

**CRITERION IV.: RESOURCES**

**IV.1. A clearly formulated program budget statement, showing sources of all available funds and expenditures by major categories, since the last accreditation visit or for the last three years whichever is longer. If the program does not have a separate budget, it must present an estimate of available funds and expenditures by major categories and explain the basis of the estimate.**

As a federal institution within DoD, USUHS is primarily funded through the federal appropriation process. USUHS has an annual federal appropriation consisting of three parts: (1) Operations and Maintenance (O&M); (2) Research, Development, Testing, and Evaluation (RDT&E); and (3) Procurement. O&M funds cover civilian personnel costs, academic and institutional support, facility operation and maintenance, student services, graduate student stipends and research support, and intramural clinical investigation research grants to faculty members. RDT&E funds support research of military relevance, while procurement funds are for major equipment items used for teaching, research or administration. Federal funding is augmented by research grants, technology transfer funds, gifts, endowments, and special project funds. The total University budget since the last Self-Study is provided in *Table IV-1*.

**Table IV-1. USUHS Line Item Budget (\$ in millions)**

	<b>FY1999</b>	<b>FY2000</b>	<b>FY2001</b>	<b>FY2002</b>	<b>FY2003</b>	<b>FY2004</b>
O&M	77.081	91.373	97.028	98.806	96.103	95.480
RDT&E	2.142	2.014	4.891	29.772	32.876	43.231
PROCUREMENT*	0.529	0.180	0.286	0.607	0.300	0.000
GRANTS AND CONTRACTS**	29.627	35.316	29.726	41.766	35.055	32.457
<b>TOTAL</b>	<b>109.379</b>	<b>128.883</b>	<b>131.931</b>	<b>170.951</b>	<b>164.334</b>	<b>171.168</b>

\* For equipment costing a minimum of \$15,000 per item

\*\* The volume of activity also includes Henry M. Jackson Foundation for the Advancement of Military Medicine accounting records.

USUHS is affiliated with the Henry M. Jackson Foundation for the Advancement of Military Medicine (HMJF), a non-profit organization established by Congress in 1983 to support the mission of this University, particularly as it pertains to research. It is through the HMJF that USUHS is able to recover indirect costs associated with extramural grants when the granting institution pays no direct support costs to federal organizations.

The principal method to increase federal funding for USUHS is through the DoD Planning, Programming, and Budgeting System (PPBS), an integrated system for the establishment, maintenance, and revision of funding profiles for DoD’s Future Years Defense Program (FYDP). Periodically, a Program Objective Memorandum (POM) is sent to the Secretary of Defense by defense agency directors to propose funding changes to the FYDP for up to six years in the future. When USUHS was under threat of closure in the early to mid 1990s, it

could not participate in the POM process. The threat was resolved in December 1997 by the decision of the Secretary of Defense to restore funding and keep the University open. Since then, USUHS has been an increasingly active participant in the POM process.

Individual administrative and academic departments (such as PMB) submit annual budget requests to the USUHS President through the Dean of the School of Medicine. Salaries for civilian faculty and staff are allocated based upon authorized staffing levels, while military faculty and staff are paid separately through direct appropriations to the military services. The submitted departmental budgets are evaluated by the University's resource management staff and recommended for approval. Midway through the fiscal year, the resource management staff meets with each Dean, Chair, and activity head to review the current budget and recommend mid-year adjustments.

Program expenditures for the PMB Department are found in *Table IV-2*. The columns represent annual expenditures by category for all departmental teaching activities within the School of Medicine, except for centrally-funded support activities for the medical students (i.e. laboratory support, textbooks, other course materials and audio visual support). There are some fluctuations in a few categories (Table IV-2), but overall, program expenditures have been steady or increasing over time. Approximately one-half of the PMB Department's funding is expended for graduate education. Additional per capita funds are received from student sponsors (e.g., individual services for residency training); this funding source amounts to approximately \$200,000 per year. Currently, graduate students, both military and civilian, pay no tuition.

**Table IV-2. Department of Preventive Medicine and Biometrics Program Expenditures (in Dollars) by Major Category**

	FY1999	FY2000	FY2001	FY2002	FY2003	FY2004
ADP MATERIALS	8,692*	9,165	7,179	1,676	3,095	5,650
GUEST LECTURE COSTS	752*	407	1,790	5,136	1,983	2,237
PHOTOCOPY	8,542*	9,100	7,367	9,171	3,363	13,922
AUDIOVISUAL	3,798*	4,238	630	2,413	1,571	1,951
BOOKS & JOURNALS	7,460*	9,428	4,832	5,615	3,795	2,961
MAJOR EQUIPMENT	14,588	21,399	16,048	12,414	4,090	25,416
TRAVEL	43,982	43,957	48,754	42,871	57,705	56,993
EXPENDABLE SUPPLIES	28,399*	16,724	20,291	12,507	26,037	30,094
INSTITUTIONAL MEMBERSHIPS	500	600	600	600	600	600
CIVILIAN PERSONNEL	1,511,489	1,632,358	1,756,931	1,853,286	2,097,194	2,297,500
MILITARY PERSONNEL	3,544,364	3,517,025	4,053,497	3,906,903	4,976,934	4,488,021
<b>TOTAL</b>	<b>5,172,566</b>	<b>5,264,401</b>	<b>5,917,919</b>	<b>5,852,592</b>	<b>7,176,367</b>	<b>6,925,345</b>

\*Dollar amounts estimated for these categories. The information was only available as a "lump sum" amount in the supply category.

**IV.2. A concise statement or chart concerning faculty resources, showing number and percent time of faculty allocated to the program and computing a student faculty ratio for the community health/preventive medicine program.**

As of December 31, 2004, the Department had 193 faculty members who held a rank of Full Professor, Associate Professor, Assistant Professor, or Research Associate. Of these, 45 are USUHS-billeted full-time faculty members, including 23 uniformed personnel (DoD or U.S. Public Health Service). These 45 PMB faculty members represent a total of 43.75 FTE, with 14.93 FTE contributing to the PMB graduate teaching program. There are a few faculty members that report percent teaching effort as 3-5%, indicating that they give one to two 50-minute lectures per year. There are also 13 jointly-appointed and 135 adjunct and visiting faculty members.

Adjunct faculty members participate in many Graduate Programs courses. The adjunct faculty members contribute by lecturing and acting as project mentors to the students at USUHS and in overseas assignments. Eight (8) adjunct faculty members are course directors for 8 graduate courses, totaling 20 quarter hours of instruction in an academic year. The percentage of effort devoted to the Graduate Programs by full-time faculty who teach is shown in *Table IV-3*. The 135 adjunct and visiting faculty contribute the equivalent of approximately 11 FTE to the overall work force capacity of the Department.

Salary support provides unusual stability for faculty compared to other universities. Accordingly, none of the 45 full-time faculty members are dependent on external funding for partial or complete salary support. To maintain a vigorous research program, USUHS provides significant internal support via intramural research grants. For example, "standard" competitive intramural awards (up to \$20,000/yr) are available to faculty investigators for a period of five years. In the upcoming year, this figure will be increased to \$50,000 per year for new tenure-track faculty, along with an allowance for equipment and personnel. Various other awards are competitively provided to faculty members and/or students working on masters or doctoral research projects and include the following categories: pilot (2 years at \$10,000 per year), instructional development (2 years at \$7,500 per year), dissertation (\$2,500), phase down (\$6,000/yr or 50% of the requested amount, whichever is less), and close out (1/6 of prior annual award). Support services are provided at reduced or no cost to investigators.

For the current academic year, the PMB Graduate Programs FTE faculty-student ratio is  $14.93/47 = 0.32$ , or about 1 faculty FTE for 3.1 graduate students.

**Table IV-3. Billeted Faculty and Percentage of Effort**

	Name	Graduate Program Teaching	Medical School Teaching	Research	Service	Admin	USUHS Program Total	Graduate Teaching Program FTE
1	Achee, Nicole	3	0	90	0	7	1.00	0.03
2	Andre, Richard	40	5	30	5	20	1.00	0.40
3	Barbour, Galen	20	2	40	25	13	1.00	0.20
4	Bradshaw, Dana	20	20	10	10	10	0.70	0.29
5	Butler, William	45	25	10	10	10	1.00	0.45
6	Carney, Patrick	20	20	10	10	40	1.00	0.20
7	Chen, Dechang	45	0	45	10	0	1.00	0.45
8	Crawford III, Raymond	20	0	40	0	0	0.60	0.33
9	Cross, John	20	30	15	15	10	0.90	0.22
10	Cruess, David	25	20	15	10	30	1.00	0.25
11	Farr, Robert	0	0	0	20	80	1.00	0.00
12	Gackstetter, Gary	33	3	33	10	21	1.00	0.33
13	Girasek, Deborah	40	0	25	15	20	1.00	0.40
14	Gonzalez-Moreno, Jesus	40	0	40	20	0	1.00	0.40
15	Hook, Gary	50	5	20	10	15	1.00	0.50
16	Hooper, Tomoko	30	10	30	15	15	1.00	0.30
17	Johanson, David	80	0	5	5	10	1.00	0.80
18	Johnson, Thomas	28	2	30	20	20	1.00	0.28
19	Kao, Tzu-Cheg	34.5	0.5	50	12.5	2.5	1.00	0.35
20	Keep, Lisa	40	10	25	20	5	1.00	0.40
21	Kinnamon, Kenneth	5	10	70	10	5	1.00	0.05
22	LaPuma, Peter	40	0	40	5	5	1.00	0.40
23	Lewis, Michael	5	5	60	20	10	1.00	0.05
24	Lipnick, Robert	70	5	5	5	15	1.00	0.70
25	Mallon, Timothy	20	5	5	20	50	1.00	0.20
26	Masuoka, Penny	25	0	5	0	25	0.55	0.45
27	Munson, Mark	50	5	10	15	20	1.00	0.50
28	Neal, Thomas	30	10	10	20	30	1.00	0.30
29	Nemmers, Scott	30	0	30	20	20	1.00	0.30
30	Olsen, Cara	15	0	60	10	15	1.00	0.15
31	Palmer, Richard	40	0	50	5	5	1.00	0.40
32	Quinnan, Gerald	25	5	37	3	30	1.00	0.25
33	Roberts, Donald	40	5	35	5	15	1.00	0.40
34	Sardelis, Michael	20	5	55	10	10	1.00	0.20
35	Scher, Ann	15	0	80	5	0	1.00	0.15
36	Schlick, Rebecca	25	5	0	55	15	1.00	0.25
37	Schultz, George	25	5	50	15	5	1.00	0.25
38	Shepherd, Lillian	95	0	0	0	5	1.00	0.95
39	Tang, Douglas	10	80	5	5	0	1.00	0.10
40	Thomas, Richard	20	5	5	20	50	1.00	0.20
41	Thompson, Beverly	5	0	30	0	65	1.00	0.05
42	Trump, David	25	40	10	15	10	1.00	0.25
43	Turner, Martha	60	0	5	25	10	1.00	0.60
44	York, Andrew	100	0	0	0	0	1.00	1.00
45	Zhang, Pengfei	20	5	73	0	2	1.00	0.20
							<b>Total FTE</b>	43.75
								14.93

**IV.3. A concise statement or chart concerning the availability of other personnel (administration and staff).**

The Department has 27 full-time civilian support personnel for teaching and research, and 5 military administrative members. Each division and program has either individual or shared clerical staff. The Graduate Programs Director has a full-time program administrative specialist and also shares the two clerical staff in the main departmental office with the Department Chair. The support staff summary is shown in *Table IV-4*.

**Table IV-4. Administration and Staff Personnel**

	USUHS Funded	Military	HMJF/Contract Funded
Secretarial	1	0	0
Administrative	4	1	3
Teaching/Technical Support	1	2	3
Research Staff (individual faculty grants)	0	2	10

**IV.4. A concise statement or chart concerning amount of space available to the program by purpose (offices, classrooms, common space for student use, etc.) and location.**

The Department occupies more than 15,300 square feet. Approximately 6,500 square feet of the departmental space serves as offices on the main campus, and another 1,000 square feet are used as offices in satellite facilities, such as at the Armed Forces Radiobiological Research Institute (AFRRI), the National Naval Medical Center, and the Henry M. Jackson Foundation. The offices on the main campus are located in non-contiguous space on all three floors of Building A.

Classes on the main campus are scheduled in one of three large lecture halls (Lecture Rooms A, B, and C) or nine large conference rooms (A2052, A2053, A2054, A2011, A2015, A2069, B3004, B4004, and C1026) available for graduate classes at USUHS. In addition, two medical student lecture halls (Lecture Rooms D and E) and fourteen medical student multi-discipline laboratory (MDL) rooms can be used for graduate education, when available. Room specifications and capacities are available at <http://usuhs.mil/mdl/rooms.html>. The Department also has approximately 300 square feet of dedicated classroom space at AFRRI, primarily used for courses taught by faculty in the Division of Environmental and Occupational Health.

Students in the General Preventive Medicine (GPM) and Occupational and Environmental Medicine (OEM) Residency programs have a recently remodeled student room of approximately 400 square feet available for their use in A1040. There are student study carrels and small group study rooms available on a first-come first-served basis for all graduate students in the LRC.

**IV.5. A concise statement or floor plan concerning laboratory space, including kind, quantity and special features or special equipment.**

The PMB Department has a total of 7,000 square feet that are used for laboratories on the main campus and at AFRRRI. The laboratory space on the main campus is located on the second and third floors of Building A. Ninety percent of the 3,000 square feet of laboratory space at USUHS is devoted to wet laboratories. Laboratory space for the Environmental and Occupational Health Division is contained within 3,000 square feet at the AFRRRI complex. Approximately 1,500 square feet of this space is for research related to weapons of mass destruction (WMD) using low-level environmental and chemical exposure technologies. Space devoted to Health Physics research at the AFFRI complex is approximately 1,000 square feet.

The Center for Population Health (formerly the Center for Health Care Quality Assessment) is an integral part of the research, service and educational activities of the Division of Health Services Administration. Since the previous CEPH survey, the Center's focus has broadened from workforce and outcomes studies to population health studies in order to include a wider range of health care issues for large populations of interest (primarily the military, Medicare, and VA). The Center personnel have expertise and experience in assessing quality of care for populations, analyzing large databases to determine trends in the efficiency and effectiveness of healthcare delivery, examining trends in population health, and ascertaining the relationship of practice patterns to outcomes. The Center is specifically designed to enable Federal healthcare providers and administrators to access comprehensive, integrated, population-based performance information to facilitate quality improvement and cost reduction and demonstrate the value and power of the combined Federal healthcare systems to the American Public. The Center has agreements that enable access to the Military Healthcare System administrative databases and the Centers for Medicare and Medicaid (CMS) databases as well as data from the Veterans Health Administration, through a research liaison. To perform statistical analysis on these large databases, the Center has appropriate data storage and computing capacity.

A recent addition to the PMB Department is the Center for Force Health Protection Studies, which employs 3 full-time analysts and 1 full time project manager and uses recently renovated space in Building A that includes 7 computer workstations and an additional server to accommodate storage and analyses of large databases. Its mission is research in the area of protecting the health of the uniformed forces; this involves Congressionally directed or Health Affairs directed studies, consultative services, multiple collaborative research projects, and formal agreements with the Naval Health Research Center (NHRC), the National Highway Traffic Safety Administration (NHTSA), and the National Institute for Occupational Safety and Health (NIOSH).

Laboratory space within the Division of Tropical Public Health includes a virology/molecular biology laboratory, a diagnostic parasitology laboratory, and a Geographic Information System (GIS) laboratory. The virology/molecular biology laboratory is a biosafety level 2 laboratory, which is equipped for molecular biology and immunological investigations. Adjacent to this laboratory, there is a common area with shared equipment and an ultra-low

freezer for storage. Personnel in this laboratory share the use of a biosafety level 3 laboratory with other departments and this facility is also equipped to support work and containment with human retroviruses. The malaria laboratory is a biosafety level 2 facility. The diagnostic parasitology laboratory is a modern, well-equipped laboratory facility that is functional for biosafety level 2 experiments.

The vector biology/ecology laboratory shares equipment with the virology/molecular biology laboratory in a common area. There are two satellite insectaries (144 square feet and 72 square feet) designed for work with live arthropods. These insectaries have double doors and screens, as well as an air-lock system to prevent entry or exit of arthropods. The environmental chambers have variable light, temperature, and humidity controls.

A remote sensing and Geographic Information Systems (GIS) laboratory enables faculty and students to acquire a working knowledge of the use of remote sensing and GIS for such diverse areas as emerging and reemerging infectious diseases, occupational health, environmental health, healthcare administration, and chronic disease epidemiology. The laboratory is equipped with a cluster of two Unix and four Dell workstations, a photo-quality printer, a scanner, and a digitizing tablet. Image processing/GIS processing software is being developed in the laboratory. Four of the workstations will allow training of eight students or faculty at a time, working in pairs, or working consecutively in groups of four. To assist in integrating epidemiological field data with remotely sensed data, we have acquired geographic positions system (GPS) units and laptop computers.

The Division of Tropical Public Health also rents research space at the Walter Reed Army Institute of Research and the U.S. Department of Agriculture in Beltsville. The rented space provides laboratory capabilities in synthetic chemistry at USDA and space for insectary and high-throughput screening of chemicals at WRAIR. Detailed information about the GIS laboratory is available at <http://www.usuhs.mil/pmb/TPH/gis.html>.

The University maintains a modern, accredited central animal facility of over 40,000 square feet that is accredited by the Association for the Assessment and Accreditation of Laboratory Animal Care (AAALAC). The Center for Laboratory Animal Medicine (LAM) manages the central animal facility and the University's animal care and use program. The Center for LAM provides medical, husbandry, and research support for a wide variety of laboratory animal species ranging from goldfish to domestic livestock. Housing and care systems in 41 animal rooms include conventional housing, microisolator caging systems, laminar flow racks, and ventilated cage racks (to include containment and barrier conditions). Within the Center for LAM, teaching and research support resources include two surgical teaching laboratories, three sterile operating rooms, four neurobehavioral testing rooms, several animal procedure rooms, and a necropsy room. Additional in-house capabilities include radiology and fluoroscopy, diagnostic laboratory, and histopathology services. The USUHS Institutional Animal Care and Use Committee (IACUC) provides oversight for the University's animal research program. Each year, several U.S. Army LAM residents enroll in the USU MPH Program and may choose an independent project that involving the use of animals.

In addition, the USUHS Biomedical Instrumentation Center (BIC) is a multi-user core facility that houses the high-end specialized equipment needed for research by faculty and students in the areas of proteomics/genomics, imaging, and flow cytometry. Detailed information about BIC is available at <http://bic.usuf1.usuhs.mil>.

**IV.6. A concise statement concerning the amount, location and types of computer facilities and resources for students, faculty, administration and staff.**

Every office, classroom, and laboratory at USUHS is equipped with Windows 2000 or Windows XP model computers that are wired via T-1 fiber optic lines to the University computer network, enabling fast and reliable Internet access. The University runs a GroupWise e-mail system for all personnel, which is accessible throughout the world via the Internet. Security concerns have limited the availability of a wireless system. Although plans are in place to create such a University-wide system soon, it is currently available only in the LRC, student lounge and cafeteria. Every classroom and lecture hall is equipped with a modern computer projection system.

The LRC has multiple computer workstations in Windows, Linux, and Macintosh platforms available for graduate student use. It also maintains a 40-workstation computer instruction classroom that is used to teach the computer science curriculum of the PMB Graduate Programs. In addition, the LRC offers regular non-credit classes in the use of a variety of computer software for the entire University community. Study carrels and study rooms for small groups are available on a first-come first-served basis for medical students and graduate students on all three floors of the LRC.

Students in the General Preventive Medicine and Occupational and Environmental Medicine residency programs have access to an approximately 400 square foot recently-remodeled study space equipped with desktop computers and printers. This residency student room is a requirement for program accreditation by the ACGME.

The University Information Systems (UIS) office maintains the University software site licenses for operating systems, statistical analysis, word processing, and database management. Software is distributed, subject to licensing restrictions, via UIS to all University personnel. UIS also operates a Help Desk that provides technical consultation and assistance to the USUHS community.

**IV.7. A concise statement of library/information resources available for program use.**

The James A. Zimble Learning Resource Center (LRC) is responsible for providing biomedical information in support of the teaching and research mission of the University. The three-level, 44,000 square foot LRC space houses the book collection and the services that are provided to the faculty, staff and guests of the University. The LRC has a staff of 30 professionals. The library portion of the LRC contains 150,863 volumes, 29,714 monographic titles and currently 7,600 serial titles. Of the 7,600 serial titles, 7,000 are available on-line to registered users of the LRC, as well as 530 electronic databases. The LRC

collection contains books, journals, documents, educational software, audiovisual materials, and a wide variety of reference materials, including medical and non-medical reference books, encyclopedias, almanacs, directories, indexes, bibliographies, atlases, dictionaries, and statistical source books. In addition, the LRC holds unique collections of U.S government publications and historical materials relevant to military medicine. The LRC computer section provides access to MS-DOS and Linux (50 workstations) and Macintosh based (23 workstations) operating system computers and is staffed by four computer professionals. Most on-line LRC resources, including full-text retrieval, are available to registered users from off-campus locations. The LRC recently added the capability for PubMed searches with LinkOut to allow direct access to full text electronic holdings. Other audiovisual and computing services include access to the internet, printers (color and black/white), slide writers, slide projectors and scanners. A wide variety of software support and services are also included, with access to medical databases, word processing capabilities, statistical analysis and publication assets. The two reference librarians provide regular instructional sessions on database searching techniques, use of bibliographic software, and other topics of relevance and interest to PMB graduate students and faculty members, and are also available to assist with literature searches. Detailed information about the LRC is available at <http://www.lrc.usuhs.mil/scripts/pli/main.cgi?P=main>.

Since the last Self Study, The PMB Department created the Biostatistical Consulting Center (BCC) which supplies research study design and analysis consultation without cost to University faculty and students. The purposes of the BCC are to improve the quality of USUHS research by providing statistical advice regarding study design, analysis, and reporting, and to encourage collaborative research between statisticians and investigators from other disciplines. Detailed information about the BCC is available at <http://usuhs.mil/biostat/biostat.html>.

<b>IV.8. A concise statement describing field experience sites used during the last three years.</b>
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*Table IV-5* gives the practicum sites utilized by the MPH students for the past four academic years. *Tables IV-6* and *IV-7* list the practicum sites utilized by the GPM and the OEM Residency, respectively, for the past four academic years.

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**Table IV-5. Master of Public Health Practicum Sites (AY2001-2 to AY2004-5)**

**Military Sites**

- Infection Control Branch, Infectious Diseases Service, National Naval Medical Center
- Occupational and Environmental Medicine, US Navy Bureau of Medicine and Surgery
- Preventive Medicine Division, Walter Reed Army Institute of Research
- U.S. Military Cancer Institute, Walter Reed Army Medical Center
- U.S. Army Center for Health Promotion and Preventive Medicine
- Army Community Service Center, Walter Reed Army Medical Center

- Department of Environmental Health and Occupational Safety, USUHS
- DoD Global Emerging Infections System Central Hub, Walter Reed Army Institute of Research
- Research and Epidemiology Branch, Headquarters, Air Force Safety Center
- Office of the Special Assistant for Command Performance and Evaluation, National Naval Medical Center
- Military Health Systems GEIS Programs, Walter Reed Institute of Research
- Preventive Medicine Health Services, Headquarters, U.S. Marine Corps
- Life Skills Support Center Outreach Program, 35<sup>th</sup> Fighter Wing
- Office of the Command Surgeon, U.S. Army Materiel Command
- Health Promotions Department, National Naval Medical Center
- Department of Experimental Therapeutics, Walter Reed Army Institute of Research
- Division of Environmental and Occupational Health, Armed Forces Radiobiology Research Laboratories
- Division of Preventive Medicine and Occupational Health, Bureau of Medicine and Surgery
- Joint Pediatric Residency Program/Field Training Exercise, Soto Cano Air Base, Honduras
- Safety Office, Commander Strike Fighter Wing Pacific
- Accession Medical Standards Analysis and Research Activity, Walter Reed Army Institute of Research
- Air Force Medical Evaluation Support Activity, Fort Detrick
- Center for Deployment Health Research, Naval Health Research Center
- Department of Outcomes Management, Walter Reed Army Medical Center
- TRICARE Management Activity, Office of the Assistant Secretary of Defense for Health Affairs
- Office of the Armed Forces Medical Examiner
- Armed Forces Pest Management Board
- Air Force Medical Evaluation Support Activity
- Occupational Health Clinic, Walter Reed Army Medical Center
- General Internal Medicine Department, Walter Reed Army Medical Center
- Program Analysis and Evaluation, US Navy Bureau of Medicine and Surgery
- Office of the Assistant Secretary of Defense for Special Operations and Low Intensity Conflict
- Naval Medical Research Unit #3, Cairo, Egypt
- Naval Safety Center, Norfolk, VA
- Headquarters Air Force Research Laboratory, Wright-Patterson AFB, OH
- Air Force Medical Support Agency

### **Federal Government Sites**

- Center for Practice and Technology Assessment, Agency for Healthcare Research and Quality
- Forensic Research Science Unit, Federal Bureau of Investigation Academy

- Office of Orphan Product Development, Food and Drug Administration
- Office of Prevention, Education and Control, National Heart, Lung, and Blood Institute
- Division of Virulence Assessments, Food and Drug Administration
- U.S. Office of Emergency Preparedness
- U.S. Public Health Service, Region III, Department of Health and Human Services
- Nuclear Magnetic Resonance Center, National Institutes of Health
- Indian Health Service, U.S. Public Health Service
- VA National Center for Health Promotion and Disease Prevention
- Center for Devices and Radiological Health, Food and Drug Administration
- Office of Health Services, U.S. Coast Guard Headquarters
- National Aeronautic and Space Administration Goddard Space Flight Center
- National Center for Health Statistics
- National Cancer Institute
- National Institutes of Health
- VA Medical Center, Washington, D.C.
- Animal and Plant Health Inspection Service, U.S. Department of Agriculture
- Office of the Assistant Secretary for Health, Department of Health and Human Services
- Office of the Assistant Secretary for Public Health Emergency Preparedness
- Agency for Healthcare Research and Quality
- U.S. Department of State
- Office of Global Health Affairs, Department of Health and Human Services

#### **State/Local Government Sites**

- Center for Veterinary Public Health, Maryland Department of Health and Mental Hygiene
- Department of Clinical Services, Howard County Public Health Department
- Rockville Health Center, Montgomery County Department of Health and Human Services
- Office of Primary Care, Prevention, and Planning, District of Columbia Department of Health
- Center for Veterinary Public Health, Maryland Department of Health and Mental Hygiene
- Juvenile Diversion Program, Ashland County Family and Children First Council
- Avian Influenza Task Force, Virginia Department of Agriculture and Consumer Services
- Loudon County Health Department
- Howard County Health Department
- Baltimore City Health Department

## Other Sites

- Division of Healthcare Services, Institute of Medicine
  - Policy Affairs, American College of Preventive Medicine
  - Pan American Health Organization
  - Association of American Veterinary Medical Colleges
  - Division of Hazard and Injury Data Systems, U.S. Consumer Product Safety Commission
  - American Association of Retired Persons
  - Johns Hopkins Children's Medical Center
  - Congressional Research Service, The Library of Congress
  - American Psychiatric Association
  - American Academy of Orthopedic Surgeons
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**Table IV-6. General Preventive Medicine Practicum Rotation Sites (AY2001-2 to AY2004-5)**

- Agency for Health Care Research and Quality (AHRQ)
- Ann Arundel County Department of Public Health (LOA/MOA under negotiation)
- Fauquier County Department of Health
- Maryland Department of Health and Mental Hygiene
- Montgomery County Department of Health and Human Services (MCDHHS)
- Maricopa County Department of Public Health
- National Committee for Quality Assurance (NCQA)
- United States (US) Army
  - Armed Forces Research Institute for the Medical Sciences (AFRIMS)
  - Army Medical Surveillance Activity (AMSA)
  - Center for Health Promotion and Preventive Medicine (USACHPPM)
  - USACHPPM-Europe
  - Global Emerging Infections Surveillance and Response System (GEIS)
  - Military Vaccine Agency (MILVAX)
  - Walter Reed Army Institute of Research
  - Walter Reed Army Medical Center
- US Air Force
  - Air Force Institute for Operational Health (AFIOH)
  - Air Force Medical Support Agency (AFMSA), Office of the Surgeon General
  - AFMSA, Population Health Support Division (PHSD)
- US Department of Health and Human Services
  - Division of Public Health Surveillance and Informatics, Epidemiology Program Office, Centers for Disease Control
  - Office of International and Refugee Health
- US Marine Corps Headquarters Health Services
- US Navy

- Navy Environmental Health Center (NEHC)
  - Naval Health Research Center (NHRC)
  - Naval Medical Research Center Detachment (NMRCDD)-Peru
  - Naval Medical Research Unit-2
  - Naval Medical Research Unit-3
  - Naval Medical Research Center (NMRC)
  - Environmental and Preventive Medicine Unit 2
  - Environmental and Preventive Medicine Unit 5
  - Environmental and Preventive Medicine Unit 6
  - Environmental and Preventive Medicine Unit 7
  - Bureau of Medicine and Surgery (BUMED)
  - US DoD
    - Armed Forces Medical Intelligence Center (AFMIC)
    - J-4 Medical Readiness Division
  - Office of the Assistant Secretary of Defense for Health Affairs
    - TriCare Management Activity (TMA), Resources Management Directorate
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**Table IV-7. Occupational & Environmental Medicine Residency Sites (AY2001-2 to AY2004-5)**

#### **Occupational & Environmental Medicine Rotations**

- Army Health Clinic, Tooele Army Depot, Tooele, Utah
- Brooke Army Medical Center, Occupational Health Service, San Antonio, TX
- Dear Army Clinic, Occupational Health Service, Anniston Army Depot, Anniston, AL.
- National Naval Medical Center, Branch Medical Clinic Indian Head, MD
- National Naval Medical Center, Occupational Health Service, Bethesda, MD
- (includes clinical experience in Dermatology, Ophthalmology, and Travel Medicine Clinics)
- National Security Agency, Occupational Health Service, Fort Meade, MD
- Naval Hospital, Occupational Health Service, Naples, Italy
- Robins AFB, Occupational Health Service, Robins, GA
- Walter Reed Army Medical Center, Occupational Health Service, Washington, DC

#### **Administrative Rotations**

- Army Center for Health Promotion and Preventive Medicine, Edgewood Arsenal, MD (includes administrative experience – Surety Inspection, US Army Inspector General)
- Army Center for Health Promotion and Preventive Medicine,
- European Detachment, Landstuhl, Germany
- Department of Energy, Officer of Worker Advocacy, Washington DC
- Department of Energy, Officer of Epidemiological Studies, Germantown, MD

- Martin Marietta Corporation, Marietta, Georgia
- Navy Bureau of Medicine and Surgery, Washington, DC
- Navy Environmental and Preventive Medicine Unit Number Six, Pearl Harbor, HI
- Navy Environmental Health Center, Portsmouth, VA (includes clinical experience at Norfolk Naval Shipyard, Portsmouth, VA)
- Occupational Health and Safety Administration, Washington DC
- US Marine Corps Headquarters, Health Services Administration, Washington, DC

### **Clinical Rotations**

- Dewitt Army Hospital Sports Medicine Service, Alexandria, VA
- Malcolm Grow Air Force Medical Center, Flight Medicine, Andrews AFB, MD
- National Naval Medical Center, Physical Medicine & Rehabilitation Service, Bethesda, MD
- Walter Reed Army Medical Center, Physical Medicine & Rehabilitation Service, Washington, DC

### **Industrial Hygiene Rotations**

- Department of Energy, Savannah River, GA
- US Coast Guard Shipyard, Curtis Bay, MD

<p><b>IV-9. A concise statement describing other community resources available for instruction, research and service, indicating those where formal agreements exist.</b></p>
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The Department has established formal partnerships with other academic institutions, government research institutes, and industrial groups directly and through the adjunct faculty. These partnerships provide opportunities that supplement and complement the didactic experience of the graduate students. In addition to the practicum sites listed above, students may obtain practical experience in clinics at the Walter Reed Army Institute of Research, the Naval Medical Research Institute, the National Institutes of Health, the Armed Forces Institute of Pathology, the Armed Forces Radiobiology Research Institute, The US Army Center for Health Promotion and Preventive Medicine, the Naval Health Research Center (NHRC), the National Highway Traffic Safety Administration (NHTSA), the National Institute for Occupational Safety and Health (NIOSH), and the Department of Agriculture, as well as at various local public health departments. Students may study and work at DoD-sponsored research facilities in Egypt, Kenya, Indonesia, Thailand, Brazil and Peru. These sites are the primary overseas training sites for students in the MTM&H program.

**IV.10. Identification of outcome measures by which the program may judge the adequacy of its resources, along with data regarding the program's performance against those measures over the last three years. As a minimum, the program must provide data on student-to-faculty ratio, program expenditures per full-time-equivalent student, and research dollars per full-time equivalent faculty.**

Information on the required outcome measures for the past 3 years are in *Table IV-8*.

**Table IV-8. Outcome Measures for the Last 3 Years**

	FY2002	FY2003	FY2004
<b>Faculty FTE to Graduate Student Ratio</b>	<b>14.93/42</b>	<b>14.93/38</b>	<b>14.93/37</b>
Overall PMB Personnel Funding	\$ 5,760,189	\$ 7,074,128	\$ 6,785,521
Graduate Teaching Personnel Funding (34% of overall)	\$ 1,958,464	\$ 2,405,203	\$ 2,307,077
Graduate Program Non-Personnel Funding	\$ 46,202	\$ 51,120	\$ 69,912
Graduate Teaching Funding per Graduate Student	\$ 42,652	\$ 52,262	\$ 51,674
PMB Research Funding	\$ 10,115,267	\$ 8,364,446	\$ 10,820,860
<b>PMB Research Funding per Faculty FTE</b>	<b>\$ 677,513</b>	<b>\$ 560,244</b>	<b>\$ 724,773</b>

The faculty to student ratio has remained fairly constant at approximately 1 faculty FTE to 3.1 graduate students over the past three academic years. In academic year 2001-2002, the faculty/student ratio was 14.93/47, including both the masters and doctoral students. The corresponding faculty/student ratio was 14.93/47 in academic year 2002-2003 and 14.93/46 in 2003-2004. Approximately one-half of the Department's non-personnel budget supports the PMB Graduate Programs. Assuming that approximately 34% (14.93 graduate program FTEs/43.75 PMB faculty FTEs) of the personnel costs are devoted to the Graduate Programs, cost per full-time equivalent student has ranged from \$42,000 to \$52,000 during the 3 year period, 2002 to 2004. This figure is inflated by including the residency and doctoral students into the cost calculations.

Research dollars per full-time equivalent faculty member has averaged over \$650,000 in the past three academic years.

**IV.11. Assessment of the extent to which this criterion is met.**

**IV.11.a. Strengths**

Being a federal agency is both a strength and a weakness with regards to program resources. Since the mid 1990s, USUHS has not been under threat of closure, and its funding has been secure. The University has begun participating in the POM process aggressively in order to obtain increased DoD funding. Increased extramural research funding by the faculty has

allowed for some growth within University programs. The presence of the HMJF allows for the University to recover some indirect support costs that can be passed on to the Department. In addition, a budding distance learning graduate program has the potential for increasing the USU and the PMB budgets.

#### **IV.11.b. Weaknesses**

While federal funding has been secure, it has not increased dramatically in the last decade. As a federal agency, there are limitations as to the sources and nature of funding. The University cannot lobby Congress to increase its overall funding, and most granting organizations will not pay direct support costs to federal organizations.

#### **IV.11.c. Recommendations**

The PMB Department should work with the new USUHS President to explore new funding opportunities for Graduate Programs. The planned distance learning MPH program should be used to stretch existing resources, if it can be accomplished without affecting quality, and attract additional funding to the Department.

**This criterion is met.**