discussed with recommendations provided below.

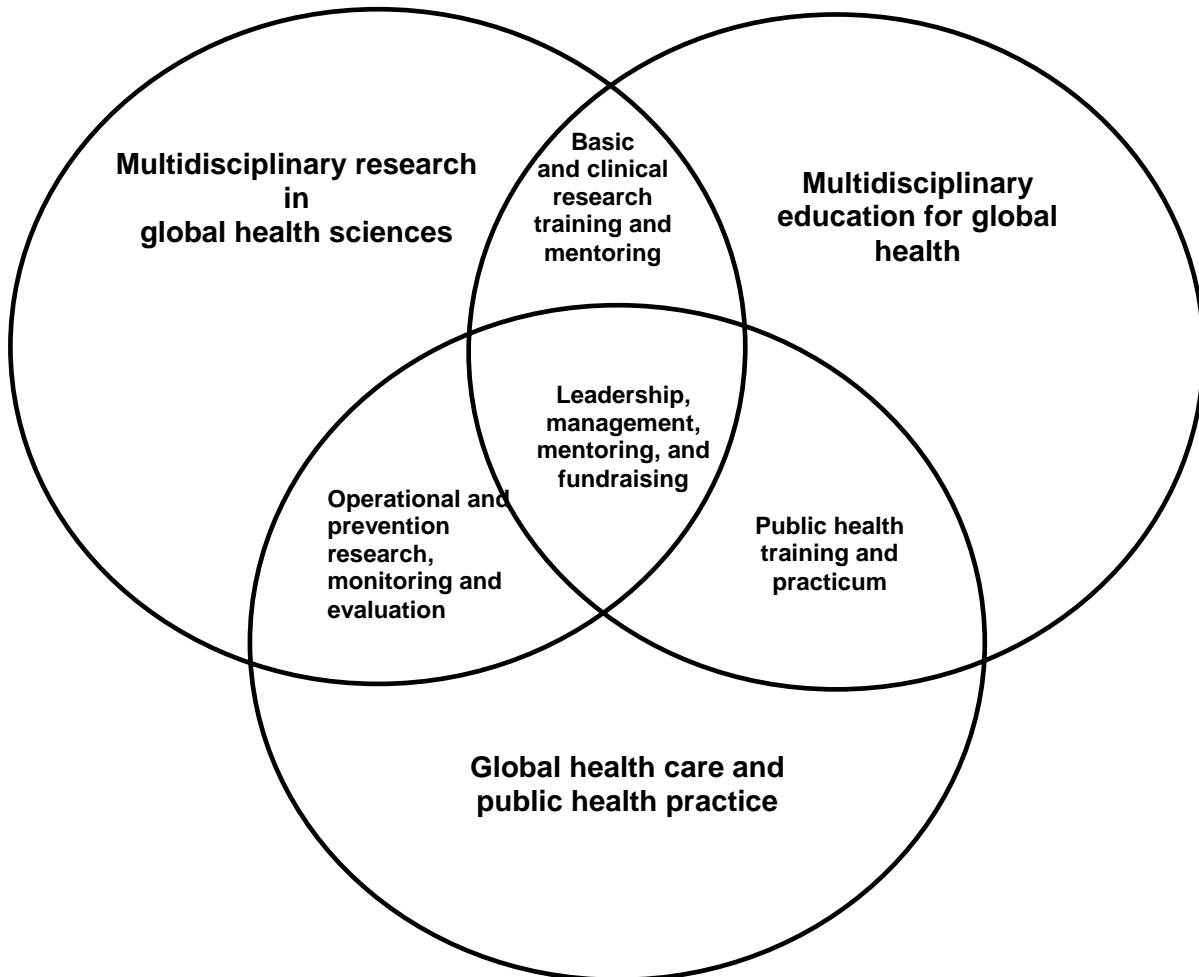


Figure 1. The Department of Global Health will coordinate education, research and service at the University of Washington.

5A. GLOBAL HEALTH EDUCATION

The 2003 Global Health Strategic Plan called for the development of a comprehensive program in global public health education, training, and mentoring. Ideally, the program should provide vision, context, and skills (competencies) to practitioners and scholars who plan to contribute to improving global health. The educational program should provide opportunities for service-learning and clinical practice in global settings. Finally,

it should also provide an understanding of major global health issues to undergraduates and to the public.

1) Principal Strategy

The Department of Global Health will build on existing courses and practical experiences and expand the scope of what is offered to meet the needs of the growing programs in global health at the UW. The DGH will likely offer a set of core courses that will serve as a base for a variety of global programs across the UW campus. These programs (see Figure 2 and Appendix B1) include the basic curricular track of the International Health Program (IHP), (which currently includes several of the Fogarty Programs) and a growing number of other programs, most of which intersect with the IHP. These programs are likely to expand considerably as the new Department of Global Health matures. We propose that the content of the Global Health Core curriculum be defined by a joint committee representing the various programs. Some of the programs might also contribute courses to the core in addition to other program specific courses and seminars. In addition, the IHP has a weekly integrated seminar (attended by ~50 students) that could serve as a focal point for all of the existing programs

2) Capacity and Number of Existing UW Global Health Courses

There are currently 18 courses (plus 5-10 regular seminars) offered by UW health sciences faculty that address global health. (Appendix B2 and B3). Many of these courses are offered on an irregular basis, and most of our courses are fairly heavily subscribed when they are offered--in other words, there is not a great deal of existing unused course capacity. There is currently a lack of faculty resources that prevents us from expanding the number of students that can be accommodated by either adding more courses or by offering the existing courses more frequently.

Harvard and Johns Hopkins are currently recognized as leaders in Global Health Education with 30-45 core courses offered, which is many more than are currently being taught at UW (Appendix B4). While we are not suggesting, nor do we recommend, that the UW program imitate existing Global Health programs, the infrastructure, size and support at those schools are useful indicators of what is needed for the UW Department of Global Health. The major reason that Hopkins and Harvard have more global health courses is that they have more faculty resources with which to meet demand. Our goal is to identify priority gaps in order to achieve a truly novel, integrative, and interdisciplinary curriculum.

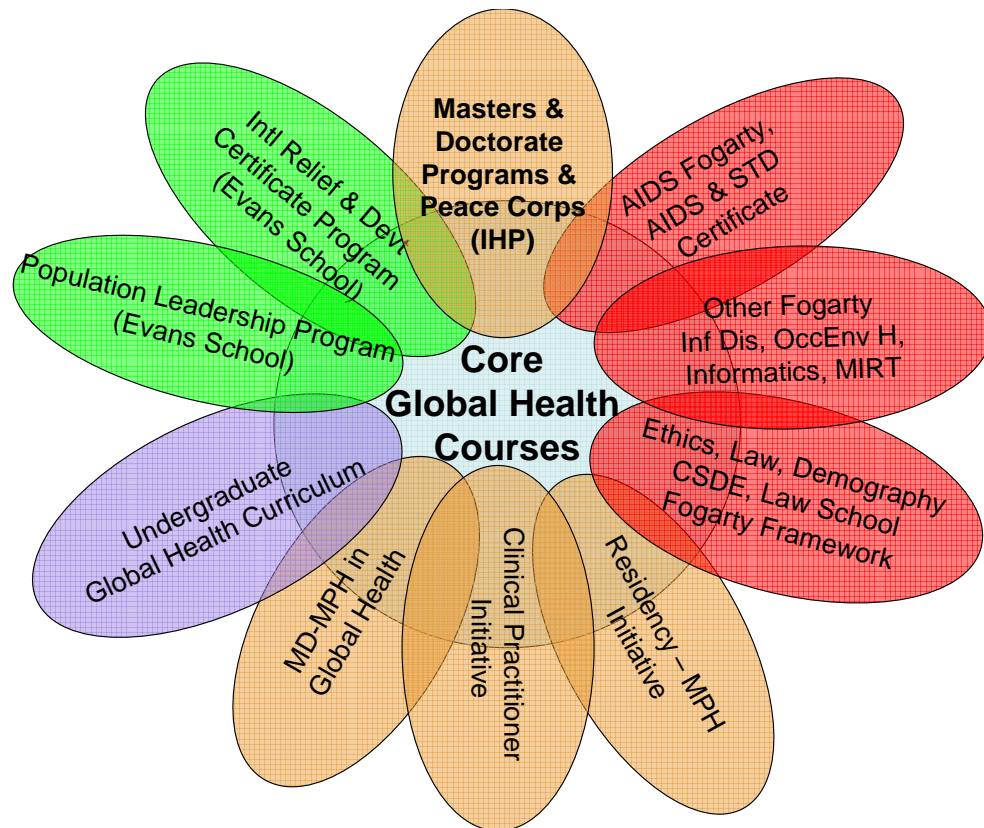


Figure 2. Schematic global health curriculum serving a sample of UW global health programs

3) Demand for Global Health Courses

At the present time, we have a small, but strong, curriculum for global health in the SPHCM and SOM. The high-quality of these limited number of course offerings is the direct result of the dedication of the existing faculty, and the enthusiasm among the growing number of students who enroll in these courses. Currently these courses have been accessible to a limited number of medical students and public health students. However, there is already a much greater demand among other students on campus and in the Seattle community, many of whom are turned away from courses due to over-enrollment. Our Committee feels strongly that we should increase the number and *scope* of global health courses to create a more robust and complete global health curriculum and full range of advising/mentoring activities for interested students. Ideally, these offerings would be available not only to traditionally matriculated students of the SPHCM and SOM, but also to students from the entire UW campus, and beyond. This Committee recognizes the growing importance of and demand for coursework in global health to educational programs throughout the health sciences and in other disciplines. We envision global health coursework as an integral component of undergraduate and graduate educational programs throughout the University.

To do this we will need to increase the size of the market for the courses. This could be done by either increasing the potential pool of students who could take these courses, or by increasing the degrees (or diplomas or certificates) for which the courses serve to meet graduation requirements.

The International Health MPH Program in the SPHCM (Health Services and Epidemiology) has had to create barriers to admission for the IHP because of the limited faculty size and the comparatively long two-year plus thesis MPH curriculum. The program limits entry to the program by requiring at least two years of international health experience to be considered for admission. Even with this barrier, the program receives well over 70 applicants annually for fewer than 15 slots. The Peace Corps Masters International program receives another 25 applicants for 3-5 slots. If the global health teaching faculty were increased, the global health MPH program could easily quadruple the number of global health MPH students to 50-60 entrants per year.

Another prospect for increasing demand for our global health courses would be to create new programs and degrees that would appeal to existing students. We anticipate that there is a sizable cohort of the medical school (perhaps 20 per year) and clinical residency programs (perhaps 10-20 per year) who would be very interested in obtaining an MPH in conjunction with their MD or with their residency training, if these programs were well integrated and designed to function smoothly. For example, if we could design an MD/MPH combined degree that could be routinely accomplished within five years; we feel that it would appeal to a large number of medical students. Further, many of our existing residents are interested in academic medicine, and an MPH/residency combination, that required one extra year, presents an exciting prospect. Both of these "new products" could significantly increase the market for global health courses. Creation of a global health-oriented Doctor of Public Health (DrPH) that could be marketed to our students and residents who have an MPH, as well as to practicing public health professionals, could also increase demand for global health courses. The existing postgraduate training programs in the SOM would also benefit from an exposure to both the academic and clinical disciplines of international health. Certificate or degree programs in maternal health child health, infectious disease, nutrition, injury prevention and chronic disease are just a few areas of potential development.

The largest potential pool of existing students (27,732) who could be given access to global health courses is the undergraduate student body on campus at UW. If existing courses were opened to these students, or if new courses were developed for them, it is virtually certain that enrollment demand would increase. Other potential groups of new students include practicing global health professionals, both domestically and internationally based, and students at other institutions. By using distance learning courses and short courses, we could probably attract a number of students from these markets.

4) Recommendations:

a) Faculty resources

The major factor limiting the capacity of our global health courses is the number of faculty members who have expertise in these areas, and number of staff to administer our programs and support global health students. Faculty recruited by the new Department of Global Health will be able to augment existing UW faculty, addressing the “bottleneck” in didactic courses due to limitations in number of faculty for teaching. New faculty must be complemented by substantial administrative staff increases to address the special needs of foreign students and for domestic students who do part of their academic work overseas, including arrangements for visas, housing, medical coverage, emergency evacuation, more complex IRB regulations for research conducted internationally, IRB submissions, and knowledge of specimen handling, shipping and import and export licenses.

Another critical “bottleneck” is the availability of faculty for mentoring of UW undergraduate, graduate and clinical fellows who are interested in global health. Additional UW faculty with expertise in global health are needed for mentoring of foreign students and professionals who attend the UW for short-term or long-term programs. This mentoring function is essentially the ‘seed’ from which long-term international research collaborations begin and are fostered. However, such mentoring is time-consuming when it is done well, given the additional logistic challenges of language differences, identification of suitable projects for students or professionals on short-term training program, and in some cases, additional time necessary to establish research infrastructure and identify funding for international projects. The same faculty who are involved in challenging global health research and programmatic activities often have substantial domestic administrative and clinical obligations and are the same faculty who teach the core international curriculum, and who are approached for individual undergraduate and graduate mentoring. The solution is to expand the number of faculty who are available for didactic teaching of the global health curriculum and who can also expand the demand for mentoring in global health beyond what is feasible with the current UW faculty. Innovative approaches to mentoring students and professionals in global health research and programmatic areas are needed, including practica, seminars on methods and evaluation, and distance mentoring for students and professionals who are based abroad.

b) Coordination of curricular activities

The Department of Global Health will create a coordinating committee comprised of the key global health programs as noted in Figure 2. Note that programs are likely to evolve over time, and the committee should expand, as appropriate, to include all relevant faculty and staff on campus who contribute to global health. The committee will assess curricular needs and work toward the development of a core curriculum that serves all programs. The committee will also assess how

curricular offerings meet those needs, as well as identify specific curricular gaps. The committee will advise the Chair of the Department to

- Encourage existing faculty to offer courses that cover curricular gaps (including with course buy-outs)
- Provide additional support for existing and new faculty for in-class teaching time and additional efforts for mentoring
- Hiring of new faculty to meet course needs that cannot be met by current UW faculty

Other functions of the committee might include the following: creation and/or support of new and innovative educational programs, new degree programs for partner institutions, assessment of the quality of the courses, integration of courses and programs, integration of the curriculum and off-campus activities (research, service, or practica), mentoring, and others. The development of a PhD program in global health is recommended and should be considered by the DGH Chair and Coordinating Committee.

c) Faculty and staff needs

An ad hoc student-faculty committee has already made some initial assessments of global health core course needs based on surveys of graduated and current students, courses in other schools (Harvard and Johns Hopkins), and student-faculty opinions. The report identifies 32 campus-wide courses relevant to global health; 5 courses of 4-5 credits, 17 courses of 3 credits, 7 courses of 2 credits, and 3 courses with 1 credit (Appendix B4). All of these courses are being taught using existing resources or donated time. The committee identified immediate and long term curricular priority areas and likely faculty needs required to make these courses available. The preliminary listing of priority areas for global health educational curriculum development is shown in Table 1. Additional longer-term priority areas are listed in Table 2.

Table 1. Priority areas for developing a global health curriculum at the UW

Health systems in developing countries <ul style="list-style-type: none"> • Policy, economics, finance, workforce, planning, & reform • Comparative systems
Environment, sanitation and water in developing countries
Primary care and prevention in international settings
Health education, promotion, behavior and advocacy
Reproductive health & contraception
Management, leadership, communication
Clinical and public health management and program evaluation in international settings <ul style="list-style-type: none"> • Monitoring and evaluation and operations research for developing countries • International human resources for health development • Financing
Applied biostatistical techniques for global health settings <ul style="list-style-type: none"> • Including mathematical modeling of disease
Applied bioinformatics technologies for global health <ul style="list-style-type: none"> • Including telemedicine, communications infrastructure for distance learning and collaborative research
Conflict and complex humanitarian emergencies in the developing world
Injury prevention and control in international settings
Rights-based & ethics-based approach to policy and research in international health
Nutrition in developing countries <ul style="list-style-type: none"> • Including food-security, malnutrition, and obesity
Mental Health
Pathobiology of emerging infectious diseases <ul style="list-style-type: none"> • Including vector management, pathophysiology of diseases of international importance • Improving treatment modalities for diseases of international importance
Vaccine Development
Gender studies with global health focus
Worker health & safety in developing countries

Table 2. Longer Term Priorities

Additional long-term priority areas for curriculum development in global health:

History of international health and development; int. health policy
Some split children and maternal health courses (we have MCH)
Political science for public health workers
Demographic methods
Pharmaceutical policy & practice (including contraceptives)
GIS & health planning
International health economics: micro, macro, econometrics
International health geography
Health advocacy: communication and mobilization
Community capacity, competence and power
Others have lots of different kinds of nutrition courses, food security, epi of malnutrition,
Violent conflict and conflict resolution; disaster mitigation
Information systems with international applications
An applied health & development course taking place in Latin America
Population-environment theory & evidence (kind of like Rosenblatt & Oberle)
“The Cuban perspective” “Nigeria & West Africa” and other regional courses
Infection and inequality
Action-oriented community diagnosis
Management of foreign aid in health and population
Immigrant populations
Migration theory and trends in global health
Public investment theory (cost/benefit, models)

Medical courses:

Obstetric problems
Gynecologic problems
Tropical medicine & parasitology
Vector borne diseases
Public health ophthalmology for poor countries
Intestinal diseases in the tropics
Vaccine trials & other trials [Intervention research for HIV/AIDS]
Traditional & alternative therapies

In calculating the number of new faculty members that would be needed to carry out the academic activities, the report assumes that

- current faculty are funded in the short term
- the Department will need **new** faculty members to cover the priority new courses, both in the short and long term. Each new faculty member would likely teach 1-3 three credit courses per year – and that each course, plus the typical academic activities (advising, academic committee work, program development, thesis work) would require 25% of a full FTE. Moreover,

courses are specialized enough that one global health faculty member is unlikely to be able to cover the material in more than two courses.

- o Long term faculty needs would be calculated using all three course lists below, with some support for those faculty currently teaching core courses.

Thus, the short term faculty needs would include 3-5 new faculty members, each funded at .25 to .5 FTE, to teach a management sequence, primary health care policy, water, sanitation, and environmental health, and health education. In the medium to long term, the 11 courses would require an additional 2.25 FTEs of teaching/advising time, translating to 3-6 additional faculty at .25 to .5 FTE each. Plus, many of the faculty teaching the existing course (4-10 faculty) would have to be compensated for their teaching activities – estimated at 1.5 FTE for ~6 course equivalents. The Department should work toward supporting the much larger course needs with a combination of its own faculty (including joint appointments) and adjunct and clinical faculty.

Curricular staffing would include support for both students and faculty and to nurture the global academic links. A staff ratio of 1 staff FTE for every 2-3 faculty would be reasonable, given the complex administrative and unique needs of the foreign students and the traveling faculty. Furthermore, staffing support will be required for the existing IHP staff with added support for curriculum development. In addition, the curricular planning and integration will require significant faculty and staff time. We propose that the DGH fund modest interim staffing over the 2005-2006 transition year to build on the current curriculum development work and begin to create a coherent core course package for the rapidly growing programs across campus in global health.

Table 3 summarizes current thinking on personnel needs for curricular development in the next five years.

Table 3

Category	Years 1-3	Years 2-5	Total
Faculty (numbers of new teaching faculty)	3-5	3-6	6-11
Faculty FTE paid by DGH for teaching	1.25	2.25 + 1.5	5
Staff (FTEs)	2-3	2-3	4-6

5B. GLOBAL HEALTH RESEARCH

The 2002-2003 strategic plan, which emphasized the importance of highlighted international health research activities involving the SPHCM and SOM, emphasized global health research and established this goal as its highest priority. The Department of Global Health Advisory Committee has updated a listing of global health research activities of the SPHCM and of the SOM, as well as related research activities of other Schools, Departments, Institutes, and Centers of the UW and UW-affiliated institutions.

1) Global Health Research at the UW

- a) Fogarty International Center Information. A listing of NIH-funded international research grants and contracts to UW faculty was provided on 4/12/05 by the Fogarty International Center (via Tom Quinn) (Appendix C1). These included 63 different grants awarded FY 2000 or later from 19 different NIH Institutes or Centers (largest numbers from NIAID, NHLBI, NCI, NIDCR, and NIDDK) to 58 different UW investigators for research in 33 countries. Of interest, only 8 of these grants involved research in developing countries. Several of the countries listed were part of multinational research consortia and therefore may not have reflected strong UW partnerships with institutions in other countries, beyond the specific grant listed. The list was incomplete – several additional international health research grants to UW investigators were not listed.
- b) UW Grants and Contracts. Mike Blackwell was able to provide a list of Foreign subcontracts and subcontracts for the Health Sciences for FY 05 through 5/20/05 (i.e., about 9-10 months). Overall, 122 subcontracts were written (70 AIDS- or STD-related) for 42 faculty members (Appendix C2).
- c) UW Health Sciences GHRC Survey. A separate survey concerning international health research activities of UW-affiliated faculty was carried out by Daren Wade of the UW Health Sciences Global Health Resources Center in April, 2005. The survey was sent directly to approximately 40 people from the GHRC Advisory Committee, 50 others working internationally in the SOM and SPHCM; to 15 in the Puget Sound Partners Administrators Group (from the SOM, SPHCM, FHCRC, SBRI, ISB, and the Bill and Melinda Gates Foundation); to International Program Offices in the Evans School and Jackson School. The UW Center for Sociology, Demography, and Ecology (CSDE) also sent the survey out to CSDE faculty in Arts and Sciences. Approximately 100 UW-affiliated speakers at the 2005 Global Health Conference were also surveyed. Each person surveyed was asked to forward the survey to people they knew in their own organizations working internationally.

As of 5/21/05, 132 respondents identified many who were doing global health research internationally but not in the Fogarty or UW Health Sciences Grants & Contracts list. Many were from the SOM and SPHCM and School of Nursing in the Health Sciences, and many from other schools not in Health Sciences (Appendix C3). The funding was from many agencies other than NIH, including

NSF and several foundations, and a much larger proportion of international research sites involved developing countries. However, even this list was probably very incomplete as reflected by the fact that only 3 of the 23 persons who had received \$50,000 Puget Sound Partner research grants from the Gates Foundation in 2003 and 2004 responded.

- d) FHCRC International Health Research. Dr. John Potter, Chief of Public Health Sciences at FHCRC, has provided a list of 47 FHCRC investigators involved in international work (Appendix C4). (This is likely a much more comprehensive list than it has yet been possible to assemble from other investigators at the UW). The list includes 9 investigators involved in multi-site studies; 20 involved in Pacific Rim and other Asian countries, especially China and Japan; 5 involved in Latin America; 3 involved in Africa; and 9 in Europe, Australia, and New Zealand. The largest of these programs are led by Steve Self involving HIV prevention trials and HIV vaccine trials; and Drs. Larry Corey and Judy Wasserheit, with 27 HIV vaccine clinical trials research sites in 15 countries around the world.

2) Global Health Research Training Programs

The UW and affiliated institutions have several active international research training programs funded by the NIH Fogarty International Center – ranking only after Johns Hopkins and Harvard in total number of such grants. These include the following:

- 5D43TW000007-17 International AIDS Research and Training Program
(K Holmes, PI)
- 5D43TW005509-05 Malaria at the Mother-Child Interface (P Duffy, PI) (Awarded to SBRI)
- 5D43TW000642-09 International Scholars in Occupational & Environmental Health
(M Kiefer, PI)
- 3D43TW001286-04S1 International Health/Biomedical Informatics
Research/Training Program (AM Kimball, PI)
- 5D43TW000924-05 International. Training & Research. in Emerging Infections
Diseases (K Stuart, PI; Dr. Stuart has reapplied for continuation of this research
training program)
- 5T37TW000049-07 Multidisciplinary International Research Training Grant (M.
Williams, PI)

In addition, two new research training programs involving the UW have been funded by the Fogarty Center:

- The Fogarty-Ellison Partnership – This new grant is analogous to a Hughes or Duke Foundation grant to graduate students in the Health Sciences, providing 1 year of funding for international health research.
- Funding for an eighth UW-affiliated Fogarty Center Training Program, to Dr. Charles Mock for Injury Prevention entitled “International Collaborative Trauma and Injury Training Program”, was announced in May, 2005.

3) New Developments in Global Health Research at the UW

- Seattle Vaccine and Immunization Research Center. The University and the FHCRC have agreed to establish a Center for Immunization Research to coordinate the already extensive research program on vaccine development for the major global diseases in Seattle (HIV, malaria, TB and STDs). The center is designed to provide the glue to take basic discoveries into a more product development. This research center is involved in a wide array of programs from basic discovery to vaccine utilization. The Vaccine Center is to be designated as a Center within the Department of Global Health.
- The Bill and Melinda Gates Foundation funded the Puget Sound Partners Global Health Research and Technology Program, administered by FHCRC, which awards approximately 10 research grants per year, each for \$50,000 for one year to investigators in Puget Sound, most UW-affiliated. Now entering the 3rd of 5 years, this new program is attracting many new young investigators to global health research.
- HIV/AIDS Clinical Trials Networks Leadership: NIAID has initiated a recompetition for HIV/AIDS Clinical Trials Networks. It is anticipated that those new Networks will in aggregate be funded at approximately \$500M per year, with growing emphasis on international clinical trials and with a projected 75-150 domestic or international sites. The HIV Vaccine Trials Network (HVTN) is located at the FHCRC and UW faculty are heavily involved in the leadership, biostatistical, laboratory, and clinical aspects of applications for the other 4 networks (Networks for Trials of Microbicides; Perinatal and Pediatric Prevention and Care; Other Prevention Research; and Treatment).
- FHCRC International Public Health Program. Dr. Potter is involved in consolidating and building on current international research efforts to form an International Public Health Program, to establish a greater presence for these efforts at FHCRC; and also in interfacing with the new Department of Global Health. He is personally interested in forming a very large long-term collaborative cohort in the Pacific Rim region for studies of a variety of health outcomes and disease determinants.
- Laboratory-based research on pathogenesis and prevention of diseases of global health importance. A large number of faculty in the Departments of Pathobiology and Medicine, and a smaller number of faculty in Microbiology, Laboratory Medicine, and Immunology, have grant-funded research programs focused on relevant research topics. These include the following:
 - Infections: parasitic (malaria, trypanosomiasis, leishmaniasis, toxoplasmosis), sexually transmitted (syphilis, chancroid, chlamydia, gonorrhea, herpes, HIV/AIDS), tuberculosis, hepatitis C.

- Interdisciplinary approaches to genetic or infectious contributors to chronic diseases including atherosclerosis, diabetes, and obesity.
- Relevance to maternal and child health: HIV, chlamydia, malaria, syphilis.
- Emerging and re-emerging global health issues: antibiotic resistance, HIV, malaria, HCV.
- Prevention: vaccine development for HIV, malaria, syphilis, HSV.

The laboratory programs affiliated with these departments are located in the Health Sciences Building, Harborview Medical Center Research & Training Building, Fred Hutchinson Cancer Research Center, and the Seattle Biomedical Research Institute.

- Global Population and Health Research and Population Modeling

The major goals of global health research are to understand the determinants of health for diverse populations and to develop effective strategies to improve health and reduce health disparities. The agenda challenges traditional models of single discipline research:

- The determinants of population health are complex, involving interactions of biomedical, social, and individual factors both within and, due to the forces of globalization, across geographically distinct populations
- The elements of this system are dynamic, and the evolution of these forces as they interact and adapt has short and long term consequences for population health

A growing movement in global public health research is the synergistic convergence of the fields of demography and population studies, with the field of macroeconomics, and with the fields of epidemiology, public health, and medicine. For example, the Wellcome Trust has recently shifted its focus in population research from “Population Studies” *per se* to “Population and Health Studies.” The Gates Foundation and World Bank are supporting the Disease Control Priorities Project (DCPP), establishing partnerships between macroeconomists, public health specialists, and clinicians, in surveying global health disease control priorities.

We recommend the development of a Population Modeling Program in Global Health Research at UW. An effective modern program of global health research will require the ability to *describe* the interactions of factors across multiple scientific domains and *predict* the short-term and long-term trajectories of complex dynamic processes. Population modeling is an important methodology needed to address these challenges. The methods provide a quantitative framework for understanding the dynamics of processes in large complex populations, and for integrating dynamics across multiple domains. This makes it possible to identify and characterize mechanisms that influence the epidemiology of disease-related morbidity and mortality – from the microbiology of host-pathogen interactions, to the networks of transmission between hosts

and the macrodynamics of host-environment interactions. These methods also make it possible to examine the many demographic impacts of health outcomes in populations – from orphanhood and household structure, to population composition and dependency ratios. Population modeling methods therefore provide a laboratory for exploring the potential impact of a wide range of public health interventions – both biomedical and behavioral.

Population Modeling represents a core expertise essential to the mission of a program on Global Health. It is an integrative methodology; a quantitative analytic framework that bridges across disciplinary domains to support research on population health. The methodology includes a wide range of tools – from simple life-table projections, to deterministic “macro” models, to stochastic microsimulation. Currently, there are no programs within the United States that teach the full range of population modeling methods to health and population scientists, and there is only one such program in the world (at Imperial College, London). This represents an opportunity. The dearth of such programs is primarily due to the difficulty in identifying a natural departmental home in traditional academic institutions. A DGH, with strong collaborative links to other discipline-oriented departments, represents an ideal academic home for such a program.

The UW has pursued a remarkably successful cross-school initiative to build strength in this area in the last two years. Internal and external resources are supporting the recruitment of several population modelers with a focus on population health. Part of this effort is located in the newly funded UW Center for AIDS Research (CFAR) Scientific Program in mathematical modeling directed by Stephen Self (Dept. of Biostatistics) (the first program of its kind at any CFAR). In conjunction with the CFAR Sociobehavioral and Biostatistics cores, this program is bringing three population dynamic modelers to the UW. The recruitments are focusing on interhost dynamics and multi-level interventions strategies for HIV prevention. In addition, a recent hiring initiative, the Center for Studies in Demography and Ecology (CSDE), directed by Dr. Martina Morris, recruited two demographic modelers to Arts and Sciences. These initiatives create a critical mass in population dynamic modeling at the UW, and an unprecedented opportunity for these diverse modeling efforts to coalesce around the mission of the new DGH. It is an opportunity to establish this new Department as the national leader in the integrative research methodology needed to improve global population health.

A related opportunity would be to continue to build strength at the UW in global health-related macroeconomics research, addressing, for example, not only the context-specific cost-utility of health interventions, but broader analyses of the health-related aspects of trade and development forces of globalization.

4) Issues in Global Health Research and Research Training

Research in both developing and developed countries is important; the following discussion focuses on increased emphasis on research addressing the health burden of low-income countries.

a) The “10/90 gap:” definition and implications

The Global Forum on Health Research, created in 1998, has issued four reports on the so called “10/90 gap” – in which only 10% of global health sciences research funding addresses the health problems of 90% of the world’s population. Growing recognition of the 10/90 gap has involved better understanding of the two components of the gap, based upon defining the burden of disease, (Murray CJ, Lancet 2003; Jamison D, DCCP, 2005); and defining the distribution of research funding for the most important components of disease burden. Solving the problem of the 10/90 gap has required identification of research priorities which will make the greatest contributions to improving global health.

The most recent report of the Global Forum (Feacham RA, 2004) emphasizes that, while investment in health and health research are possibly the best of all economic investments, there must be reorientation of research efforts and of health research funding towards the key health priorities of the world; increased attention to research outside the biomedical sector (e.g., sociobehavioral, management, functioning of health systems); translation of research into relevant products, policies, and action for the developing world; research capacity strengthening in low-income countries; sustaining the 70 or more emerging public-private partnerships and networks for global health research (e.g., Roll Back Malaria, Road Traffic Injuries Network, etc.); and integration of gender issues in all efforts to close the 10/90 gap.

At least three different approaches can be considered for closing the 10/90 gap. For example, the Commission on Macroeconomics and Health of the WHO emphasizes a focus on specific diseases affecting low income countries (WHO, 2002). Others have delineated the “top 10 biotechnologies” needed for improving health in developing countries (Daar, Nature Genetics, 2002). A third approach advocates a focus of global health research on the “social, environmental, and economic contexts in which health, disease, and health care are imbedded” (Labonte R, BMJ, 2003). These perspectives, reflecting a disease-oriented approach, a technology-oriented approach, and a health-oriented approach, are complementary and will ideally all be strongly represented in the research agenda for the new UW Department of Global Health.

b) Combining medicine & public health in global health research. Although location of all of the UW Health Sciences schools close to each other and near the main campus has encouraged collaboration, the focus of clinical medicine emphasizes basic science and individual patient care, while the focus of public

health research more often emphasizes population level research on prevention, for example. To quote Richard Klausner of the Gates Foundation in speaking with this Advisory Committee, "There is a need for breaking down the silos between medicine and public health, to bring both disciplines together in a synergistic approach to solving real problems in global health." This could be emphasized in the mission statement for the new Department.

c) Providing research training opportunities for UW students.

Global health research training opportunities for UW graduate students in the Health Sciences are provided by a number of programs, including the Puget Sound Partners Global Health Training and Education (PSPGH-TE) program, the MSTP program, selected Fogarty International Center research training programs, and individual research grants.

- **PSPGH-TE**. By far the largest of these is the PSPGH-TE, funded by the Gates Foundation at \$1.5M over 5 years. This program has several components - the Collaborative Program in India (Chennai); Occupational and Environmental Health in Vietnam and Central America; the Amauta Public Health program in Andean countries; Global Health Partnership Travel grants in multiple countries; the International Health Elective (IHE) for 4th year students; and the International Health Opportunities Program (IHOP) for first-second year students (initiated by the medical students who applied to the Gates Foundation for the overall PSPGH-TE funding). Although the IHE supports 4th year students only for clinical practicum experiences, all of the other programs may support research training. Overall, about ½ of over 80 students accepted into the program over the past 3 years (including summer of 2005) have had a research-oriented experience. Medical students seek to fulfill the Independent Investigative Inquiry research (III-1) medical school requirement in international settings; and MPH students seek international research-oriented practicum experience required for the MPH degree. In addition, growing numbers of graduate students in medicine and public health have a primary research focus in global health.

The PSPGH-TE program now accepts about 30 health sciences professional and graduate student applicants each year, but this now meets the needs of only a fraction of the applicants as the new program becomes better known. For example, this year, only 10 of 30 medical school applicants could be accepted. More of the WWAMI-site students from states other than Washington have become interested, and ½ of those medical students accepted this year were from WWAMI sites. Some programs are actively recruiting Nursing and Social Work students, but so far nearly all of the PSPGH-TE students have been from SOM and SPHCM. Further, of the 100 upper level undergraduate students who have taken the UW Conj 501-503 series, many express interest in international experience. The PSPGH-TE program could probably grow to 3 to 5 times its current size before serving all interested students, even at the current time.

Although the typical duration of PSPGH-TE funding is 6-10 weeks for 1st year medical students, a longer time (e.g., 10-12 weeks) should probably be viewed as a minimum for summer research projects.

- **MSTP.** The level of interest of MSTP trainees in international research is growing; 3-4 were assigned to international projects this year.
 - **Fogarty Center Programs.** The Fogarty-Ellison partnership for graduate students in the Health Sciences is a new and growing program, funding graduate students in health sciences for a full year fellowship of international research experience. From a national competition, two excellent UW graduate students were selected in 2005, one from the School of Public Health and Community Medicine, one from the School of Medicine.
- d) Linking technical assistance (TA) to research.** Health Alliance International (HAI), an NGO affiliated with the UW, has an annual budget of about \$5M; and the more recently formed International Training and Education Center for HIV (I-TECH), based in the Dept. of Health Services and the UW CFAR, has a current 2004-05 budget of \$17M. These two large TA programs provide unique opportunities for developing applied operations research and research training programs for the new Department of Global Health.
- e) Translating research to policy, and policy to action.** The limited public health and health care capacities of many developing countries present enormous challenges in translating research findings and new technologies into policy and practice. This has implications for the types of research and technologies that are most appropriate for global health research, as discussed above; and again for linking research programs into partnerships with technical assistance programs; and for fostering academic linkages of global health research with programs of the Evans School, and the Law School, and with multinational and bilateral agencies focused on policy as related to equity and eliminating health disparities; on justice; and on advocacy to guide and promote introduction and scale-up of new technologies and approaches.
- f) Siting of global health research at the UW.** In general, the Advisory Committee felt that global health-related basic science research, which is currently housed physically within the existing basic sciences (e.g., Pathobiology, Microbiology, Immunology) and clinical departments (e.g., Medicine, Infectious Diseases), and at affiliated institutions (e.g. SBRI) would likely remain in those departments and institutions. In addition, the development of “the top ten biotechnologies” for global health could be further pursued jointly by the new Department in collaboration with these other departments. The new Department of Global Health would also emphasize translational and applied research that facilitates access of basic scientists to global health settings, and applications of findings from basic science research at the global level. Considerations for location of other relevant basic, developmental, applied, or clinical laboratory

bench research on global health may considerably differ from those for location of global health research involving epidemiology, operations research, prevention, and sociobehavioral research, macroeconomic, legal/justice, and policy issues, etc. Logically, these latter types of research activities could be co-located not only with others involved in global health research, but also near faculty and trainees having similar educational, training, and research disciplines.

- g) Overhead recapture for global health research.** The infrastructure and operational costs for global health research in general are incurred primarily at international sites, rather than at the UW campus. For example, these include costs for transportation, security, research clinics, laboratories, offices, equipment, and other support infrastructure. Therefore, the new Department must have the use of indirect costs to support the necessary global health research infrastructure internationally, as well as the infrastructure needed to support this new department at the UW.
- h) Declining value of the dollar in international research** (e.g., the dramatic recent decline in value of the dollar vs. other currencies of industrialized countries, (e.g., the Euro and the Yen), have perhaps surprisingly also been accompanied by devaluation of the dollar relative to currencies of several developing countries – (e.g., 40% or greater devaluation against the South African Rand). This compounds the difficulties in financing with US dollars the development of research capacity and conduct of research in these developing countries.
- i) Memoranda of understanding and intellectual property (IP) agreements.** While case-by-case IP agreements are appropriate, generic approaches must consider equity in international research partnerships.
- j) Bias against publishing global health research.** We note the existence of bias of medical journals against publishing manuscripts concerning diseases of poverty (Horton, R. Lancet, 2003); this could impede academic progress of global health researchers without development of additional, complementary criteria for measuring academic research contributions and progress of faculty in the new Department. Developing a journal focusing upon global health research might be a future initiative for the DGH.

5) Recommendations for Research and Research Training

- a) Focus on selected countries and institutions.** Although the current geographic scope of international research and TA activities of UW/FHCRC-based faculty and programs neglects few if any of the countries of the world, there is a clear need to selectively strengthen key partnerships. This will be required to build meaningful inter-institutional partnerships characterized by sustainability, interdependence, synergies, trust, complementary strengths, and security. Beyond geography and language, strategic criteria for investment of personnel and financial resources of the new Department could include building

on the largest and strongest of existing partnerships between UW Health Sciences and Arts and Sciences faculty and institutions in other countries (Kenya, Peru, Uganda); existence of realistic mutually defined needs and opportunities; and long-term potential for scientific synergies and sustained growth.

- b) **Breadth vs. depth in the focus of biomedical and non-biomedical global health research.** The new Department should clearly address, but not be limited to research on key disease morbidities in developing countries, including infectious diseases such as HIV/AIDS and other sexually transmitted diseases, tuberculosis, and malaria; injury control; nutrition; and reproductive and maternal and child health. This research should build on the strength of existing UW basic science, public health, and clinical research by catalyzing applications of new findings, approaches, and technologies in the global context, especially in developing countries. The research should include a population-level focus, address health systems needs and opportunities, and operational research; and should also include strong emphasis on social, legal, economic and other approaches to promotion of global health.
- c) **Personnel: There is a need to develop a critical mass of full time faculty and professional staff expertise** based primarily in the new Department for the biomedical and public health research areas just cited, including research outside the biomedical sector (e.g., sociobehavioral research, management, health systems, community involvement).
- d) **Facilities.** New facilities will be required both in Seattle and in selected other countries to support global health research. For example, in Seattle international AIDS research programs alone are dispersed into facilities throughout the city – approximately 15,000 sq. ft. or more are currently rented; and the Fogarty Center programs and trainees are also dispersed. The new Department, the SOM, and SPHCM, and the UW and its capital campaign must work with foundations and other donors to support development of consolidated interdisciplinary global health research facilities on campus, and equally important, in selected partnering academic centers in other countries, especially in developing countries. For example, the new research center developed in Durban at the University of KwaZulu Natal in partnership with Harvard, together with funding in part from the Doris Duke Foundation, represents a sustainable model for infrastructure development. Similarly, the new Infectious Diseases Institute at the University of Nairobi, funded by the Canadian government, and the new Infectious Diseases Institute in Kampala at Makerere University funded by Pfizer Inc., represent examples of the types of support not provided by NIH that are essential, together with indirect cost recovery and donor funding, for building international infrastructure.
- e) **Overhead recapture & rationale.** For reasons cited above, the formula for distribution of RCR to the Department of Global Health should be designed in a

non-conventional but rational manner to reflect the fact that at least ½ of the research funds generated by this Department will likely be expended in developing countries; which in turn have much greater infrastructure needs (libraries, IT, parking, buildings, etc.) than does the UW.

- f) **Linkages to the Bill and Melinda Gates Foundation, PATH, and others** – Formal planning should be undertaken early by the new Department to achieve mutual benefits in research and research training, based upon the complementary strengths and the needs of these agencies and the UW.

5C. GLOBAL HEALTH CARE AND PUBLIC HEALTH PRACTICE

Achieving global health equity is an important mission of the Department of Global Health. To accomplish this goal, global health service must be a priority for the Department. At most universities, service is often given less prominence than research or teaching. This is reflected in the fact that service activities are not given much credence for faculty promotion. Formal medical and public health literature also neglects this aspect of professional activity. (It has been noted previously that this is also true of international research in general.) Nonetheless service activities have the potential to contribute, at least as much as these other activities, to lowering the burden of death and disability globally. The quality and success of existing programs, both at UW and in the Seattle area, provide an ideal environment to provide leadership and to create new initiatives.

Service as defined by this Committee includes the application of the results of research on health problems, services and policies and describes:

- Technical assistance programs, such as UW's I-TECH and HAI
- Provision of direct clinical services
- Provision of public health services
- Efforts to strengthen the medical care infrastructure and the public health infrastructure through:
 - consultancies
 - operations research
 - training both for students and for practitioners in international sites
 - advocacy, including addressing broader determinants of health inequity

1) Provision of Direct Clinical Services

Provision of clinical services is characteristically given considerable importance in schools of medicine, at their own teaching hospitals, but less so at international sites. Nonetheless, a growing number of medical students, as well as residents, seek clinical international elective rotations. The UW School of Medicine has a Clinician Teacher Pathway (see Appendix F2) for SOM faculty, which recognizes clinical practice and teaching as priorities. The opportunity to actually provide services in developed or developing countries internationally has not been explicitly clarified in existing promotional criteria.

2) Provision of Public Health Services

Provision of public health services has usually not been a priority of schools of public health. The UW SPHCM has been an exception to this trend, with efforts such as the NW Center for Public Health Practice (NWCPHP) which provides practice-oriented education and training programs for practitioners in public health agencies and community-based health centers. The Center works with health agencies throughout the Northwest in developing these programs. The latest work for the Center has been in bioterrorism preparation which affects many countries not just the US. Expansion of such training into global health projects seems a natural direction for the future.

An added effort in the emphasis on public health services is the appointment of the first director of NWCPHP to the newly created position of Associate Dean for Public Health Practice in SPHCM.

3) Efforts to Strengthen the Public Health Infrastructure

Currently UW faculty are engaged in many service-related activities globally, some of which are described in the following:

- a) HAI, a private non-profit voluntary organization (PVO) which is affiliated with SPHCM under the Department of Health Services was originally established to assist Mozambique institutions in addressing the enormous health needs of their country. Over time this well-established on-going program has expanded to include work in regions around the world. It receives funds primarily from a USAID grant.
- b) The Center for Health Education and Research (CHER), a collaboration of the Department of Health Services (SPHCM) and the Center for AIDS and STD (SOM), conducts both domestic and international training for health practitioners as well as research. With differing sources of grant funding the Center's work encompasses all three components of this report: education, research, and service.

- c) The International Training and Education Center on HIV (I-TECH) which has developed into a large international technical assistance program over the last five years under CHER is a strong example of the importance of service work in developing countries. Funded primarily by HRSA, CDC and PEPFAR dollars, this activity provides technical assistance to more than a dozen countries throughout of the world aimed at developing institutional capacity. Often operational research and training opportunities flow from this, another overlapping function of global health activity.
- d) The Marc Lindenberg Center was established within the Evans School of Public Affairs to better prepare University of Washington students, faculty and staff for life and work in a global society. The work aims at relieving widespread humanitarian crises, extreme poverty afflicting over one billion of the world's population, environmental challenges, terrorism, health crises and many other problems that flow across national borders. In collaboration with other UW departments, including SPHCM and SOM, the Lindenberg Center seeks multidisciplinary approaches to address these issues through teaching, research and **service**.
- e) The Population Leadership Program (PLP) provides service activities internationally. PLP is a joint program of the Center for Studies in Demography and Ecology (CSDE) and the Evans School of Public Affairs and is staffed by SPHCM faculty. Drawing on the concepts of current theorists and practitioners, PLP aims to develop effective leaders working in the unique environment of USAID - in Washington, D.C. and in the field.
- f) PATH, another UW affiliate, conducts service-related activities within their international research projects and provides internships for UW students in global projects. PATH has extensive experience in doing public health development in non-academic ways, working with the culture and politics of a nation and not primarily research work.
- g) The Global Health Resources Center (GHRC) is a collaboration of the SPHCM and SOM under the **Health Sciences Administration** department. Its purpose is to manage the Training and Education Program for the **Puget Sound Partners for Global Health** and to establish a global health resource and information center on campus. The GHRC coordinates activities, events and information; connects individuals interested in global health; and catalyzes opportunities for international, inter-professional collaboration and exchange
- h) The many existing Fogarty grants at the UW while focused on research will often have a service component provided within the country in which the research is conducted. Graduates of these programs often move into senior positions with US-based and international technical assistance agencies.

It will be critical to the training and service missions of the DGH to establish bidirectional programs where the UW can have trainees, staff, and faculty be a part of clinical care and service delivery programs. Ideally, UW will develop long-standing service and training collaborations regionally, with sites in Latin America, (possibly Peru, given the strength, breadth, and longevity of our collaborations), Kenya and/or Uganda, and India or Thailand to name but a few.

An example of a successful service, research, and training collaboration is the one between Indiana University and Moi University in Eldoret, Kenya. A steady bidirectional flow of health care trainees, and faculty between the two institutions has been highly successful in providing services (clinical, public health, IT, and administrative), as well as training opportunities and research in these areas.

There are many other existing examples that could be included here. Our object is to show the importance of a service component and how extensive these activities are at present in our region. A defined home for the administration of service programs and the corresponding documentation of the hours and expertise required of the faculty involved would aid in revision of faculty promotion guidelines to emphasize the credibility of this type of faculty effort.

4) Summary Recommendations

The UW is currently involved in a wide variety of important global health and technical assistance activities, largely due to individual faculty initiatives. Such efforts could be better promoted through administrative changes to facilitate service work, through making service criteria (including related consultancies and international training activities) a more prominent component of faculty promotion criteria, and creating a culture and environment that encourages international services, technical assistance and consultations.

- a) At present funded global health service projects such as the USAID grant which supports the Mozambique project are more easily managed through an NGO rather than through the UW Office of Sponsored Programs (OSP). In part this is because the structure of OSP is geared for research grants based in the US. Similar constraints have led faculty at other universities to also found affiliated NGOs, such as JHPIEGO at Johns Hopkins and Family Health International in Research Triangle Park. Large funded service projects could be encouraged by adjustment of the UW grants management process, (perhaps only in relation to global health projects) to facilitate management of funds for projects that are primarily service and technical assistance, based in developing countries. This would also apply to operations research, which is often an integral part of service projects. Currently at UW, the I-TECH program is based in the Department of Health Services and the Center for AIDS and STD in the SOM. These programs generate the largest number of health-related international subcontracts being administered at the UW Grants and Contracts office.

- b) Consultancies and technical assistance. Currently these are regarded almost as outside efforts. Such activities could be better promoted and encouraged. UW might maintain a roster of technical expertise that its faculty offer, and circulate this through appropriate global health channels. Also, within UW, such consultancy activity and technical assistance should be included as a criterion for faculty promotion. This would include activities with NGOs, host country ministries of health and other stakeholders, and international agencies, such as WHO and UNICEF. In addition, such consultancy activity could be further encouraged by making it easier for faculty to have consulting fees contribute towards their UW salary.
- c) Advocacy for improvements in infrastructure for clinical and public health. Such advocacy would be aimed at promotion of social and economic justice; and for other means to address the determinants of health inequity. This would include advocacy for policies at international and national levels. It would also include providing assistance to local community groups as they struggle to change local policies or take on powerful actors in local settings.

Advocacy could be performed through several means, including, but not limited to:

- *Consensus statements*, such as the 2001 Harvard Consensus Statement on Antiretroviral Treatment for AIDS in Poor Countries, which helped to stimulate efforts to promote ARV availability in developing countries.
 - *Promoting and encouraging research and training* on related issues that address pressing operations research needs and that address major determinants of health inequity
 - *Providing appropriate testimony and evidence* to support key legislation and key changes in national and international policy
 - *Developing criteria* for how advocacy activities will be figured into faculty promotions
- d) Training: The overlap of training with service could be better promoted through:
- *Promotion of internships or resident electives* with service organizations such as PATH, HAI, I-TECH or others
 - *Increasing exposure to global health* for professional students (e.g. medical, nursing, etc.) and residents through off-site (e.g. international) rotations. Considerable progress in this area has been made through the medical student group (IHOP, IHE). This should be expanded and developed for other student groups.

- *Courses conducted at international sites.* UW faculty are currently involved with many such efforts, for which they receive little credit. Such activities could be better promoted, at a low cost, by counting them toward academic promotion, as with formal courses taught on-site at UW. This would include distance learning activities geared for developing countries.
- e) Additional resources: Furthering service activities will require additional faculty, staff and space to:
1. Capture the excitement of students, faculty and donors in the major problem of global health which is more closely related to technical assistance and service than to research and training.
 2. Establish service and technical assistance partnerships to strengthen research and training. Rick Klausner's vision of joint medicine and public health "Problem Solving" stems from these synergies with existing UW international tract grants in Asia, Latin America, Pacific Rim and Eastern Europe especially.
 3. Access new sources of funding from USAID, state department, World Bank, foundations and others.
 4. Be more aware of what its faculty and students are actually already doing.

Recommendations:

- *Faculty:* 2 full time faculty will be needed to adequately cover this area. One would be a senior faculty member with experience in politics and advocacy that would help shape the department's vision and goals in this area. The other might be a more junior person who would help develop longer term, larger service projects.
- *Staff:* At least 2 FTE of staff time would be required to assist with the logistical arrangements and budget management, especially as regards larger service projects
- *Space:* 5000 sq. ft is recommended for the above personnel and for graduate students/ research assistants who could work on service projects.

6. COMMUNITY INPUT

The Global Health Advisory Committee received advice concerning the nature and direction of the Department of Global Health from a broad constituency. Appendix D lists many of the individuals, programs, University departments and global health programs who were interviewed by members of the Advisory Committee. Some of the questions composed to these external consultants included:

- 1) How can this new department have the greatest impact on international health? What kind of impact should we have?
- 2) What is/are the niche (niches) for the UW Department of Global Health in international health?
- 3) How should the Department focus its activities? Should it be thematic? If so, what themes? Should it be geographic? If so, where?
- 4) How can the Department build and sustain partnerships in international health?
- 5) What educational initiatives do you feel a Department of Global Health should focus on?
- 6) What technical or administrative areas do you think the Department could establish to improve the University programs in global health?
- 7) How would your department/program like to be involved/related to this new Department?
- 8) What potential resources could you supply to such a department or what resources could this department bring to your program that would be helpful?

An open-to-all University forum was held in Hogness Auditorium at the School of Medicine from 7:30-9 AM on April 26, 2005. The format for this forum was a brief overview of the history of the concept for the Department of Global Health, an introduction of the Global Health Advisory Committee, a brief review of information that had been received from outside consultants followed by a lively and interactive discuss between the audience participants and members of the Global Health Advisory Committee.

A compilation of summaries of these interviews along with relevant global health material submitted to the Committee are compiled in a separate notebook (Appendix E).

There was an extremely high level of interest and enthusiasm for the development of a Department of Global Health throughout the UW community. Consistently, the Global Health Advisory Committee was urged to develop a broad scope of research, which included both medical and applied research. We were urged to think creatively and maximize the opportunity to bridge Public Health and Medicine in our global health research. The Department should have applied practical and sustainable programs in developing countries. One of the greatest opportunities seen for this new Department was in creating education and training programs at all levels both at our University and with global partners. Finally, it was repeatedly emphasized that a panoply of outstanding global programs existed in the Seattle community and that partnerships should be formed to bring added value whenever possible.

The Advisory Committee gleaned the following set of values for this Department of Global Health from the UW community.

- 1) Collaboration: The Department should promote and create collaborations in global health at the University of Washington in Seattle and internationally.
- 2) Multidisciplinary programs: The Department should create a new model for an academic department in which many disciplines are included in all of the missions of the Department.
- 3) Partnerships: The Department should form partnerships with existing global health programs at the UW and within the local and international community. The Department should bring added values to the University community.
- 4) Innovation: The Department should develop creative approaches to addressing global health issues and developing educational programs.
- 5) Opportunism: The Department should build on existing strengths at UW. Examples include: distance learning programs, infectious disease research in HIV/AIDS and other important pathogens (e.g., malaria), experience in faculty and student exchanges, Global Health Research Center, student global health interests, etc.
- 6) In-country partnerships: The Department must understand the importance of developing international partnerships. Efforts should primarily be focused in developing countries.
- 7) Themes: The Department should foster pursuit of the highest priorities in global health. Geographic focus (e.g. Pacific Rim) was recommended by some, but was generally felt to be too limiting.
- 8) Accessibility: A broad consensus expressed desire for the DGH's educational and service programs to have a campus location.
- 9) Social Equity: The Department should always work to promote social justice and health equity.
- 10) Mission: The Department must have a strong academic research focus (broader than biomedical), as well as outstanding international education, training and service programs.

7. ORGANIZATION OF DEPARTMENT OF GLOBAL HEALTH

The Department of Global Health will be a department in both the School of Medicine and the School of Public Health and Community Medicine. The Chair must be an active participant in the leadership in both of these Health Sciences Schools. The Committee recognizes that many activities within the Department will be based in Centers with far reaching and multidisciplinary partnerships. Nonetheless, the Committee feels that it would be essential for the success of the Department to have experienced leadership identified for each of the missions of the Department of Global Health (education, research and service). The Department must have core missions to advance global health equity and social justice. Identifying leadership for the development of the Global Health curricular offerings should be an extremely high early priority for the new Chair.

For the new Department to develop into the anticipated leadership position in global health education and international partnerships, we believe it is essential that the Education and Service components of the Department be located on or very close to the University of Washington campus. Furthermore, we highly recommend that the Department be given sufficient space to grow rapidly at its inception and also to have long term potential for growth. Our estimations of immediate on-campus space are at least 20,000 square feet and a near-term vision of an additional 10,000 square feet should be planned. We do not feel that it is essential that the research laboratories within the Department be located on campus, but urge the Chair to maintain a high degree of interaction between any off-site members of the Department and the on-site home.

Faculty primarily should be recruited to the Department as new recruits. The Chair will need to work with the Deans and current Chairs in the Schools of Medicine and Public Health and Community Medicine to determine which, if any, faculty should have their primary appointments transferred from existing departments into the Department. The Committee believes that a faculty composition of 15-20 new core faculty members from a diverse group of disciplines should be recruited within the first 2-3 years and that the long term goals of the faculty complement should be as high as 50 faculty within 10 years. We believe that to provide a full complement of teaching and mentoring activities vision by the Department, 10-15 new FTEs will be required.

While the organization of the Department will largely be determined by the first Chair, we believe that identification of key leaders for education, research and service should be identified or recruited as expeditiously. These leadership positions should have cross-cutting responsibilities for Centers, thematic programs and/or divisions in the Department. Whether the Department should be organized around Centers, thematic programs or divisions should be determined by the first Chair.

A critical consideration for success of the Department is the development of a reward system for faculty advancement that will be efficient and easily understandable by existing faculty regulations and governing bodies. The School of Public Health and Community Medicine currently has a faculty track called the Public Health Practice

track. We believe that a track in the School of Medicine (Appendix F1), similar to the Clinician-Teacher pathway (Appendix F2), called Global Health Practice-Teacher should be considered. In this pathway, Global Health Practice would be a substitute for clinical activities in the Clinician-Teacher pathway. Formal recognition of non-traditional academic activities is essential for Global Health faculty who will come from a wide variety of backgrounds and terminal degrees. The Committee recommends using the structure established by the Department of Bioengineering as a model for advancing faculty. We suggest having a primary initial appointment in either Public Health or Medicine, and identifying the promotion pathway through which an individual will be promoted at the time of appointment. The Committee also recommends that, as much as possible, salary equity be the goal within the Department, regardless of which School the faculty member in the Department of Global Health is primarily appointed. A mechanism for distribution of RCR between the two Schools will be needed. Again, we suggest closely considering the model established by the Department of Bioengineering.

The Committee agrees with the recommendation of 2002-2003 School of Public Health and Community Medicine Task Force Report that the Center for Vaccine Development would be an ideal program to include within the Department of Global Health. The complexities of this transfer and mitigation of the negative effect on the home department in the School of Medicine should be considered by the Deans. The Committee also agrees with the Task Force Report that Fogarty Centers should be housed and coordinated in this Department.

As described within our Report, the Department should take full advantage of successful existing resources in global health. For this reason, the Committee recommends that the Global Health Resource Center, currently headed by Daren Wade, be based in the new Department. While it is less important that research laboratories for faculty in the Department be located on campus, we do recommend that laboratory facilities for Global Health faculty be co-located to allow maximal synergy among the faculty of this new Department.

Highly important consideration for the success of the Department is the requirement for a large support staff. Establishing international partnerships and working through the complexities of contracts, agreements, travel, etc., for students, faculty and visitors requires a high amount of staff support time. Recognition of these requirements and preparation for both space and funding for this unique administrative requirement must be a part of the planning for the Department.

In addition to faculty and support space, the Committee also recommends that considerable space for student activities (both University of Washington students and students visiting from other countries) should be a component of the Department's allocated space. This is essential to promoting the every day interactions of both US and foreign students that are so important in providing an understanding of the unique issues at each foreign site.

In order to be successful, the Department will have a high number of international partnerships in all three missions of the Department. A University infrastructure for international contracting, patient safety, visa acquisition, tissue banking, technology transfer and other complex administrative functions must be developed at the University of Washington, so that this Department can function efficiently and swiftly when opportunities arise.

8. SUMMARY RECOMMENDATIONS

The Advisory Committee supports the creation of a unique, interdisciplinary Department of Global Health within both the School of Medicine and the School of Public Health and Community Medicine. This Department must bring added value to the many successful global programs at the University of Washington and in the Seattle community through creative and innovative public health and medical approaches to global health problems. The Department must develop internationally recognized educational programs, applied international research in developing countries, biomedical research and global health service. Advocacy for global health equity must be a mission of the Department of Global Health.

- 1) Resources allocated to start the new Department should visibly demonstrate the serious commitment of the Schools of Medicine and Public Health and Community Medicine, as well as the University, to this important Global Health initiative. The Department will require adequate space and resources to recruit key faculty leaders in the areas of education, research and service. The Department must have a visible and accessible location on or near the University of Washington campus.
 - a) Adequate space, in the short term, should accommodate and co-locate the existing translational research and teaching programs related to Global Health that are currently dispersed in off-campus sites, as well as new faculty and staff that will be recruited. The Committee estimates that this will initially require at least 20,000 square feet to establish a functional department that integrates and catalyzes campus-wide participation. During the first five years, departmental space should increase by approximately 10,000 additional square feet to accommodate the new faculty and staff that will be recruited.
 - b) Any additional needed laboratory space could be accommodated on the Portage Bay campus or at other UW-affiliated sites (e.g. South Lake Union area, Harborview Medical Center R&T Building) adjacent to existing related laboratories.
 - c) To develop necessary new curriculum in the priority program areas, the Committee estimates that 10-15 new, currently uncommitted faculty positions will be required during the first 5 years. An equal number of related program and curriculum staff will be essential for development of this new Department.
- 2) The Chair, the Deans, and the University must develop a plan to secure adequate funding for the Department and its programs from diverse funding agencies,

foundations, and institutions. As a first priority, the plan should include a strategy for recovery of indirect costs needed for the unique challenges and mission of this new Department.

- 3) The organization of the Department should promote the integration of research, teaching, and service focused on the highest priorities in global health.
- 4) The Department of Global Health should serve as a coordinating center for local and international global health research, education, and service programs within the Health Sciences and other Schools, Departments, and Programs of the University.
- 5) The Chair and Department faculty must develop academic pathways and promotion criteria to allow recognition and academic advancement for successful global health faculty. Teaching in international settings, global health care, global health practice and global advocacy must be valued and rewarded.

9. REFERENCES

Global Health at the School of Public Health and Community Medicine
University of Washington. Situational Assessment and Strategic Plan. January 13,
2003.

10/90 Report on health research 2003-2004. Last website accessed on April 12, 2005.
Web address:
www.globalforumhealth.org/site/002_What%20we%do/005_Publications/001_10%2090%20reports.php.

Sanders D, Labonte R, Baum F, Chopra M. Making research matter: a civil society perspective on health research. *Bull World Health Organ.* 2004;82(10):757-63.

Muraskin W. The global alliance for vaccines and immunization: is it a new model for effective public-private cooperation in international public health? *Am J Public Hlth* 2004;94:1922-25.

MacDonald R. Providing the world with clean water. *Br Med J* 2003;327:1416-18.

Labonte R, Spiegel J. Setting global health research priorities. *Br Med J* 2003; 326:722-3.

Travis P, Bennett S, Haines A, et al. Overcoming health-systems constraints to achieve the Millennium Development Goals. *Lancet* 2004;364:900-6.

Horton R. Medical journals: evidence of bias against the diseases of poverty. *Lancet* 2003;361:712-3.

Birn A-E. Gates's grandest challenge: transcending technology as public health ideology. *Lancet*. Published online March 11, 2005.

Spiegel J, Labonte R, Hatcher-Roberts J, Girard J, Neufeld V, on behalf of the Coalition for Global Health Research (Canada). Tackling the “10/90 gap:” a Canadian report. *Lancet* 2003;362:917-8.

Ezzati M, Hoorn SV, Rodgers A, et al. Estimates of global and regional potential health gains from reducing multiple major risk factors. *Lancet* 2003;362:271-80.

Sachs J. Macroeconomics and health. Investing in health for economic development. Report of the Commission on Macroeconomics and Health. WHO, December, 2001.

Kim J. Dying for broke: global inequality in the health of the poor. Common Courage Press, 2000.