

Historically Black Medical Schools: Addressing the Minority Health Professional Pipeline and the Public Mission of Care For Vulnerable Populations

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Substantial changes in not only access to care, cost, and quality of care, but also health professions education are needed to ensure effective national healthcare reform. Since the actionable determinants of health such as personal beliefs and behaviors, socioeconomic factors, and the environment disproportionately affect the poor (and often racial/ethnic minorities), many have suggested that focusing efforts on this population will both directly and indirectly improve the overall health of the nation. Key to the success of such strategies are the ongoing efforts by historically black medical schools (HBMSs) as well as other minority serving medical and health professional schools, who produce a disproportionate percentage of the high-quality and diverse health professionals that are dedicated to maintaining the health of an increasingly diverse nation. Despite their public mission, HBMSs receive limited public support threatening their ability to not only meet the increasing minority health workforce needs but to even sustain their existing contributions. Substantial changes in health education policy and funding are needed to ensure HBMSs as well as other minority-serving medical and health professional schools can continue to produce the diverse, high-quality health professional workforce necessary to maintain the health of an increasingly diverse nation. We explore several model initiatives including focused partnerships with legislative and business leaders that are urgently needed to ensure the ability of HBMSs to maintain their legacy of providing compassionate, quality care to the communities in greatest need.

Keywords: historically black colleges and universities ■ minority ■ health disparities

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INTRODUCTION

As part of the Obama administration's efforts to reform health care, ensuring that the supply of physicians, dentists, and other health professionals keep pace with the disease-specific health care and prevention needs of the country's growing and aging population is recognized as one of the most critical resource issues facing the US health care system. Inherent in this plan are far-reaching implications for access, cost, and quality of care. At the same time, the Institute of Medicine notes

the quality of health care depends as much on physicians' scientific competence as on an understanding of cultural, social, and economic factors that influence the health of patients, the ways in which they seek care, and their response to medical treatment.¹

Frontline/safety-net academic medical centers such as those linked to historically black medical schools (HBMSs) are particularly well positioned to develop clinicians and researchers who have broad experience and in-depth expertise in racial/ethnic and socioeconomic health disparity issues. Ideally, these experiences can be translated into new knowledge, useful research innovations, and effective strategies to improve health outcomes for all communities. Unfortunately, resource

challenges and competing priorities disproportionately impact HBMSs and their affiliated academic medical centers. These issues progressively undermine efforts to sustain the requisite environment to support successful minority health professional student and faculty development. In the absence of a long-term commitment of resources dedicated to a comprehensive approach to address the challenges of HBMS and their affiliated academic medical centers that support training and service for underserved communities, the nation is unlikely to achieve a critical mass of high-quality and compassionate clinicians/scientists dedicated to serving these communities and ultimately reducing health disparities.

STATEMENT OF THE PROBLEM

The need for historically black colleges and universities (HBCUs) to contribute to health professional training remains as important today as it was more than 100 years ago.^{2,4} Racial and ethnic inequities in health have been well documented dating back to the 19th century.⁵ W.E.B. Du Bois lamented in 1899, “there have been few other cases in the history of civilized peoples where human suffering has been viewed with such peculiar indifference.”⁶ The disproportionate level of suffering by and indifference to racial/ethnic minorities remains essentially unchanged. The origin of HBCU medical and other health professional schools was grounded in a vision of preparing minority health providers and serving minority communities. With rare exceptions, minority physicians were not allowed to train in, nor were minority patients allowed to receive care in, most white educational/medical facilities prior to the civil rights movement. Support for infrastructure, research, and linkages to communities of wealth were rare for HBMSs, as governmental funding was nonexistent or limited to modest educational support, while foundations and philanthropy were reluctant to provide significant support. Andrew Carnegie, one of a few sources of support for African American medical colleges in the early 20th century stated, “If we start helping medical colleges for colored people, we cannot discontinue.” He felt their needs were too great and their allies who might help in the funding too few.⁴ The precarious nature of these early HBMS financial arrangements, whether overseen by white missionary groups or by enterprising independent black physician proprietors, put them in a vulnerable position. Unfortunately, the relative level of core funding and vulnerability has not changed; the need remains great and the allies remain few.

The paucity of philanthropic support, research funding, clinical practice income, and tuition base due to low income from its core constituency has and continues to strain HBMSs. As research has become an increasing source of prestige it has been one of the driving domains for philanthropic support). HBMSs have fallen further behind in endowments and resources due to their histori-

cally limited research infrastructure. With the development of academic health centers (AHCs), where medical education and medical care delivery have merged to support training and diversify revenue streams, HBMSs and the populations they served were limited by restricted arrangements with private hospitals (another common source of philanthropy), ultimately leaving the only option of creating core relationships with “safety-net” hospitals serving indigent and underinsured or uninsured communities. Howard University is the one exception among the HBMSs, as it does own its own hospital, but the recent closure of the DC General Hospital has left Howard University Hospital as the de facto safety-net facility beset with a disproportionate volume of uninsured and underinsured patients compared to other local private hospitals.

With a common public mission that includes a high degree of primary care in an era of procedure-driven medical care, sustainability of faculty income and dean’s operating funds is no longer viable without the high reimbursement rates of insured specialty and tertiary care delivery, further financially constraining the ability of HBMSs to provide quality clinical faculty and clinical training sites for trainees. Thus, the evolving constellation of core factors over the last 100 years that are fundamental to the fiscal solvency of AHC are inherently inadequate in HBMS-AHC partnerships.

Despite the long-term contributions of Howard University and Meharry Medical School and, more recently, Morehouse School of Medicine and Charles Drew University, African Americans comprise only 3.5% of physicians⁷ and fewer than 1.5% of professor-level faculty positions at US medical school faculty (including professor-level faculty at minority-serving institutions).⁸ The need for HBMSs to produce not only medical school graduates but postgraduate physicians and other health care professionals is as important now as it was more than 100 years ago. Unfortunately, the financial situation of safety-net hospital partnerships (eg, declining insurance reimbursement rates, skyrocketing malpractice insurance costs) serving dense populations of economically marginalized and low-income individuals,⁹ central to HBMS-AHC partnerships, has become increasingly strained. Furthermore, the increasing barrage of unfunded regulatory mandates¹⁰ for all aspects of medical research, education, and health care delivery has disproportionately adversely impacted HBMSs.

The inability of many “safety-net” hospitals to maintain their accreditation has led to reduction and/or loss of HBMS postgraduate training positions, further reducing the minority health professional pipeline and weakening the HBMS infrastructure. Centers for Medicare and Medicaid Services (CMS)–sponsored postgraduate training positions are linked to the sponsoring hospital, not the Accreditation Council on Graduate Medical Education (ACGME) sponsor, who is frequently the univer-

sity, creating both a training focus that is grounded in an old inpatient-oriented training model, and an imbalance in responsibility and authority around CMS-funded training positions. Updating CMS policies on sponsored postgraduate training positions should include provisions to ensure safety-net facilities and partner HBMSs have authority to redirect these positions (traditionally linked to inpatient care volume) locally to enhance existing and/or create new training partnerships to address the clinical care and training needs of the local community consistent with new ambulatory focused, distributed models of health care delivery.

THE CASE FOR INCREASED SUPPORT FOR HISTORICALLY BLACK MEDICAL SCHOOLS

Since there is compelling evidence that minority physicians are more likely to provide care for poor and underserved communities, the racial and ethnic diversity of the physician workforce bears directly on addressing disparities in access to care and perhaps even health outcomes for significant segments of the population.

—*The Complexities of Physician Supply and Demand: Projections Through 2025*
Association of American Medical Colleges
Center for Workforce Studies, 2008

The etiology of the wide spectrum of health disparities suffered by minority and socioeconomically disadvantaged populations in the United States is complex and multifactorial.¹ The need is ever present for the development of well-trained faculty with a unique understanding of the factors that contribute to health disparities among disadvantaged populations. Support for minority institutions committed to the care of such communities provides an opportunity to address these critical health issues. Odom et al examined perceived facilitators and barriers to professional success among 748 minority medical students (80% African American) and found experiences with racial stereotyping and discrimination to be an important barrier to success.¹¹ Similarly, Price et al reported that minority and foreign-born faculty report ethnicity-based disparities in recruitment and

subtle manifestations of bias in the promotion process at a major research-intensive institution,¹² reinforcing the need and role for minority-serving medical schools while recognizing they are not immune from biases. Ironically, those institutions whose academic mission is most closely aligned with addressing the issue of health disparities are often the most challenged in maintaining an academic environment that will facilitate the development of faculty into competitive clinicians/scientists. Highly prevalent de facto racial segregation within the US health care system limits revenues and reduces health care delivery capacity, restraining organizations dedicated to the care of poor and often largely minority populations.¹³ Private and public frontline/safety-net academic medical centers such as those linked to HBMSs are particularly well positioned to develop clinicians and researchers who have broad experience and in-depth expertise in many health disparity areas. Ideally, these experiences can be translated into new knowledge, useful research innovations, and effective strategies to improve health outcomes.

The Final Report of the Commonwealth Fund Task Force on Academic Health Centers noted the overriding purpose of academic health centers is to improve the health and health care of their communities and of the larger society in which they reside. Their social missions—teaching, research, provision of rare and high-technology services, continuous innovation in care, and care of the indigent—are significant contributors to public welfare and are likely to grow more important in the foreseeable future. Thus, the report recommends society should find ways to support institutions that serve these missions.¹⁴ This mission and need is most embodied in the HBMSs, which are national leaders in caring for patients marginalized by inequities within health care systems. Their faculty and students are highly sensitive to issues that underlie the propagation of community-level health disparities such as the injustices embedded within the social systems that influence health and health care, and the promotion and inculcation of community-level and personal responsibility for health- and health care-related behaviors.¹⁵⁻¹⁷

THE IDEAL HEALTH CARE SYSTEM

In 2005 the Commonwealth Fund established the Commission on a High Performance Health System rec-

Box 1. Commonwealth Fund Commission on a High Performance Health System: 7 Key Recommendations

- Extend health insurance to all.
- Pursue excellence in the provision of safe, effective, and efficient care.
- Organize the care system to ensure coordinated and accessible care for all.
- Increase transparency and reward quality and efficiency.
- Expand the use of information technology and exchange.
- Develop the health care workforce to foster patient-centered primary care.
- Encourage leadership and collaboration among public and private stakeholders.

ognizing the need for national leadership to revamp, revitalize, and retool the US health care system. The commission’s group of 19 distinguished experts representing diverse sectors of health care, business, state and federal policy, professional societies, and academia were charged with promoting a high-performing health system that provides all Americans with affordable access to high-quality, safe care while maximizing efficiency in its delivery and administration. Of greatest concern to the commission were the most vulnerable groups in society, including low-income families, the uninsured, racial and ethnic minorities, the young and the aged, and people in poor health. Unfortunately, the commission’s 7 keys to high performance (Box 1) represent a list of ideals that are presently unaffordable and unachievable in the present structure of the US healthcare system.

THE WAY FORWARD

What then is a realistic set of plans to enhance the infrastructure and stabilize the eroding existence of the HBMS. As a result of the historical institutionalization of racism into social fabric of America, the financial models of HBMSs are uniquely disadvantaged compared to most of their peer institutions. Unlike subspecialty-oriented, research-intensive institutions—with higher margin clinical services, an integrated hospital system, substantial research enterprises, sizeable endowments, and a critical mass of wealthy donors—HBMSs, which have historically been excluded from any such opportunities, are

faced with an unprecedented set of adverse factors that challenge their financial viability (Box 2). The lack of any significant dean’s or chair’s tax and limited endowment funds impede the creation of a rich training/service environment, as well as the ability to recruit and/or retain quality faculty. Consequently, HBMSs are disproportionately dependent on the various federal programs that support their core purpose. Unfortunately, most federal programs are not directed for core infrastructure, despite the public focus of the HBMS mission. And even in those rare instances where federal funding to support infrastructure is available, there is usually a requirement that infrastructure activities become “institutionalized” through resources that are known, a priori, not to exist, allowing HBMSs to have just enough resources to struggle. Four potential highly relevant questions with national implications for the development of a model of solutions include¹⁸ (1) What is the future role of HBMSs in maintaining quality healthcare and quality teaching programs in public hospitals/facilities serving predominantly poor communities?; (2) What is the role of partnership between HBMSs and predominantly white research-intensive institutions in the elimination of disparities in health such as collaborative postgraduate training strategies and leadership development?; (3) How can partnerships between HBMSs and predominantly white research-intensive institutions function equitably to focus on moving from discovery to delivery of the best medical findings and technology to communities in greatest need?; and (4)

Box 2. Key Reasons for Differential Core Funding Streams Across Medical Schools

Major Revenue Stream	Traditional Research-Intensive Medical Schools	Historically Black Medical Schools
Clinical revenue	Main source is tertiary care at a major medical center	Historically limited to relationships with county safety-net hospitals and/or set in low-resource, uninsured, and underinsured communities
Philanthropy and endowments	Wealthy alumni base and wealthy donors who received tertiary care at private medical facilities and provide large donations as their sign of gratitude	Social fabric of the nation has led to an alumni and community base without wealth, and the patients at the affiliated safety-net hospitals have no wealth to donate. Alumni providers disproportionately practice in low-resource communities, leading to much lower income and lower level of giving despite advanced education.
Tuition	Among the highest in the world	Modest to support enrollment of a diverse student base from mostly minority families who with rare exception have no generational wealth
Research	Research-intensive institutions leverage the base of wealth generated above to continually expand direct and indirect revenues, engage more philanthropic options, and lower the “unit cost” of core institutional operations	Emerging research activities are a major source of sustainability for core institutional operations, but the limited infrastructure is unable to sustain further significant research growth.

How do HBMSs create and/or maintain a culture of accountability in environments that disproportionately afflict major public hospitals where surrounding poverty and hopelessness are too often reaffirmed by low accountability?

We propose a series of recommendations over the next 5 years to increase HBMS infrastructure through structured public-private partnerships to address these concerns. Several elements of our key recommendations are listed below and summarized in Box 3.

GOVERNMENTAL AGENCIES

The role of the federal government is central to the public mission of HBMSs. Like many fundraising campaigns, the key is the concept of the “lead gift.” When an organization receives a large “lead gift,” it is expected that this will become the seed around which further charitable giving will crystallize. The federal government is positioned to make just such a substantial “lead gift” to support the HBMSs in several ways. By uniquely recognizing and addressing many of the key tenets for effective healthcare and health education reform, HBMSs should be recognized as irreplaceable national resources conducting a public mission by focusing on the training of clinicians, clinicians/scientists, and other health care professionals who have broad experience and in-depth expertise in providing high-quality, compassionate care to racial/ethnically diverse and socio-economic disadvantaged populations. As such, 3 key recommendations for federal support are (1) the establishment of a core operating infrastructure fund in the amount of \$16 million per year for each HBMS, (2) the donation of state-of-the-art electronic medical records systems (such as Department of Veterans Affairs electronic medical records systems) to HBMS affiliated safety-net health care facilities, and (3) the creation of a dedicated liaison office to coordinate a series public-private partnerships and overcome longstanding dual standards for HBMS. These lead efforts combined with expansion of core existing resources such as Title VII health professions training programs administered by the Health Resources and Services Administration of the US Department of Health and Human Services and funding from the US Department of Education under its Title III, Section 326 Historically Black Graduate Institutions, and the National Institutes of Health–National Center for Research Resources Research Centers in Minority Institutions and Extramural Construction Programs, and the National Center on Minority Health and Health Disparities, would enhance the ability of HBMS to forge the necessary partnerships for sustainability. This should also include the reactivation of terminated programs such as an urban underserved loan repayment program that could be modified to support those willing to serve at HBMS safety-net facilities, and the collaborative VA-HBMS collaborative research and research faculty development programs.

These efforts should be followed by additional support at the federal, state, and local government levels, such as ensuring adequate levels of disproportionate share payments reimbursements, Medicare capital indirect medical education payments, and federal Medicaid support for graduate medical education to HBMS and affiliated safety-net facilities. Also the creation of VA-partnered clinical satellite facilities and ongoing training and knowledge of transfer activities focused on quality care, safety, and comparative effectiveness could be of extreme value. In addition, key partnerships with information technology companies (eg, Dell, IBM, Hewlett Packard, Apple, Microsoft, Oracle); large health care system and insurance companies (eg, Department of Veterans Affairs, Aetna, BlueShield); pharmaceutical and medical device industries; and health and health care foundations (eg, Robert Wood Johnson, California Endowment) or foundations with a commitment to addressing health needs as part of their philanthropic mandate (eg, Kellogg Foundation), would create the public-private partnerships required for sustainability.

The above efforts will create the requisite environment for philanthropy that could be leveraged to a tiered approach to giving commensurate with and as a mechanism to accelerate the institutional maturity of each HBMS. A tiered approach to philanthropic community might consist of creating health leadership institutes (such as supporting the creation of a Satcher Leadership Institute on each HBMS campus, maybe each with some similar and different core areas of focus) dedicated to increasing the pipeline of high-quality minority clinician scientists and health leaders to insure the succession of leaders at these schools and mitigate the “brain drain,” as many research-intensive institutions create substantial packages for minority faculty in response to addressing diversity issues. A second tier might consist of creating “translational science institutes” as public-private partnerships and an integrated HBMS–research-intensive institution mentoring network for developing research focused clinicians/scientists. A third tier might consist of creating educational institutes focused on training students and teachers to ensure the highest level of pedagogy is infused into a curriculum steeped with cultural sensitivity, compassion, and a unique understanding the social determinants of health at both a personal and community level. There should also be integrated postgraduate training consortia creating subspecialty fellowships beyond the core programs both within the HBMS consortia and select partner research-intensive institutions.

Without these systems, HBMS partner medical centers will fall further behind existing CMS requirements for reporting and quality, resulting in reduced reimbursement at the end of the year and less capital for programs, positions, equipment, and other new technology. Each of the above recommendations should be refined, implemented, and shepherded by an advisory group that

includes senior representation of the described organization (1 member of executive leadership and possible 1 board member), each HBMS (dean, senior associate

dean or equivalent and 1 board member), and a small cohort of select recognized leaders in health care and the federal liaison. An annual report would be generated

Box 3. Key Recommendations for an Integrated Public-Private Approach to Supporting Historically Black Medical Schools⁹

Major Partner	Recommendation
Federal government	<ol style="list-style-type: none"> 1. Core operating infrastructure fund in the amount of \$16 million per year for each HBMS (1/10th of mean public medical school revenue from practice plans, hospital purchased services, and support, federal appropriations, and state and local government and parent university support at \$155.6 million/year²⁰) 2. Donation of state-of-the-art electronic medical records (EMR) systems (eg, Department of Veterans Affairs EMR) to HBMS-affiliated safety-net health care facilities 3. Creation of a HBMS public-private partnership liaison office 4. Expansion of core existing resources such as US Department of Health and Human Services Title VII health professions training programs, US Department of Education under its Title III, Section 326 Historically Black Graduate Institutions, National Institutes of Health–National Center for Research Resources Research Centers in Minority Institutions and Extramural Construction Programs, and the National Center on Minority Health and Health Disparities 5. Reactivation of terminated programs such as urban underserved loan repayment program, which could be modified to support those willing to serve at HBMS safety-net facilities, and the collaborative Veterans Affairs–HBMS collaborative research and research faculty development programs 6. Creation of Veterans Affairs–partnered clinical satellite facilities and ongoing training and knowledge transfer activities focused on quality care, safety, and comparative effectiveness 7. A health care reform and/or office of urban affairs liaison to promote and support HBMS partnerships with governmental agencies, businesses, private health care facilities/hospitals, etc 8. Work with Centers for Medicare and Medicaid Services (CMS) for modifying sponsored postgraduate training positions to ensure safety-net facilities and partner HBMSs have authority to redirect these positions (traditionally linked to inpatient care) locally to enhance existing and/or create new training partnerships to address the clinical care and training needs of the local community consistent with new models of distributed, outpatient focused health care delivery.
Federal, state, and local governments	<p>Ensuring adequate levels of disproportionate share payments reimbursements, Medicare capital indirect medical education payments, and federal Medicaid support for graduate medical education to HBMS and affiliated safety-net facilities</p> <p>HBMS partnership with state and local government health education funding, or creating new models of public-private partnerships for providing quality care in an academic training model for underserved communities</p>
Information technology companies	<p>Structured partnerships with software/hardware companies such as Dell, IBM, Hewlett Packard, Apple, Microsoft, Oracle, etc to ensure ongoing high-quality information technology and informatics infrastructure for training, clinical care, research, resource discovery, and networking</p> <p>Creation of a special portfolio dedicated to capacity building and infrastructure enhancement ranging from placement of satellite facilities and partnered research projects to ongoing training and knowledge transfer activities</p>
Large health care system and insurance companies	<p>New and/or expanded partnerships with health care and insurance companies, such as the Department of Veterans Affairs, Aetna, BlueShield, Kaiser, can help diversify clinical revenue streams, enhance clinical data systems and quality care initiatives, as well as provide access to new training sites</p> <p>Creation of a special portfolio dedicated to capacity building and infrastructure enhancement ranging from placement of partnered clinical satellite facilities and ongoing training and knowledge transfer activities focused on quality care, safety, and comparative effectiveness</p>

with a summary compilation report developed for (but not limited to) the *Journal of the National Medical Association* to ensure dissemination and awareness of progress to the major source of stakeholders.

CONCLUSION

In 2007 the *New England Journal of Medicine* Shat-

tuck Lecture by Dr Steven A. Schroeder focused on improving the health of American people, noting “that since all the actionable determinants of health—personal behavior, social factors, health care, and the environment—disproportionately affect the poor, strategies to improve national health rankings must focus on this population.”¹⁹ Dr Schroeder’s article reinforces the compel-

Box 3. Key Recommendations for an Integrated Public-Private Approach to Supporting Historically Black Medical Schools^o (cont)

Major Partner	Recommendation
Pharmaceutical and medical device industries	Formal alliances with pharmaceutical and medical device industries for research infrastructure and training as well as enhanced support for developing more sophisticated intellectual property and technology transfer systems
Health and health care foundations	Satellite facilities on HBMS campuses to promote mini research incubators, infuse training opportunities, support construction of buildings, and provide direct resources for faculty and staff positions Create a structured approach for partnering with many health and health care foundations (eg, Robert Wood Johnson, California Endowment) or foundations with a commitment to addressing health needs as part of their philanthropic mandate (eg, W.K. Kellogg Foundation) The creation of a special portfolio dedicated to capacity building and infrastructure enhancement ranging from placement of satellite facilities, supporting traditional faculty development, academic leadership development, institutes such as cultural competency, quality care, comparative effectiveness, minority biomedical and health professional pipeline programs or other initiatives that create synergy between HBMS mission and the foundation’s mission
Philanthropy and research-intensive institutions	Creating health leadership institutes (such as supporting a Satcher leadership Institute on each HBMS campus) dedicated to increasing the pipeline of high-quality minority clinician scientists and health leaders to ensure the succession of leaders at these schools, to mitigate the “brain drain” to research-intensive institutions, and enhance exchange of faculty across HBMS and research-intensive institutions Creating translational science institutes as public-private partnerships and an integrated HBMS–research-intensive institution mentoring network for developing research focused clinician scientists Creating health professional educational institutes focused on training students and teachers to ensure the highest level of pedagogy is infused into HBMS curriculum that are already steeped with cultural sensitivity, compassion and a unique understanding of the social determinants of health at both a personal and community level Creating an integrated postgraduate training consortia creating a collaborative subspecialty fellowship model beyond the core programs both within the HBMS consortia and with select partner research-intensive institutions and/or Veterans Affairs facilities
General approach	Each of the above recommendations should be refined, implemented, and shepherded by an active advisory group that includes senior representation of the described organization (1 member of executive leadership and possibly 1 board member), each HBMS (dean, senior associate dean or equivalent, and 1 board member), and a small cohort of select recognized leaders in health care. An annual report would be generated with a summary compilation report developed for (but not limited to) the <i>Journal of the National Medical Association</i> to ensure dissemination and awareness of progress to the major source of stakeholders.

Abbreviation: HBMS, historically black medical school.

^o An irreplaceable national resource conducting a public mission by focusing on the training of clinicians, clinicians/scientists, and other health care professionals who have broad experience and in-depth expertise in providing high-quality, compassionate care to racial/ethnically diverse and socioeconomic disadvantaged populations.

Table 1. Mean Revenue Source for Medical Schools in Millions of Dollars^a

	Public Medical Schools	Private Medical Schools
Practice plans ^b	\$71	\$129
Hospital purchased services and support	\$36	\$56
Federal appropriations	\$2	\$0
State and local government and parent university support	\$46	\$3
	\$155	\$188
Additional revenue sources		
Tuition and fees	\$9	\$27
Endowment ^c	\$5	\$21
Gifts ^c	\$7	\$19
Miscellaneous sources ^d	\$22	\$31
Total grants and contracts	\$101	\$173
Federal research grants and contracts	\$64	\$121
Direct	\$55	\$87
Facilities and administrative/indirect costs	\$9	\$34
Other grants and contracts	\$37	\$52
Direct	\$35	\$47
Facilities and administrative/indirect costs	\$2	\$5
Total revenues	\$298	\$459

^a Fiscal year 2007. Prepared by AAMC June 2008. Revenues Supporting Programs and Activities at 126 Accredited US Medical Schools FY2005-FY2007. Prepared by AAMC, June 2008. http://www.aamc.org/data/finance/2007tables/fy2007_medschool_fin_tables.pdf. Accessed May 18, 2009.²⁰

^b Includes practice plan, network affiliation, and other medical service organization funds. Practice plan revenues from affiliated hospitals are reported with the hospital purchased services & support: \$523 million recorded revenue for public schools and \$513 million recorded revenue for private schools.

^c Includes restricted and unrestricted funds.

^d Includes sales and services, royalties, and consulting. Totals may not sum due to rounding.

ling case for concentrating on the less fortunate, a strategy that should attenuate health disparities and the core mission of HBMSs. However, it is clear that substantial changes in health education policy and funding are needed to ensure HBMS as well as other minority-serving medical and health professional schools can continue to produce a high-quality and diverse health professional workforce necessary to maintain the health of an increasingly diverse nation. As a model initiative, our recommendations can serve as a nidus for focused partnerships with legislative and business leaders that are urgently needed to ensure the sustenance of HBMS and their partner health professions to maintain their legacy of providing not just quality care, but health justice and compassion to the communities in greatest need.

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