

Chapter IV

Resources

CEPH Criterion

The School shall have resources adequate to fulfill its stated mission and goals, and its instructional, research, and service objectives

Resources

CEPH Expected Documentation

- 1 A clearly formulated School budget statement, showing sources of all available funds and expenditures by major categories, since the last accreditation visit or for the last five years, whichever is longer
 - 2 A concise statement or chart concerning faculty resources, showing number and percent time of faculty by program area and computing a student faculty ratio for each and for the School as a whole
 - 3 A concise statement or chart concerning the availability of other personnel (administration and staff)
 - 4 A concise statement or chart concerning amount of space available to the School by purpose (offices, classrooms, common space for student use, etc.), by program and location
 - 5 A concise statement or floor plan concerning laboratory space, including kind, quantity, and special features or special equipment
 - 6 A concise statement concerning the amount, location, and types of computer facilities and resources for students, faculty, administration, and staff
 - 7 A concise statement of library/information resources available for School use
 - 8 A concise statement identifying field experience sites used during the last three years
 - 9 A concise statement describing other community resources available for instruction, research, and service, indicating those where formal agreements exist
 - 10 Identification of outcome measures by which the School may judge the adequacy of its resources, along with data regarding the School's performance against those measures over the last three years
 - 11 Assessment of the extent to which this criterion is met
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Overview

The budget of the Bloomberg School of Public Health continues to grow. While the rate of revenue growth is somewhat less than that experienced in the 1990s, it is substantial and much greater than what was projected in 1999. Since 1999, total revenue increased by 50 percent to approximately \$330 million, and the endowment fund market value rose by 75 percent to a total of \$186.5 million in 2005. During this time period, student enrollment increased as did the proportion of faculty relative to students, resulting in a lower student-faculty ratio.

To meet current and future growth, the School launched a building project in 1996 that doubled the size of the Wolfe Street Building. Renovations to the existing structure and Hampton House continue as revenue allows, and ground has been broken to construct a new building for community-based activities. To avoid deficit spending, the building expansion was phased in as reserve funds accrued. As a result, annual revenue exceeded expenditures until fiscal year 2005. Preliminary data indicate a modest surplus for fiscal year 2006.

Revenues

Revenues for the School of Public Health are generated from several broad categories: grants and contracts, designated funds, tuition, and endowment income, as well as from other sources (Table IV.1).

Grants and Contracts: The largest source of revenue comes from grants and contracts. During the past seven years, grants and contracts funding increased by more than 70 percent to \$219.5 million in 2005. We anticipate grants and contracts will remain the School's largest revenue source, and have made substantial investments in faculty and infrastructure to ensure the School's competitiveness for future research opportunities. Nonetheless, due to tightening of federal research budgets, we forecast a more modest growth rate than that of the past seven years (Chapter VI Research and Chapter VIII Faculty).

Designated Funds: Designated funds primarily consist of private sector funds supporting non-sponsored research. This funding fluctuates from year to year as different opportunities become available and may come as a lump sum to the School to be spent over several years. For example, in 2003, the Bill and Melinda Gates Foundation committed \$40 million to build capacity for population and reproductive health programs in developing countries. These funds will be expended over a 10-year period.

Net Facilities and Administrative: Indirect cost recovery (net facilities and administrative) also increased between 1999 and 2005, but at a slower rate than funding from grants and contracts. This lower growth rate is due to an increasing percentage of off-campus research and research funded by agencies and private foundations that reimburse for facility and administrative costs at a lower rate than do federally funded, on-campus grants and contracts.

Tuition: Two factors contributed to the growth in revenue from tuition and student fees. Tuition steadily rose from \$453 per credit hour in 1999 to \$617 in 2005. The tuition revenue growth, however, resulted largely from increased enrollment of part-time/Internet-based MPH students who typically pay approximately 30 percent more in total tuition than do full-time MPH students.¹

State Aid: Maryland is one of the few states that provide state aid for students at private universities. The amount per full-time equivalent student varied between \$1,142 in 1999 and \$845 in 2005.

Table IV.1 Revenue (in 1000s), School of Public Health, 1999–2005 and 2010 Projection

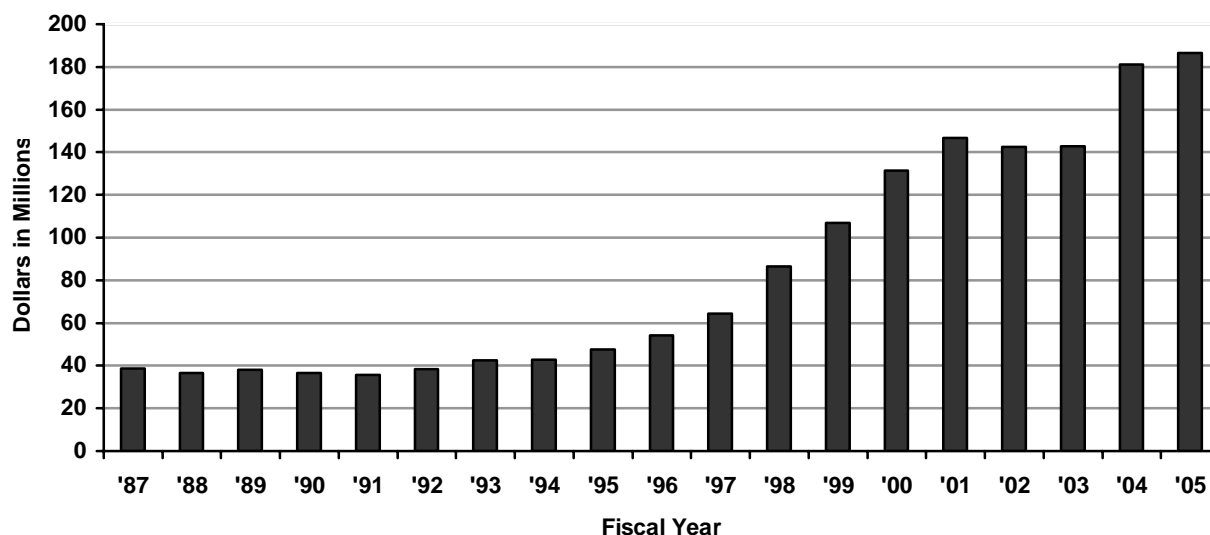
Sources of Funds	Fiscal Year							Percent Change	Projected
	1999	2000	2001	2002	2003	2004	2005	99–05	FY 2010
Grants and Contracts	128,205	136,371	155,333	177,644	192,500	203,092	219,562	+ 71%	271,913
Designated Funds	31,223	27,866	33,803	23,405	60,611	55,701	14,636	- 53 %	19,896
Net Facilities and Administrative	30,017	30,405	34,535	41,514	42,569	43,830	43,306	+ 44%	60,824
Gross Tuition and Fees	24,289	25,263	26,853	27,225	32,091	37,054	40,475	+ 67%	53,035
Maryland State Aid	1,379	1,415	1,536	1,660	1,474	1,160	1,433	+ 4%	1,997
Endowment Income	2,773	4,353	5,633	6,163	6,618	7,255	8,427	+204%	9,577
Temporary Investment Pool	582	798	954	1,145	1,285	1,645	1,773	+205%	2,273
Miscellaneous	173	10	22	22	165	1	467	+170%	15
Total Revenues	218,641	226,481	258,669	278,734	336,983	349,738	330,079	+ 51.0	419,530

Endowment Fund: While grants and contracts will continue to be the primary source of annual revenue, the School and University recognize the importance of increasing the School’s endowment fund to ensure long-term financial stability. During the past decade donors who shared our vision of “saving lives, millions at a time” contributed \$99 million to the endowment fund (Figure IV.1). The market value increased dramatically and now exceeds \$180 million. In 2005 the fund generated more than \$8 million in revenue. Approximately 40 percent of the income supports general operations of the School, including \$337,000 for

¹ Full-time students pay for 12 credit hours per term, but most earn at least 16 credits a term. Most part-time/Internet-based MPH students take less than 12 credits a term and thus do not benefit from the tuition discount

student scholarships in 2005. The remainder, from department endowments, is used for general departmental operating expenses or is designated to fund departmental research, lectureships, and student scholarships.

Figure IV.1 **School of Public Health Endowment Market Value, 1987–2005**



TIP: A small but growing income source comes from the University’s investment income, the Temporary Investment Pool (TIP). The investment income is distributed among the University’s schools and administrative units. Because of the growth of the School’s reserve funds, we were able to negotiate a larger percentage of the total pool. As a consequence, the School’s TIP income tripled over the past seven years. We project modest gains from this source in the future.

Reserve Funds: The School maintains three types of reserve funds. First, the School’s Capital Reserve Fund is maintained to meet one-time expenditures and for capital improvement projects, including building additions and renovations. It is not intended for day-to-day expenses. Second, each academic department has its own Departmental Fund that can be tapped to meet departmental revenue gaps or, for example, purchase specialized equipment. Third, each department has contributed about 10 percent of its annual general funds allocation to the School’s Permanent Reserve Fund. This fund of approximately \$2.5 million is available to a department that has exhausted its reserve fund and is unable to meet its annual obligations. Fortunately, it has never been tapped but remains a vital resource to ensure financial stability.

Miscellaneous: Miscellaneous income, derived from parking fees, interest on late payments, and other sources, fluctuated widely over the past seven years. During its three peak years, most of the income came from external funding for renovations in 1999,

administrative fees and gain or loss on disposal of equipment in 2003, and negotiating a sublease arrangement for an off-site building in 2005.

Total Revenues: Since 1999, total revenues increased annually until 2005. Overall, the School's revenues increased 50 percent during that time. The slight decrease in 2005 can be explained by the unusually large amount of designated funds received in 2003 and 2004. In fact, total revenue in 2005 was 18 percent higher than in 2002. We anticipate continued growth, conservatively estimating revenues to exceed \$400 million in 2010.

Expenditures

Since the 1990s, the School has avoided deficit spending by following cost-saving administrative and operational procedures, growing the endowment fund, and maintaining our Capital Reserve Fund that was created specifically to be "drawn down" in order to finance building expansion and renovation. Nonetheless, expenditures exceeded revenue in fiscal year 2005 for the first time in 12 years. This was primarily due to the purchase of University-wide administration (HopkinsOne) and student tracking (Internet Student Information System, ISIS) software. Based on preliminary information, the School experienced a modest surplus for fiscal year 2006. We project a deficit, attributed to additional payments for the software, for fiscal year 2007, followed by years of net gain.

Current expenditures fall into nine categories: grants and contracts, designated funds, departmental general funds for instruction and research, student aid, student services, plant operations, general services, auxiliary enterprises, and interdivisional costs (Table IV.2).

Grants and Contracts: Expenditures for grants and contracts account for approximately two-thirds of the School's total operating expenses. These expenditures are made in accordance with revenue and reflect direct project costs (e.g., personnel, equipment, supplies, etc.).

Designated Funds: Designated funds expenditures do not necessarily parallel the year's designated funds revenue. These funds are often expended over several years but are credited to the School as revenue in the fiscal year in which they are received. For example, in 2004 the Malaria Institute received the final \$23 million pledge for a 10-year, \$100 million initiative to study approaches to reduce malaria.

Instruction and Research: Instructional and research expenditures have risen more than 50 percent since 1999. Most of these dollars are expended in departmental general funds using methods detailed below. Additionally, several School-wide programs are supported by these funds, including the MPH and Distance Education Programs and the Multimedia Center.

Student Aid: We are particularly pleased that student financial aid has nearly doubled since 1999. In 2005, \$21 million in scholarships and training grants supported 1,075 students. In addition, tuition is discounted by 75 percent for doctoral students after they pass their written

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comprehensive examinations and for professional Master of Health Science (MHS) students while they fulfill their field experience requirement.

Student Services: The Office of Student Affairs falls under this category and includes Admissions, Career Services, Disability Support Services, Financial Aid, Records and Registration, the Student Diversity Office (created in 2001), and the Student Outreach Resource Center (SOURCE). Purchase costs of ISIS was added to this line item in 2005.

Table IV.2 **Expenditures (in 1000s), School of Public Health, 1999–2005 and 2010 Projection**

Expenditures	Fiscal Year							Percent Change 99–05	Projected FY 2010
	1999	2000	2001	2002	2003	2004	2005		
Grants and Contracts	128,205	136,371	155,333	177,644	192,500	203,092	219,562	+71%	271,913
Designated Funds	11,121	14,582	13,769	13,584	14,508	21,985	18,879	+70%	26,026
Instruction and Research	17,339	18,130	19,590	20,772	22,788	24,766	27,195	+57%	31,406
Student Aid	7,983	7,849	7,621	7,792	11,730	13,356	15,413	+93%	20,134
Student Services	1,497	1,607	1,627	2,103	2,234	2,440	2,602	+74%	3,521
Plant Operations, Maintenance	13,830	13,747	18,256	16,722	18,683	20,740	23,312	+69%	33,712
General Services and Administration	6,375	6,218	6,395	9,096	10,204	12,031	12,871	+102%	18,608
Auxiliary Enterprises	568	775	683	650	629	221	–	–	–
Interdivisional Allocation	6,945	7,354	8,000	6,994	7,745	8,642	9,404	+35%	13,021
Total Operating Expenses	193,863	206,633	231,274	255,357	281,021	307,273	329,238	+ 70%	418,340
Net Transfers (In)/Out	22,212	17,390	24,653	16,287	51,067	38,240	4,522	-80%	1,191
Surplus (Deficit)	2,566	2,458	2,742	7,090	4,895	4,225	(3,681)	–	–

Plant Operations, General Services, and Auxiliary Enterprises: Plant operations and maintenance includes day-to-day operating expenses as well as mortgage payments for the new additions and loan repayments for renovations. The Office of Information Systems, HopkinsOne, and street and building security costs are included under general services and

administration.² Leasing a student apartment building, Henderson House, was the sole auxiliary enterprises expenditure; the lease ended in 2004.

Interdivisional Allocation: These costs include services shared by the medical campus or University, such as libraries, legal services, human resources, shuttle service, residence halls, athletic centers, and classroom space at the Montgomery County Campus.³

Total Operating Expenses: As noted earlier, our total revenues have exceeded expenses each year, except during fiscal year 2005. A revenue surplus that will replenish the Capital Reserve Fund is expected in 2008.

Net Transfers: This line item captures surplus revenue and unspent designated gifts deposited into the School's Capital Reserve Fund and departmental reserve funds. The varying yearly "deposits" reflect fluctuations in designated funding.

Allocation of Funds to Departments

Since the mid-1990s, general funds have been allocated to departments based on formulas that account for the department's contribution to the academic programs (from tuition revenues) and the size of its research enterprise (from facility and administration cost recoveries). The transparent formulas allow each department to predict its general funds allocation (Table IV.3). The Dean also has the option of allocating additional funds to a department with special needs, for example to purchase laboratory equipment or finance faculty recruitment. The Dean's discretionary funds average less than \$1 million each year.

The Tuition Allocation Methodology (TAM) is used to allocate revenues from tuition and fees less scholarships and instructional costs incurred by the School. It was designed to reward teaching and mentoring equitably. Points are given for the activities of each faculty member during the previous fiscal year. Activities include teaching a formal course (adjusted for credit units and number of students), mentoring for-credit special studies projects, advising students (weighted by masters or doctoral degree), and participating in preliminary oral examinations and thesis or dissertation final defenses. The distribution of total points by department determines each department's share of the total allocable tuition. The Finance Committee, a joint committee of the Advisory Board and Faculty Senate, meets annually to review and modify, as deemed appropriate, the number of points assigned to each activity.

The formula to distribute facilities and administrative revenues recognizes that some departments, by the nature of their research, are better able to obtain federal funding than other departments. As a result, 50 percent of these revenues are allocated proportionate to

² In compliance with changing governmental and University regulations, street security costs were included as an interdivisional expenditure during some fiscal years

³ In previous years, costs associated with the Washington, DC campus were incurred; School of Public Health courses are no longer taught on this satellite campus

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the amount of indirect costs recovered from the department's grants and contracts. The remaining revenues are allocated in proportion to the department's administrative costs.

Table IV.3 **General Funds (in 1000s) Allocation by Department, 1999–2005**

Department	Fiscal Year							2005 % of Total
	1999	2000	2001	2002	2003	2004	2005	
Biochemistry and Molecular Biology	940	1,184	1,049	1,169	1,347	980	1,028	4.6
Biostatistics	1,300	1,347	1,370	1,631	1,777	1,930	2,248	10.1
Environmental Health Sciences	1,966	1,777	1,770	1,842	1,981	2,301	2,353	10.5
Epidemiology	2,541	2,342	2,571	2,938	2,960	3,634	3,895	17.4
Health Policy and Management	2,784	2,697	2,565	2,940	3,348	3,592	3,377	15.1
International Health	2,036	1,996	2,251	2,580	3,132	3,522	3,641	16.3
Mental Health	696	638	685	742	855	1,278	1,103	5.0
Molecular Microbiology and Immunology	1,016	1,079	1,198	1,057	1,405	1,648	1,634	7.3
Population and Family Health Sciences	1,953	2,183	2,302	2,258	2,609	2,878	3,069	13.7
Total	15,231	15,243	15,759	17,157	19,414	21,763	22,348	100

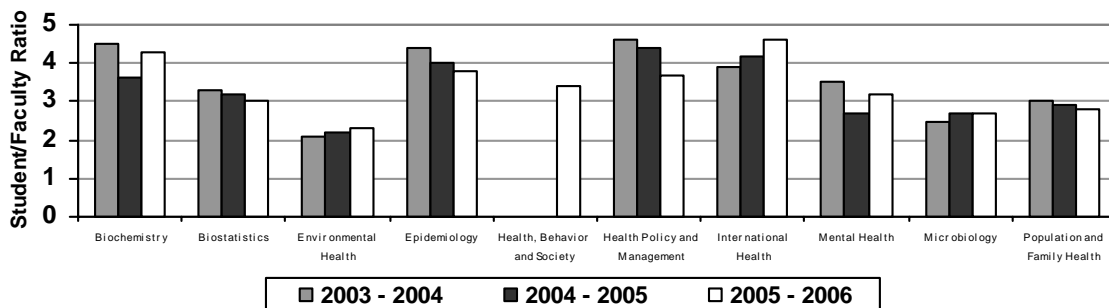
The Department of Health, Behavior and Society was inaugurated during FY 2006

Student-Faculty Ratios

Since 1999, faculty growth has outpaced the increase in student enrollment. As a result the overall student-to-professorial faculty⁴ ratio decreased from 5.8 in 1999 to 5.0 in 2005 (Figure IV.2 and Tables IV.4-5). In 2005–2006, there were approximately 1.1 departmental masters and 2.3 doctoral students enrolled for each professorial faculty. The ratio of all departmental student-to-professorial faculty ranged from 2.3 to 4.6 per department (Figure IV.2), and there were 2.7 masters students (MPH and departmental) for each professorial faculty. The actual overall student-faculty ratio is lower because part-time, adjunct, and emeritus faculty, as well as full-time instructors, research associates, and scientist-track faculty, are excluded from the calculations. Many of these faculty members teach and/or serve as MHS and MPH advisors. In addition, approximately one-third of students are part-time.

⁴ To simplify calculations, the departmental student-faculty ratios summarized in Figure IV.2 and Tables IV.4-5 are based solely on professorial faculty

Figure IV.2 Departmental Student-to-Professorial Faculty Ratios by Academic Year ^{1,2}



1 Head count of all departmental students, regardless of full-time status

2 Professorial faculty excludes scientist track, visiting, adjunct, phased, and emeritus faculty

Table IV.4 Masters Student-to-Professorial Faculty Ratios by Academic Department, Year ¹⁻⁴

Department	2003 – 2004			Academic Year 2004 – 2005			2005 – 2006		
	# of Masters Students	# of Full-Time Faculty	Student-to-Faculty Ratio	# of Masters Students	# of Full-Time Faculty	Student-to-Faculty Ratio	# of Masters Students	# of Full-Time Faculty	Student-to-Faculty Ratio
Biochemistry and Molecular Biology	27	15	1.8	16	15	1.1	32	17	1.9
Biostatistics	7	16	0.4	10	19	0.5	13	20	0.7
Environmental Health Sciences	14	38	0.4	17	39	0.4	22	40	0.6
Epidemiology	51	42	1.2	54	50	1.1	52	53	1.0
Health, Behavior and Society	-	-	-	-	-	-	24	14	1.7
Health Policy and Management	86	47	1.8	86	48	1.8	47	39	1.2
International Health	80	41	2.0	76	39	1.9	96	44	2.2
Mental Health	6	11	0.5	5	13	0.4	9	13	0.7
Molecular Microbiology and Immunology	13	25	0.5	13	25	0.5	11	25	0.4
Population and Family Health Sciences	16	29	0.6	13	27	0.5	19	33	0.6
Total Departmental Masters Students	300	264	1.2	290	275	1.1	325	298	1.1
Master of Public Health Students	401	-	-	421	-	-	469	-	-
Total Masters Students	701	264	2.7	711	275	2.6	794	298	2.7

1 Head count of all masters students, regardless of full-time status

2 Total number of full-time professorial faculty is used to calculate the ratios for departmental masters students and total masters students. Professorial faculty excludes scientist track, visiting, adjunct, phased, and emeritus faculty. Non-professorial faculty may advise masters students

3 In 2003 – 2004, 156 faculty served as MPH advisors; in 2004 – 2005, 168 served; and in 2005 – 2006, 191 served

4 All masters degree programs are departmental, with two exceptions. The MPH is a School-wide, interdepartmental program and the Graduate Training Programs in Clinical Investigation (GTPCI) is a joint program with the School of Medicine. In 2005, GTPCI had 15 masters students; they are not included in this table (see Table IX.A.8 and <http://www.jhsph.edu/gtpci>)

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Table IV.5 **Doctoral Student-to-Professorial Faculty Ratios by Academic Department, Year**¹⁻³

Department	2003 – 2004			Academic Year 2004 – 2005			2005 – 2006		
	# of Doctoral Students	# of Full-Time Faculty	Student-to-Faculty Ratio	# of Doctoral Students	# of Full-Time Faculty	Student-to-Faculty Ratio	# of Doctoral Students	# of Full-Time Faculty	Student-to-Faculty Ratio
Biochemistry and Molecular Biology	40	15	2.7	38	15	2.5	41	17	2.4
Biostatistics	45	16	2.8	50	19	2.6	46	20	2.3
Environmental Health Sciences	66	38	1.7	70	39	1.8	68	40	1.7
Epidemiology	134	42	3.2	144	50	2.9	148	53	2.8
Health, Behavior and Society	–	–	–	–	–	–	28	14	2.0
Health Policy and Management	130	47	2.8	123	48	2.6	96	39	2.5
International Health	80	41	2.0	87	39	2.2	106	44	2.4
Mental Health	32	11	2.9	30	13	2.3	32	13	2.5
Molecular Microbiology and Immunology	49	25	2.0	54	25	2.2	56	25	2.2
Population and Family Health Sciences	71	29	2.4	65	27	2.4	68	33	2.1
Total Doctoral Students	647	264	2.5	661	275	2.4	689	298	2.3

1 Head count of all doctoral students, regardless of full-time status

2 Total number of full-time professorial faculty is used to calculate the ratios for doctoral students. Professorial faculty excludes scientist track, visiting, adjunct, phased, and emeritus faculty

3 All doctoral degree programs are departmental, with one exception. The Graduate Training Programs in Clinical Investigation (GTPCI) is a joint program with the School of Medicine. In 2005, GTPCI had 42 PhD students; they are not included in this table (see Table IX.A.9 and <http://www.jhsph.edu/gtpci>)

Administrative and Staff Personnel

The current distribution of full-time equivalent staff by administrative units and departments (Table IV.6) reflects the School's growth in research, revenue, and student enrollment and support, as well as the Wolfe Street Building's size.

Table IV.6 **Number of Full-time Equivalent Staff by Office or Department, July 2005**

Office or Department	Deans and Chairpersons	Senior Staff	Support Staff	Total Staff
Dean's Office	2.5	3	5	8
Associate Dean				
External Affairs	1	13	12	25
Graduate Education and Research	0.5	2	1	3
Professional Programs	1	15 ¹	19	34
Finance and Administration	3	21	14	35
Departments				
Biochemistry and Molecular Biology	1	2	11	13
Biostatistics	1	3	5	8
Environmental Health Sciences	1	15	55	70
Epidemiology	1	74	140	214
Health, Behavior and Society	1	1	2	3
Health Policy and Management	1	26	53	79
International Health	1	70	120	190
Mental Health	1	7	31	38
Molecular Microbiology and Immunology	1	17	44	61
Population and Family Health Sciences	1	151 ²	94	245
Other				
Student Academic Support Services	1	14	16	30
Support Services	0	6	13	19
Facilities Management	0	11	120	131
Human Resources	0	3	11	14
Information Systems	0	34	14	48
Journal of Epidemiology	0	4	2	6
Total	19	492	782	1274

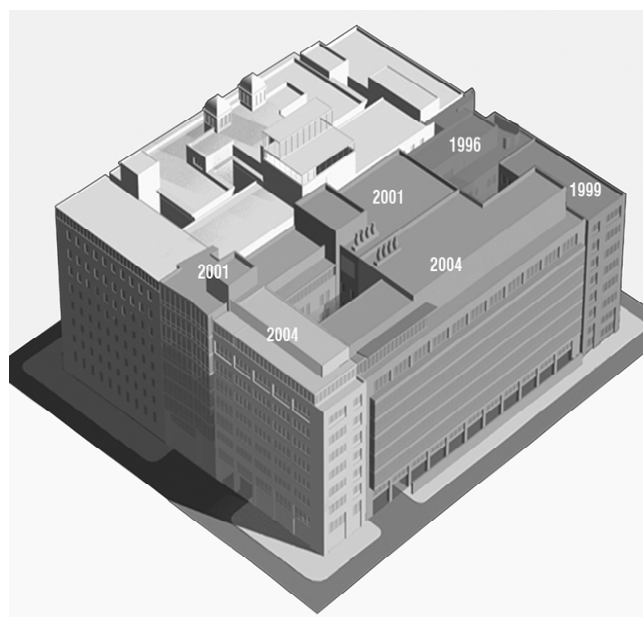
1 Includes MPH Office and the Center for Teaching and Learning with Technology (Distance Education)

2 Includes Center for Communication Programs that moved to the Department of Health, Behavior and Society in 2006

Space Allocation: Classrooms, Common Areas, and Offices

In the 1990s, the School recognized the need for additional space to accommodate the increase in faculty size and student enrollment, allow growth to continue, and encourage interdisciplinary collaboration by consolidating into one building faculty who were housed in different locations. The master plan called for phased expansion, with additions built as funds were raised. In order to minimize costs, the architects ensured that the foundations; plumbing, heating, cooling, and electrical systems; and overall design of each addition fit together seamlessly. Construction, from 1996 to 2004, doubled the size of the Wolfe Street Building, from approximately 357,000 to 759,000 square feet (Figure IV.3).

Figure IV.3 **Phased Expansion of the Wolfe Street Building**



The additions and renovations provide much-needed space for current and future faculty and support staff; additional up-to-date laboratory space; technologically state-of-the-art classrooms and auditoriums; a fitness center; reading rooms; and sunny student lounges and study nooks (Tables IV.7-8). Renovations to the older sections of the Wolfe Street Building are under way. Offices, laboratories, animal facilities, and the heating, cooling, and air flow systems will be upgraded to match those in the new addition. Similar renovations are slated for Hampton House, home to the Lilienfeld Library and the Departments of Health, Behavior and Society; Health Policy and Management; and Mental Health.

Table IV.7 **Net Usable Space by Administrative Function, 2005**

Administrative Function	Net Usable Space		Administrative Function	Net Usable Space	
	Net Square Feet ¹	Percent of Total		Net Square Feet ¹	Percent of Total
Administration: Departmental	40,987	7.0	Service Center ²	20,628	3.5
Administration: School	15,943	2.7	Sponsored Projects Activities	3,614	0.6
Instruction	74,715	12.7	Other Sponsored Activities	76,151	13.0
Joint Use/General	52,714	9.0	Other Institutional Activities	12,886	2.2
Library	4,276	0.7	Student Services	4,836	0.8
Organized Research	260,350	44.4	Unassigned: Capable of Use	8,380	1.4
Plant Operation Support	11,080	1.9	Total	586,559	100.0

1 Includes all buildings owned or leased by the Bloomberg School of Public Health

2 Includes Auxiliary Services

Table IV.8 **Allocation of Net Usable Space by Academic Department, 2005**

Department	Net Square Feet ¹			
	Research	Instruction	Other	Total
Biochemistry and Molecular Biology	39,029	3,628	2,899	45,556
Biostatistics	3,219	6,164	2,495	11,878
Environmental Health Sciences	58,284	9,682	2,571	70,537
Epidemiology	41,212	3,404	6,728	51,344
Health, Behavior and Society	2,801	1,556	808	5,165
Health Policy and Management	17,395	6,822	5,212	29,429
International Health	33,316	5,924	9,641	48,881
Mental Health	13,363	4,112	3,204	20,679
Molecular Microbiology and Immunology	65,831	4,797	2,340	72,968
Population and Family Health Sciences	20,130	6,258	4,915	31,303
Center for Communication Programs	33,703	60	6,021	39,784
Total	328,283	52,407	46,834	427,524

1 Includes all buildings owned or leased by the Bloomberg School of Public Health

In 2005, construction began on a nearby building the School will initially lease with options to purchase. The 30,000 square-foot building will consolidate community-based activities currently scattered throughout the city. It is specifically designed to foster community participation in research and other activities. The School also owns or leases buildings located within one block of the Wolfe Street Building and office space in downtown Baltimore (Table IV.9). These annexes, in general, house programs or offices staffed primarily by support personnel, such as Human Resources, Center for Communication Programs, and

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the Center for Teaching and Learning with Technology (Distance Education). In addition, some research projects conducted outside of Baltimore lease on-site office and research space.

Table IV.9 **Total Space Owned and Leased by Building Location and Designated Use, 2005**

Location	Primary Designated Use	Square Feet		
		Gross	Net	
Bayview Campus	Clinical Research Facilities	9,600	7,704	
Candler Building	Center for Communication Programs Center for Teaching and Learning with Technology	125,600	58,734	
2005 - 2023 E. Monument St	Benefits Services Center Facilities Management	21,000	16,161	
Hampton House	Classrooms Common Areas Laboratories	Clinical Research Facilities Departmental Offices Lilienfeld Library	135,000	76,904
911 N. Ann St	Departmental Offices	9,400	6,979	
617 - 627 N. Washington St	Departmental Offices	20,800	8,463	
Wolfe Street Building	Administration Offices Common Areas Laboratories	Classrooms Departmental Offices Support Services Offices	759,400	411,614
Total		1,173,479	586,559	

Space Allocation: Laboratories

The Wolfe Street Building additions increased laboratory space by 50 percent; renovations will update the older laboratories (Table IV.10). Biohazard level 3 (P3) laboratories are located on the first and ninth floors. A third as yet unused laboratory meets P3 federal requirements. All other laboratories are at level 2. In addition, our faculty conduct clinical research at facilities in the Johns Hopkins Hospital, Bayview Medical Center, and Hampton House, and they collaborate with staff at laboratories and medical facilities around the globe.

Table IV.10 **Laboratory Space and Equipment by Academic Department**

Department	Special Features	Square Feet
Biochemistry and Molecular Biology	Transmission Electron Microscope; Fluorescence Microscopes; Ultracentrifuges; PCR Equipment; High-performance Liquid Separations Systems; Facilities for DNA Synthesis, Sequencing, and Analysis; Spectrometers; Spectrophotometers; Biacore 3000 Unit (to measure real-time ligand-macromolecule interactions by surface plasmon resonance); Equipment for acquisition and digital quantitation of images and separations visualized by absorbance, fluorescence, or radioactivity	33,312
Environmental Health Sciences	<ul style="list-style-type: none"> Atomic Absorption Laboratory Environmental Exposure and Health Assessment Facility Microarray and Molecular Biology Facility Imaging and Analysis Laboratory (<i>in vitro</i> and <i>in vivo</i>) 	40,643

Table IV.10 **Laboratory Space and Equipment by Academic Department, continued**

Department	Special Features	Square Feet
Epidemiology	P2 and P3 Laboratories; Autoclave; Automated ELISA (Evolis) and PCR (COBAS) Analyzers; Biological Safety Cabinets; CO ₂ Incubator; Coulter Counter Z1; Fume Hood; Matrix 96 Beta Counter; Microcentrifuge; Scintillation Counter; Thermocycler; Vi-Cell; 96-well Plate Washer, Readers, and Harvester	5,908
International Health	Complete Cellular/Molecular Immunology Laboratory, 9-color Flow Cytometer (FACS Aria) for high-speed cell-sorting, 4-color Flow Cytometer (FACS Calibur) for automated batch process, ELISPOT Reader (Immunospot), CO ₂ Incubators, Laminar Flow Hoods, Tissue-culture Centrifuges, Compound and Inverted Microscopes, Thermal Cyclers, Sonic Dismembrator; Cellular-grade (Milli-Q Academic) and Molecular-grade (Milli-Q Biocell) Water Purification Systems, UV Cross-linker, DNA/RNA and Protein Gel Electrophoresis Equipment, Microcentrifuges, Hybridization Oven	8,829
Mental Health	<ul style="list-style-type: none"> • Observation Laboratories • Interview Laboratories 	2,146
Molecular Microbiology and Immunology	Facilities and Equipment for: <ul style="list-style-type: none"> • Gene Array • Microscopy • Flow Cytometry • Insectary • Malaria Production • BSL3 Insectaries • BSL3 Cell Culture • X-ray Crystallography • Fermentation 	54,617
Total		145,455

Computer Facilities

The Office of Information Systems (OIS) provides computing support to faculty, students, and staff. In the 1990s, fiber optic cables and a wireless network for laptop users were installed throughout the School's buildings. OIS currently focuses on technical support, security, and information sharing, as well as infrastructure maintenance for approximately 5,000 users. In addition, OIS staff members assist new projects by identifying appropriate software and hardware and developing software applications, including data entry and storage systems. Faculty, staff, and students may purchase discounted software and hardware through OIS.

Technical Support: In 2005, significant technical support changes were instituted, including hiring additional technicians. At least one technician is assigned to each department, providing technical support to the department's faculty and staff. Previously each "help request" was assigned to the next available technician, resulting in little continuity. Technicians not assigned to a department are also available to support over 3,000 desktop and 1,200 laptop computers and related equipment. In the near future, OIS will provide remote desktop assistance.

Resources

Technicians support students by ordering and installing software and trouble-shooting personal laptops. They maintain 75 desktop computers in three laboratories, nine networked “kiosk” terminals, and 10 wireless printers located throughout the School’s buildings. In July, September, and January, OIS modifies incoming students’ laptop computers for wireless conductivity. Presently, the School strongly recommends that each student have a laptop or desktop computer; we are considering making this a requirement.

Data Security: A new data center, with adequate power and airflow for the School’s 138 servers, was completed in 2005. A redundant data center is planned for Hampton House. Recently OIS began to manage all desktop computers centrally so that antivirus patches are automatically installed. As a result, the incidence of computer virus infection has sharply decreased. Previously each user was responsible for downloading patches provided by OIS. Plans are under way to install password-protected screen savers on all computers and to back up all desktop document files on a daily basis. Currently, only administrative data and specially designated computers are backed up by OIS. Each week all backed-up data are sent to another city for storage that complies with the Department of Defense and HIPAA regulations. As a final precaution, OIS tests its “disaster plan” two to three times each year at an independent site.

Information Access and Sharing: OIS maintains the School’s secure Web site (portal) through which e-mail, event calendars, departmental resources, administrative Web sites, and course material can be accessed; support services can be requisitioned; data files can be stored; and School-discounted hardware and software can be ordered. The portal is being updated for easy remote access to desktop files, which will allow researchers to share secure data and work space easily and comply with NIH requirements to share research information and data with the public. In addition, OIS participates in Internet-2 and in an initiative to facilitate database access among the University’s schools and administration units.

Library and Information Resources

Students, faculty, and staff have full access to all library resources of The Johns Hopkins University. The William H. Welch Medical Library, Abraham M. Lilienfeld Library, and Milton S. Eisenhower Library contain most of the public health-related library resources. In addition, departments maintain specialized collections and reading rooms in the Wolfe Street and Hampton House buildings for faculty and students.

The digital age has revolutionized our access to information. All University libraries are connected electronically. From any location worldwide, full- and part-time students, faculty, and staff may obtain online help, browse the libraries’ catalogs, download any electronic holding, reserve printed materials, and request interlibrary loans and PDF files from book chapters and journal articles that are not electronically available.

William H. Welch Medical Library: The Welch Library serves and is financially supported by all Johns Hopkins medical and health divisions, including the Bloomberg School of Public

Health. It is located across the street from the Wolfe Street Building. The library's vast holdings contain more than 370,000 bound volumes. Patrons also have electronic access to approximately 75 public health-related databases (e.g., PubMed, Social Sciences Citation Index) and full-text articles from 3,000 journals. Satellite and specialty libraries, such as the Abraham M. Lilienfeld Library, are located throughout the East Baltimore and Bayveiw campuses.

The Welch Medical Library also offers free courses in writing abstracts, grant proposals, and research papers; identifying funding sources; and using electronic databases and bibliographic management software. Courses in software applications,⁵ Internet applications and Web development,⁶ and programming languages such as Linux and SQL are available for a fee.

Abraham M. Lilienfeld Library: Located in Hampton House, the Lilienfeld Library was established to meet information needs of public health students and faculty that are not met by the other University libraries. The interdisciplinary collection of approximately 200⁷ journals and over 31,500 books, pamphlets, and government reports is especially strong in demography, epidemiology, health policy and management, and social and political aspects of health care. Special services include individualized or small group tutoring in the use of document referencing software and electronic databases, literature review guidance, and proctoring examinations of on-campus students taking Internet-based courses.⁸ Librarians also assist faculty by obtaining copyright waivers for and digitizing reserved course materials (e.g., articles, book chapters).

Milton S. Eisenhower Library: The University's primary research library is located on the Homewood campus. It contains more than 2.6 million volumes, 30,000 journals, and 600,000 electronic books. The collection is especially strong in the fields of biomedical engineering, chemistry, and environmental engineering as they relate to public health. The library also offers a wide range of courses for faculty, students, and staff.

Field Experience Sites

The School continues working at sites across the globe, including funded projects in more than 60 countries (<http://commprojects.jhsph.edu/research/default.cfm> lists some recent and current international projects). These projects include monitoring and evaluating governmental and non-governmental public health programs; providing technical assistance to ministries of health responsible for "rolling out" national HIV treatment programs; conducting clinical trials, behavior change intervention studies, health surveys, and community-based disease surveillance; and developing health education/communication programs. Funded projects are also located in various US and Maryland locales, as well as in Baltimore (Chapter VI Research

5 For example, Access, Acrobat, Adobe, Excel, Illustrator CS, Power Point, Project Management, Stata, Word

6 For example, ColdFusion MX, Dreamweaver MX, Flash MX, HTML, Java Script

7 The libraries no longer subscribe to some print journals because they are available electronically in full-text. As a result the number of print journal subscriptions declined from approximately 275 in 1999 to 200 in 2005

8 All Internet course examinations must be proctored; off-campus students usually select co-workers as proctors

and Chapter VII Service). Field sites for professional masters students (Chapter V.B Professional Degrees and Appendix V.B.1 Field Sites) and numerous examples of student service activities (Chapter VII Service) are discussed elsewhere in this report.

Community Resources

A broad and rich array of other community resources is available to students and faculty for instruction, research, and service. These resources, described in subsequent chapters, extend well beyond Baltimore and include the public and private sector. Faculty instructors draw on local, national, and international public health practitioners to supplement lectures and course discussions. Community-based research activities occur in communities throughout the world, as well as locally (Chapter VI Research). To strengthen and expand professional practice opportunities in the Baltimore area, core School funds have been allocated to hire 10 part-time and two full-time professorial practice-oriented faculty (Chapter VII Service).

Many professional MHS students fulfill the field placement requirement through community-based agencies in Baltimore and elsewhere (Appendix V.B.1 Field Sites). Opportunities available through a new professional practice course for MPH students will come primarily from local governmental and non-governmental agencies (see Chapter V.B Professional Degrees). Other students participate in community-based activities through SOURCE, student organizations, and mentored fellowship programs. The new community building, mentioned previously and due to open in early 2007, will house existing and new community-based instruction, research, professional practice, and service activities in East Baltimore. Our expanded administrative role in the Urban Health Institute also should increase service and practice opportunities in East Baltimore (Chapter VII Service).

Outcome Measures

The School uses several measures to assess resource adequacy. Our endowment fund exceeded \$186 million in 2005. Efforts to increase the fund are ongoing. The total student-to-professorial faculty ratio has been 5.1 or 5.0 during the past three academic years. In 2004–2005 institutional expenditures approached \$80,000 per student, and grants and contracts expenditures averaged over \$798,000 per professorial faculty member. The Wolfe Street Building space doubled since the previous self-study. Renovations are being made to the older sections of the Wolfe Street Building and Hampton House. A building for local community-based activities is under construction.

Correction to the printed document: An error was made (above) in reporting the institutional expenditures per student. The correct amount was \$23,211 in FY 2004 and \$24,181 in FY 2005.

Assessment

Strengths

- Since 1999 the School has experienced increases in:
 - Revenue from grants, contracts, designated funds, and endowment
 - Research activities
 - Full- and part-time student enrollment and faculty size that has resulted in lowered student-to-faculty ratios
 - Student scholarship funds
 - Wolfe Street Building floor space and staff size that parallels the School's growth in research and enrollment
- The School is:
 - Renovating the Wolfe Street Building and Hampton House
 - Leasing a community-based activities building that is under construction
- The School has continued to:
 - Implement financial management policies begun in the early 1990s
 - Maintain three types of reserve funds built from surplus income
 - Utilize transparent formulas to allocate general funds to departments
 - Negotiate with the University for favorable revenue flow
- The Office of Information Systems has:
 - Expanded technical support for 5,000 users
 - Strengthened data security and access
- Libraries have pioneered digitization so that faculty, students, and staff can access information from anywhere at any time

Challenges

- Two-thirds of the School's revenue is derived from grants and contracts, for which funding has become increasingly more difficult to secure
-

Plans

- The School will continue to:
 - Have planned growth of research activities and infrastructure in spite of decreasing federal funding and increased reliance on funding from non-governmental agencies and foundations
 - Increase the endowment fund
 - Follow financial management policies in order to maintain reserve funds, including those for capital improvements
 - Increase the size of the student body, faculty, and staff as resources permit
 - Fund state-of-the-art libraries and information systems

The criterion is met
