College for all Texans

Texas Higher Education Coordinating Board

Texas Public Health-Related Institutions Cost Study

FY 2008 & FY 2009

July 2010

Division of Planning and Accountability
Finance and Resource Planning

Mission of the Coordinating Board

The Texas Higher Education Coordinating Board's mission is to work with the Legislature, Governor, governing boards, higher education institutions and other entities to help Texas meet the goals of the state's higher education plan, *Closing the Gaps by 2015*, and thereby provide the people of Texas the widest access to higher education of the highest quality in the most efficient manner.

Philosophy of the Coordinating Board

The Texas Higher Education Coordinating Board will promote access to quality higher education across the state with the conviction that access without quality is mediocrity and that quality without access is unacceptable. The Board will be open, ethical, responsive, and committed to public service. The Board will approach its work with a sense of purpose and responsibility to the people of Texas and is committed to the best use of public monies. The Coordinating Board will engage in actions that add value to Texas and to higher education. The agency will avoid efforts that do not add value or that are duplicated by other entities.

Texas Public Health-Related Institutions

Cost Study for Fiscal Years 2008 & 2009

Executive Summary

The 81st Texas Legislature, Senate Bill 1, Rider 51 requires the Texas Higher Education Coordinating Board (Coordinating Board) to "…conduct a cost study to validate the relative weights…" used for the health-related institutions' Instructions & Operations (I&O) Formula.[1] The provision calls for the study to provide an "all funds" analysis of costs and to address the differences between the health-related and general academic institution formula matrices for the nursing, pharmacy, and allied health disciplines.

Coordinating Board staff worked with representatives of health-related institutions (HRIs) to review methodologies for a cost study to (a) validate the weights in the HRI formula matrix, and (b) compare differences in funding between health-related institutions (HRIs) and general academic institutions (GAIs) for specific disciplines.

In the absence of a detailed cost accounting system at each HRI that specifically supports educational costing and funds flows, the cost study conducted for this report is not truly a "cost study" but rather more of an allocation of expenses. Great strides, in a very short time frame, have been made to develop consistency across institutions in these allocations, but the leadership of each HRI has reservations about the overall reliability of these allocations for the purpose of evaluating – and possibly changing – formula weights. Additionally, there are principled concerns as to which HRIs' expenses are most appropriately included in the cost study. While some of these same questions and concerns could be raised in relation to the GAIs' cost study, they are more apparent and significant in dealing with the HRIs because of the diverse missions and roles of HRIs and the diverse financial structure of each HRI. Specifically, while all HRIs in the cost study have substantial research programs, some are significantly larger than others. Also, and perhaps more importantly, the size of clinical programs vary greatly, with some HRIs having revenue from patient care services three or more times larger than others. Additionally, some HRIs operate their own hospitals, which make them directly responsible for some expenses that are not reflected in the financial statements of other HRIs.

Expenses from eight HRIs (The University of Texas Health Science Center at Tyler does not yet offer academic degrees) are included in the cost study and pertain to seven different academic disciplines (within the Allied Health discipline there are significant differences in program types). One institution offers only one program in a single discipline, while two offer programs in six different disciplines. With the exception of the institution offering just a single program, four institutions have more than 30 percent of their students in a single discipline. Therefore, variations among this group of HRIs is large, while the total number of HRIs is much smaller

[1] 81st Texas Legislature, General Appropriations Act, page III-62. Cost Matrix Study. Out of the funds appropriated above the Higher Education Coordinating Board shall conduct a cost study to validate the relative weights contained in the matrix in Section 29 (1) of the Special Provisions Relating Only to Institutions of Higher Education and report the results of the study to the Legislative Budget Board and the Governor's Office no later than September 1, 2010. The study should provide an "all funds" analysis of the Health Related Institutions' costs. All costs should be based on data in each institution's Annual Financial Report. The study should also address the differences between funding for nursing, pharmacy, allied health or any other overlapping disciplines between the General Academic matrix and the Health Related Institution matrix.

than that of GAIs. These factors all tend to increase the heterogeneity of HRIs, as a group, versus GAIs, as a group.

In partnership with HRI staff, the Coordinating Board considered many methodologies for allocating expenditures as part of this "cost study." Because the intent was to *"validate the relative weights"* of the current formula matrix, a fundamental question was: Which revenues should be included in the study? Should only state appropriations be part of the study, to reflect what the formula has historically supported? Should the study include revenue outside of the appropriations process, even though state funding has long recognized that certain programs have had access to revenues beyond those appropriated?[2] Throughout the discussions, there was great concern that the inclusion of revenues from outside of the formula process to modify formula weights could have a significant impact on state appropriations, at least for some programs.

In other words, within the HRI formula, state appropriations have historically funded programs at different levels of the relative cost to provide support for the education and training for that program. Institutions/programs often generated outside revenue (including clinical, philanthropic, and investment income) to make up the difference. Medical education is likely the best example of faculty members frequently generating significant amounts of patient care revenues to help cover the difference between state support and actual costs. Additionally, certain medical faculty's frequent performance, simultaneously, of clinical and teaching (and, occasionally, even research) related activities, further complicates completion of an educational cost study. A shift in state appropriations to fund all programs at the same percentage of expected costs — directing more state appropriations toward medical education at inevitably the expense of other programs- would leave those programs with less access to outside revenue worse off. Additionally, institutions with significant percentages of their overall enrollment in programs lacking access to outside revenue would be adversely affected by state appropriations flowing to other institutions/programs, with little ability to make up for these lost funds.

There are differences in what the HRI and GAI I&O formulas generate for what appear to be similar degree programs. As expected, there are differences in expenses related to these degree programs. More importantly, there is concern that isolating a small "slice" of state support for a specific program and comparing across different types of institutions without context to total state funding at the institutional level is misleading and could result in over or under support for the institution.

Therefore, the Coordinating Board recommends that this cost study not be used to modify the HRI I&O formula matrix at this time. Any results of this cost study and/or future cost studies should be provided to the HRI Formula Advisory Committee convened by the Coordinating Board. This advisory committee should review the results of any such cost studies to determine trends in expenses by program and level and make recommendations to the Coordinating Board regarding changes in the formula matrix.

[2] The current weights in the HRI I&O Formula are a by-product of the formula established by the Texas Legislature in 2001. The weights were originally the result of converting existing state appropriations by program, some of which were based partially on average salaries, into the new formula to allocate state appropriations to HRI. These appropriation levels represented the State's General Revenue support for the programs, not the total cost of providing the program.

Background

Since the cost study of the general academic institutions (GAIs) has been in place since 2005, it is helpful to understand how it was developed over a period of several years and how it allocates costs to GAI disciplines.

In 2002, the Coordinating Board directed the GAI Formula Advisory Committee to develop a cost study to validate the *relative* weights in the GAI formula matrix. A methodology was developed and presented to the Coordinating Board in April 2004. The first cost study report, published in May 2005, included expenditures from Fiscal Years 2002, 2003, and 2004. The 79th Texas Legislature, Regular Session, 2005 began the phased-in modification of the weights for the 2006-07 biennium based on the cost study.

The objective of the GAI cost study was to develop an expenditure-based methodology to distribute I&O formula funds. The GAI study included all funds except Auxiliary Funds and recommended an allocation of these funds by operating expense elements: instruction, research, academic and institutional support, and student services. Because the GAI formula matrix includes 21 disciplines with up to five instructional levels, total expenses are assigned by discipline and level. Faculty (and teaching assistant) salary data, which are tied to semester credit hours (SCH), are used to allocate Academic Support costs by discipline and level of instruction and Departmental Operating Expenses by level of instruction. Expenses for Institutional Support and Student Services are allocated based on semester credit hours.

After all expenses are allocated to the appropriate discipline and instructional level, they are divided by the related SCH to determine the "cost per SCH" for each element in the matrix. To establish the relative weights within GAIs, the SCH rates are divided by the undergraduate lower-level liberal arts rate. The higher the undergraduate lower-level liberal arts expenses, the lower the other weights. Because the 2004 study addressed the "relative" weights, a discipline could show an increase in expenses on a per SCH basis, but have a reduction in its relative weight.

The 81st Texas Legislature, Regular Session, 2009 included a rider in the General Appropriations Act requiring an "all funds" analysis of costs to validate the "relative" weights in the HRI I&O formula matrix. The report is due September 2010. As noted in the Executive Summary, there are numerous questions about what should be included in this cost study. For example the term "all funds" could mean: (A) the "all funds" method of finance for the I&O Formula which includes General Revenue and the General Revenue-Dedicated; (B) any revenue an institution has access to, regardless of whether that revenue is allocated by the I&O Formula or explicitly in the Appropriations Act; or (C) some variation of the two.

One concern about using definition "(A)" of "all funds" is the incomplete picture it may provide of what it actually costs to educate a student in a particular program. It would, however, reflect how institutions spend formula appropriations. Another shortcoming of this definition is that the expenditure study would likely penalize programs with significantly increasing enrollments. For instance, the formula funding amounts available to institutions for both FY 2008 and FY 2009 (i.e., years included in this expenditure study) were based on institutions' enrollment levels from summer 2006, fall 2006, and spring 2007. The per Full-Time Student Equivalents (FTSE) calculations in this study were made, however, using the number of students actually enrolled in FY 2008 and FY 2009. While institutions have the ability to spend formula funds outside the program area in which the formula funds are "earned," the finite amount of formula

appropriations in the short term could imply that programs with increased enrollments are relatively less expensive on a per student basis. Conversely, programs with stable or declining enrollment during the biennium, but relatively fixed costs in the short term, would likely show higher per student expenses and thus potentially be rewarded with increased weights.

The concern about using definition "(B)" of "all funds" is the imbalance between the historical formula allocation and the expenditure of revenue outside the formula allocation. The original weights, and by extension the I&O Formula, were not intended to cover the total cost of educating students in each discipline. Institutions/programs supplemented these formula appropriations with additional revenues. Adjusting the I&O Formula matrix based on "all funds" that an institution has access to would be a fundamental shift from the historic formula purposes and could result in a dramatic change in the allocation of state appropriations among programs/institutions. Additionally, if revenue outside the formula allocation were included, additional challenges would be created. For example, institutions would need to agree on the definition of "eligible expense". The funding generated through the care and treatment of patients has not been included in the formula. Collecting information and developing an equitable allocation of revenue from patient care services attributable to education would be a complex and lengthy undertaking.

Some revenues from patient care services are used to support medical student education and training. Without medical students, much of this revenue would not exist. Therefore, should all costs related to revenues from patient care services, including administration and liability insurance, be included as a cost related to medical education? Additionally, clinical training is part of the education of most health professionals. Because institutions which own hospitals are directly responsible for related expenses, would certain institutions include these expenses while institutions educating the same types of students in affiliates' hospitals not report these expenses?

The table shown in Appendix C provides a summary comparison of the existing weights for FY 2010-11 with the weights that result from the inclusion of all revenue. It was noted that in some cases the costs of some disciplines can be significantly underestimated as a result of excluding these items. However, ultimately, the cost study workgroup recommended the cost study include expenditures in addition to what are generated by the I&O Formula, but to exclude expenditures covered with revenue from patient care services and with external grants.

HRI Cost Study Methodology

A preliminary "cost study" methodology was presented at the October 2009 Formula Advisory Committee (FAC) meeting. The FAC requested that each institution submit FY 2008 expenses based on the preliminary methodology. The results of the reported FY 2008 expenditures were discussed at the November FAC meeting. The FAC appointed a workgroup to refine the methodology to determine the appropriate revenue streams and to produce consistent reporting and allocation of expenditures. The cost study workgroup met in November, January, and March to meet this charge. The methodology adopted by the workgroup is outlined as follows:

Step 1: Create a control total to determine the amount of expenditures to be included in the cost study.

- Include Instruction, Academic Support, Student Services, and a proportional share of Institutional Support included on the annual Sources and Uses document submitted to the Coordinating Board.
- Adjust the Instruction, Academic Support, and Student Services costs to create reporting consistencies among the institutions and to better align the expenditures with the I&O formula. These adjustments include:
    - Reclassify faculty salaries recorded as Hospitals and Clinics to Instruction in order to create consistency among the institutions.
    - Exclude expenditures for Graduate Medical Education (GME). This includes any salaries and benefits paid directly to the resident physicians. It also includes any centralized GME office expenditures and faculty salary expenditures. The faculty salary expenditures must be at least equal to $17,386 per resident, which is the cost of faculty instruction determined in the 2004 GME Cost Study inflated for the Consumer Price Index (CPI).
    - Exclude expenditures for patient business operations, including centralized business operations and front desk billing staff in the departments, medical records, and nursing staff.
    - Exclude one-time startup expenditures.
    - Include the costs of graduate student stipends that may be included in research.
    - Include faculty salaries associated with training graduate students that are reported in research.

Step 2: Allocate the control total between the disciplines. Expenditures not directly tied to a discipline, such as library, student services, and institutional support, are allocated based on the percent of direct expenditures for each discipline.

Step 3: The Coordinating Board combined the expenditures and calculated an expenditure per FTSE and weights for each discipline, with Allied Health remaining at a base of 1.000.

The institutions have utilized this methodology using expenditures from all revenues sources to be included as a reference point in this report. The recommended methodology excludes any expenditures covered by revenue from patient care services. It also excludes faculty and graduate student stipend expenditures previously reported as research and funded from external sources.

Differences between Health-Related and General Academic Institutions

While there are differences in what the respective I&O formulas generate for HRIs and GAIs, it is important to recognize the differences in the respective institutions. After presenting the differences in the I&O formulas, the following sections highlight some of differences, including state support, other revenue sources and uses of that revenue, and program costs.

A significant issue for any cost study is the allocation of expenditures not directly tied to a discipline. Academic and institutional support, student services, and the library are just a few examples of large expenditures to allocate across disciplines. While the GAIs cost study used a combination of faculty salaries and SCH/headcount to help allocate such costs, health institutions used a different approach driven by overall direct expenditures related to the discipline. Because lower-division liberal arts at the GAIs—the weight that all others are measured against—represents more than 25 percent of all general academic semester credit hours, this methodology allocates a substantial portion of these expenses into the baseline weight. Two consequences for the general academic matrix are less expenditures allocated to remaining disciplines and an increase in the denominator for determining all other weights. These differences in methodology have consequences for what is identified as a per SCH/per FTSE cost by discipline, and as a result, impacts the relative weights within each matrix. This is another reason why the comparison of expenses between types of institutions would be inappropriate.

Instruction and Operations Formulas

The formulas for HRI and GAI are based on different criteria with the intent to allocate two distinct pots of money within the respective types of institutions, not between specific disciplines across types of institutions.

For the 2008-09 biennium, the GAIs I&O formula allocated $3.33 billion across 35 institutions based on semester credit hours modified by 68 different weights (21 disciplines, most with four instruction levels). General Academic Institutions report information at the course level and the GAIs I&O Formula is calculated as follows:

Semester Credit Hours X Discipline and Level Relative Weight X Rate

Semester credit hours are a measurement of how many class hours per week an institution delivers. On top of what is generated by the GAIs I&O formula, an additional weight of 10 percent is added to lower-division and upper-division SCH taught by tenured and tenure-track faculty.

The current HRIs formula allocates funding through a distinctively different approach. For the 2008-09 biennium, the HRIs I&O formula allocated $929 million across eight institutions based on FTSE modified by seven different weights (seven programs with a single weight each). Health-Related Institutions report coursework based on a student's program of study, and the HRIs I&O Formula is calculated as follows:

(FTSE X Programs Weight X Rate) + Small Campus Supplement

A single FTSE is determined as follows: 30 undergraduate SCH; 24 masters' SCH; and 18 doctoral SCH. A professional student (medical or dental) equals one FTSE. Institutions with less

than 200 FTSE at a particular location may receive additional funding from the "Small Campus Supplement."

Even though certain degree programs may appear to be consistent across HRIs and GAIs, it is unclear whether the coursework/student data is treated the same for formula funding. For example, the GAIs matrix has a "Special Professional" instructional level which is applied to pharmacy, health services, and optometry (law and veterinary medicine as well). For formula funding, the Pharm D program at a HRI is reported as "masters" level and reported as "Special Professional" for a GAI. Texas Tech University Health Sciences Center offers doctoral degrees in pharmaceutical sciences, but out of its Graduate School of Biomedical Sciences. Certain HRI doctoral programs, such as nursing practice and communication disorders, are reported as "masters" level by the Coordinating Board; for the GAIs formula, the level is determined by the lower of the class level or the student level.

Due to the different number of semester credit hours used to determine a FTSE, the level of the program is a key for the HRIs. The amount each formula generates for an institution is a product of the number of SCH/FTSE enrolled, the weight established for each discipline in the respective formulas and the funding rate, which is a by-product of how much the Legislature is willing to appropriate. The current funding levels generated by the HRI I&O Formula for the 2010-11 biennium are presented in Table 1.

Table 1
HRI I&O Formula Revenue - 2011-11 Biennium

Discipline	HRI Formula Weight (per FTSE)	HRI Formula Funding (per FTSE)
Allied Health	1.000	$ 11,129
Biomedical Science	1.018	$ 11,329
Nursing	1.138	$ 12,664
Pharmacy	1.670	$ 18,585
Public Health	1.721	$ 19,152
Dental Education	4.601	$ 51,203
Medical Education	4.753	$ 52,894
Amounts above do not include funding related to any Small Campus Supplement a HRI might receive.		

Discipline Comparison for Allied Health, Nursing, and Pharmacy

When the Health-Related Institutions' I&O formula was established for the 2000-01 biennium, the weight for nursing was based on historical funding levels of the HRIs, which reflected nursing salary related costs. The disparity between what is provided for nursing programs in the respective formulas was smaller than it is now. The differences that currently exist between the two formulas fields may have more to do with the methodology of the Cost Study applied to the general academic matrix.

This is a notable result because the decline in the general academic nursing weights has occurred when each GAI cost study shows the institutions have spent more money per nursing student in each year. The GAIs Cost Study looks at expenses not in context of what HRIs spend on nursing, but what the GAIs are spending in context with other disciplines at GAIs. Because

of concentrated efforts to expand nursing enrollment and because of the fact that so much of the GAI overhead expenses are allocated to lower-level liberal arts because of the volume of SCH, the GAI weights for nursing continue to decline.

The comparisons of Allied Health/Health Services and Nursing are shown below in Tables 2 and 3 respectively.

Table 2
HRI and GAI I&O Allied Health/Health Services
Formula Revenue Comparisons

	FY 2000-01		FY 2010-11	
Allied Health/ Health Services	HRI Formula Funding (Yearly per FTSE)	GAI Formula Funding (Yearly per FTSE)	HRI Formula Funding (Yearly per FTSE)	GAI Formula Funding (Yearly per FTSE)
Lower Division	N/A	$ 4,687	N/A	$ 2,313
Upper Division	$ 11,383	$ 5,651	$ 11,129	$ 3,694
Masters	$ 11,383	$ 8,453	$ 11,129	$ 4,791
Doctoral	$ 11,383	$ 15,659	$ 11,129	$ 9,504
Special Professional [1]	N/A	N/A	N/A	$ 5,761

[1] The Special Professional level was funded at a weight of 3.86, although it is published as 8.49 in the matrix in the Appropriation Act.

GAI Formula amounts are converted to FTSE for purposes of this comparison.

Amounts above do not include funding related to any Small Campus Supplement a HRI or Teaching Experience Supplement a GAI might receive.

The amounts above reflect GR and GR-D amounts generated by the respective formulas.

The Allied Health discipline encompasses a wide variety of programs, ranging from bioinformatics to nutrition to cytotechnology and radiation therapy. Other HRIs such as The University of Texas Health Science Center at Houston have concentrations in dental hygiene and informatics for the Allied Health discipline. Given the disparity of Allied Health programs for HRIs and Health Services for GAIs, an overall comparison is not meaningful.

Table 3
HRI and GAI I&O Nursing Formula Revenue Comparisons

	FY 2000-01		FY 2010-11	
Nursing Program	HRI Formula Funding (Yearly per FTSE)	GAI Formula Funding (Yearly per FTSE)	HRI Formula Funding (Yearly per FTSE)	GAI Formula Funding (Yearly per FTSE)
Lower Division	N/A	$ 8,019	N/A	$ 3,619
Upper Division	$ 12,954	$ 8,689	$ 12,664	$ 4,571
Masters	$ 12,954	$ 8,480	$ 12,664	$ 7,060
Doctoral	$ 12,954	$ 15,992	$ 12,664	$ 11,911

GAI Formula amounts are converted to FTSE for purposes of this comparison.

Amounts above do not include funding related to any Small Campus Supplement a HRI or Teaching Experience Supplement a GAI might receive.

The amounts above reflect GR and GR-D amounts generated by the respective formulas.

As indicated previously, the matrices capture pharmacy program data differently, but Table 4 on the next page, presents a comparison.

Table 4
HRI and GAI I&O Pharmacy Formula Revenue Comparisons

Pharmacy Program	FY 2000-01 HRI Formula Funding (Yearly per FTSE)	FY 2000-01 GAI Formula Funding (Yearly per FTSE)	FY 2010-11 HRI Formula Funding (Yearly per FTSE)	FY 2010-11 GAI Formula Funding (Yearly per FTSE)
Lower Division	N/A	$ 6,533	N/A	$ 1,325
Upper Division	N/A	$ 7,578	N/A	$ 7,911
Masters [1]	$ 19,010	$ 9,865	$ 18,585	$ 29,657
Doctoral [2]	$ 11,588	$ 18,726	$ 11,329	$ 33,079
Special Professional [1]	$ 19,010	$ 17,547	$ 18,585	$ 5,657

[1] PharmD is funded at the Masters Level for HRI and Special Prof. for GAI.

[2] For HRI the Pharmaceutical Science Ph.D. is funded at the Biomedical Science weight.

GAI Formula amounts are converted to FTSE for purposes of this comparison.

Amounts above do not include funding related to any Small Campus Supplement a HRI or Teaching Experience Supplement a GAI might receive.

The amounts above reflect GR and GR-D amounts generated by the respective formulas.

The changes in the amounts of HRI formula funding for Allied Health, Nursing, and Pharmacy are only attributable to the change in state funding level, which decreased the I&O formula generated for the HRIs. The change in GAI amounts is attributable to funding level changes as well, but more importantly, the change is also the result of the GAI cost study. A decrease in what the GAI formula generates for a discipline or instruction level does not necessarily imply that per student expenditures decreased; however, it suggests that they did not increase as much as other disciplines and instructional levels increased.

State Appropriations

The overall state appropriations differ significantly between HRI and GAI. The Legislative Budget Board's *Fiscal Size-Up 2008-09* references to All Funds state appropriations include General Revenue, General Revenue-Dedicated (certain tuition and fee revenue), and Other Funds (hospital patient income). According to the *Fiscal Size-Up 2008-09*, general academic institutions and system offices received more than $5.9 billion in All Funds appropriations—$4 billion of which is allocated through the formulas. Of this $4 billion, 81 percent ($3.4 billion) was allocated by the I&O Formula (another 2.5 percent allocated by the "teaching experience supplement").

Of the $7.4 billion in All Funds appropriations to HRIs, $1.8 billion was allocated through the formulas. Of this $1.8 billion, $930 million was allocated by the I&O Formula. Much of the huge disparity between All Funds appropriations between HRIs and GAIs may be explained by the estimated $5.1 billion in hospital income which is included in the Appropriations Act but is not part of the formula funding process ($4.1 billion of the estimated $5.1 billion is attributable to The University of Texas M.D. Anderson Cancer Center).

This difference in All Funds appropriations and the percentage of these appropriations allocated for the support of I&O speaks to the different missions of health-related and general academic institutions.

Sources and Uses

A review of the Coordinating Board's *Sources and Uses* report highlights some of the disparities between access to revenue and uses of those funds between HRI and GAI. State funding,[3] including General Revenue, contracts and grants, Research Development Fund, Higher Education Assistance Fund, and Available University Fund represented 35 percent of the universities' total revenues in both FY 2008 and FY 2009. Of the $3.4 billion in state funding for GAI in FY 2008, $1.25 billion in General Revenue was allocated through the GAI I&O formula.[4] The relative weights established in the GAI expenditure study are a key driver to the I&O formula, which accounted for 12.7 percent of the GAIs' total revenues in FY 2008 and represents 21.5 percent of the expenditures captured in the GAI Cost Study for FY 2008.

State funding represented 18 percent of the HRIs' total revenues in FY 2008 and FY 2009. Of the $1.5 billion in state funding for HRIs in FY 2008, $435.5 million in General Revenue was allocated in the HRI I&O formula. This $435.5 million was 5.2 percent of the HRIs' total revenues in FY 2008 and represents 48.9 percent of the expenditures captured in the HRI Cost Study.

Another highlight in the differences between HRI and GAI is tuition and fee revenue. The $125 million in tuition and fees collected by HRIs represented 1.52 percent of total revenue to HRI institutions in FY 2008, as compared to the $2.64 billion collected by GAI, which represented 26.7 percent of GAI total revenue.

Consistent with their differing missions, there are significant differences in how HRI and GAI use the available revenue. For HRIs, the three largest categories of expenses are: Hospitals and Clinics (38 percent), Instruction (22 percent), and Research (16 percent). For GAIs, the three largest categories are: Instruction (32 percent), Auxiliary Enterprises (11 percent), and Research (10 percent).

Variations in Programs and Costs

As described in the Executive Summary, HRIs are different in the structure of their clinical programs, and the size of the clinical programs at each HRI set them apart from the GAIs. The size of the clinical program necessary to support the education and training of students (as well as residents and fellows) and to provide patient care has an impact on expenses across HRIs.

The HRI I&O Formula supports not only the instruction for a particular program, but supports the institutions overall administrative costs, including institutional support, academic administration, student services, and library costs. These fixed overhead costs are spread over an average of less than 2,400 students at HRIs, compared to an average of more than 15,000 students at general academic institutions. On a per student basis, overhead cost would be higher at an HRI because of fewer students at the HRI to bare those costs.

On a whole, HRIs are more likely to be research intensive institutions and to have a greater percentage of their students in masters' and doctoral level programs, as opposed to undergraduate students. As a result, the overall per student cost of a HRI program is higher

[3] In this instance, "State Funding" includes General Revenue, Contracts and Grants, Research Development Fund, Higher Education Assistance Fund, and Available University Fund.
[4] The $1.25 billion in General Revenue includes funding for the Teaching Experience Supplement.

because of the level of faculty expertise, the need for lower student to faculty ratios for graduate programs versus undergraduate programs, and other resources that are necessary for graduate level students.

Both factors described in the two previous paragraphs were recognized as a reason for cost differences among GAI in the first "Texas Public University Cost Study" (Texas Higher Education Coordinating Board, May 2005):

> *"As expected, the research-oriented institutions tend to be relatively costly institutions on a total, full-time student equivalent (FTSE) basis. However, institutions with fairly small student populations also tend to be relative costly on a total FTSE basis because of the minimum requirements needed to provide higher education services…"*

The GAI formula matrix has a much broader array of programs and levels in the GAI formula matrix to allocate expenses (68 weights in 2008-09, 70 weights in 2010-2011) as compared to the HRI formula matrix (seven weights). The concentration of weights in the HRI formula matrix would lead to higher weights for HRIs. Also, differences in how the two cost studies allocate related administration, students services, and library expenses across the disciplines leads to very different outcomes. Further, the cost study takes the averages of expenditures—not the lowest or the highest. The large mix of GAIs spread these costs across a large array of cells in the matrix, thus reducing the extremes.

Findings and Implications of HRI Cost Study

The HRI Cost Study was developed and the data compiled in a relatively short timeframe given the complexity and significance of the issue. The development of the cost study brought to light the tremendous differences between the HRIs. These include the diverse missions and roles of HRIs and the diverse financial structure of each HRI. While all HRIs in the cost study have substantial research programs, some are significantly larger than others. Also, and perhaps more importantly, the size of clinical programs vary greatly, with some HRIs having revenue from patient care services three or more times larger than others. Additionally, some HRIs operate their own hospitals, which make them directly responsible for some expenses that are not reflected in the financial statements of other HRIs. This creates principled concerns as to which HRIs' expenses are most appropriately included in the cost study. Every effort was made to create consistency of costs included by each institution, but the leadership of each HRI has reservations about the overall reliability of these allocations for the purpose of evaluating – and possibly changing – formula weights.

As stated in the Executive Summary, only eight HRIs have academic programs. The number and size of disciplines offered by each institution are dependent upon the mission of the institution. All eight institutions have allied health disciplines, and seven of the eight institutions have medical and biomedical science disciplines. Only two institutions have a pharmacy school. The programs within each discipline vary significantly between institutions. For instance, within the Allied Health discipline there are programs ranging from bioinformatics to nutrition to cytotechnology and radiation therapy. Some institutions have a broad array of programs offered within Allied Health, while The University of Texas Health Science Center at Houston's "allied health" FTSE are concentrated in dental hygiene and informatics. Their high level of expenses in Allied Health could bolster the argument made by the Coordinating Board and Formula Advisory Committee in April 2004 to change Health Informatics coursework to the same weight for Biomedical Science (that recommendation also called for increasing this Biomedical Science weight from 1.018 to 1.292). The impact of including this high-cost program within Allied Health would be to reduce the entire matrix because Allied Health is used as the base for determining all weights.

As discussed previously, there should be a closer look at implications which could reduce weights in disciplines where there has been a concerted effort to increase enrollment and/or an expressed need to expand enrollment to address larger state needs and goals. On a whole it is clear that on average HRIs are spending far more within each discipline than the funding generated from the I&O Formula.

Table 5 provides a comparison of total formula funding dollars on a yearly basis with the expenditures from the Cost Study for FY 2008 and FY 2009, as well as expenditures based upon all resources for FY 2008 and FY 2009. Based upon all resources available to the HRIs, they spend more than four times the amount received from formula funding for educational purposes.

Table 5
Health-Related Institutions I&O Formula Compared with Expenditures
Total Dollars

Discipline	FY 2008 & FY2009 Formula Funding (Each Year)	FY 2008 Expenditures based on Cost Study	FY 2008 Expenditures including All Resources	FY 2009 Expenditures based on Cost Study	FY 2009 Expenditures including All Resources
Allied Health	$ 39,300,238	$ 49,305,818	$ 51,925,399	$ 49,960,684	$ 52,817,825
Biomedical Science	34,759,619	100,185,269	167,380,691	108,741,620	176,007,675
Nursing	32,743,825	53,887,113	54,592,924	57,551,617	58,502,578
Pharmacy	14,629,425	19,511,781	20,803,446	25,147,940	26,240,314
Public Health	21,726,471	39,984,279	42,460,902	41,769,610	45,665,867
Dental Education	60,750,402	109,049,420	119,695,873	111,466,138	120,117,406
Medical Education	260,557,278	517,722,148	1,415,492,845	557,479,544	1,503,418,675
Totals	$ 464,467,258	$ 889,645,828	$ 1,872,352,080	$ 952,117,153	$ 1,982,770,340
	100%	192%	403%	205%	427%

Table 6 provides a comparison of HRIs expenditures on per FTSE amounts.

Table 6
Health-Related Institutions I&O Formula Compared with Expenditures
Per FTSE

Discipline	FY 2008 & FY 2009 Formula Funding (Each Year)	FY 2008 Expend.Based On Cost Study	FY 2008 Expend. Based On Including All Resources	FY 2009 Expend. Based On Cost Study	FY 2009 Expend. Based On Including All Resources
Allied Health	$ 10,841	$ 14,222	$ 14,978	$ 12,916	$ 13,654
Biomedical Science	$ 11,036	$ 34,333	$ 57,361	$ 37,052	$ 59,971
Nursing	$ 12,336	$ 20,273	$ 20,539	$ 19,465	$ 19,786
Pharmacy	$ 18,104	$ 21,448	$ 22,868	$ 22,957	$ 23,955
Public Health	$ 18,657	$ 35,519	$ 37,720	$ 34,155	$ 37,341
Dental Education	$ 49,877	$ 84,534	$ 92,787	$ 79,505	$ 85,676
Medical Education	$ 51,525	$ 101,974	$ 278,805	$ 105,483	$ 284,469
Totals	$ 172,375	$ 312,305	$ 525,058	$ 311,533	$ 524,852
	100%	181%	305%	181%	304%

Tables 7, 8, and 9 display the impact on weights, rates, appropriations by discipline, and appropriations per institution, if the cost study weights were implemented for I&O formula funding.

.

Table 7
Health-Related Institutions I&O Formula Matrix

Discipline	Current Weights & Related Funding		FY 2008 Cost Study Weights & Related Funding		FY 2009 Cost Study Weights & Related Funding	
Allied Health	1.000	$ 11,129	1.000	$ 7,700	1.000	$ 6,903
Biomedical Science	1.018	$ 11,329	2.414	$ 18,588	2.869	$ 19,802
Nursing	1.138	$ 12,664	1.425	$ 10,976	1.507	$ 10,403
Pharmacy	1.670	$ 18,585	1.508	$ 11,612	1.777	$ 12,269
Public Health	1.721	$ 19,152	2.497	$ 19,230	2.644	$ 18,254
Dental Education	4.601	$ 51,203	5.944	$ 45,766	6.156	$ 42,490
Medical Education	4.753	$ 52,894	7.170	$ 55,207	8.167	$ 56,374

Table 8
FY 2010-11 I&O Formula Appropriations Based on Cost Study
Net Change Between Discipline

Discipline	FY 2008 Cost Study	Percent Change From FY 2010-11	FY 2009 Cost Study	Percent Change From FY 2010-11
Allied Health	$ (26,134,162)	(29%)	$ (32,210,210)	(36%)
Biomedical Science	41,655,252	59%	48,571,420	69%
Nursing	(9,629,762)	(13%)	(12,897,128)	(18%)
Pharmacy	(15,238,164)	(34%)	(13,801,556)	(31%)
Public Health	185,772	0%	(2,155,476)	(4%)
Dental Education	(15,029,624)	(11%)	(23,899,452)	(17%)
Medical Education	24,190,686	4%	36,392,404	6%
Totals	$ (2)	(0%)	$ 2	0%

Table 9
FY 2010-11 I&O Formula Appropriations Based on Cost Study
Net Change Between Institutions

Institution	2008 Cost Study	Percent Change From FY 2010-11	2009 Cost Study	Percent Change From FY 2010-11
The University of Texas Southwestern Medical Center	$ 15,215,870	12%	$ 19,012,424	15%
The University of Texas Medical Branch at Galveston	1,826,754	1%	2,923,420	2%
The University of Texas Health Science Center at Houston	6,194,236	3%	4,809,784	2%
The University of Texas Health Science Center at San Antonio	(3,189,070)	(2%)	(5,309,346)	(3%)
The University of Texas Health Sciences Center M. D. Anderson	(1,849,948)	(31%)	(2,280,052)	(38%)
Texas A & M University Health Science Center	(7,241,086)	(6%)	(9,426,068)	(7%)
University of North Texas Health Sciences Center	6,167,660	7%	7,731,814	9%
Texas Tech University Health Sciences Center	(17,124,418)	(11%)	(17,461,974)	(11%)
Totals	$ (2)	(0%)	$ 2	0%

Implementation of any cost study weights without adding new funding would result in a significant reallocation of funding between disciplines and between institutions as demonstrated by the results shown in Table 9. The result would be a significant reduction in capacity for many disciplines. However, the funding needed would be quite substantial, and the desire to implement these weights would have to be weighed against other pressing needs of HRIs and the state.

Further tables of detailed amounts by institution from the Cost Study for FY 2008 and FY 2009 are provided in Appendices A and B.

Recommendations

In response to concerns about differences in funding from the HRI and GAI I&O Formulas and whether institutions are spending formula funds on program areas which generate the funding, a HRI cost study methodology was developed. This report illustrates numerous concerns about the accuracy of a "cost study" absent a specific, educational cost accounting system and given the great disparity among such a small group of institutions. Notwithstanding these concerns, the "cost study" developed for this report indicates that at each program level, HRI institutions spend in excess of what the I&O formula generates for each program.

Additionally, this report illustrates the differences between the HRI and GAI I&O formulas. Many of these differences appear to be a result of the cost study implemented for GAIs. Further, the report illustrates the differences between the mission and scope of HRIs and GAIs and that differences in cost/expenses between the two types of institutions are expected. More importantly, the report raises the question of the appropriateness of looking at state support for a specific program, i.e. such a small "slice" of overall state support and comparing across different types of institutions without a larger context to state support for the entire institution. Finally, each I&O formula was established as part of other mechanisms to allocate state support among like institutions; the I&O formulas were not intended to fund programs across different types of institutions.

A few key issues related to any cost study include: the revenue and related expenses included in the cost study; the method for allocating expenses that are not directly attributable to an individual academic discipline; and the number of years of expenses included to minimize the unintended consequences of new programs or enrollment increases adversely affecting overall program costs.

More important than these issues related to the cost study methodology is the appropriateness of using the results of a cost study to allocate HRIs' formula funding. As indicated in this report, the HRI I&O formula has never attempted to fund all of the costs to educate a student in each program and has funded programs at different levels of the relative cost. As such, the use of a cost study to influence the allocation of the HRI I&O formula would be a departure from the historical intent of the formula. Additionally, as evidenced by data in this report, the allocation of the HRI I&O formula based on this cost study (and likely, any variation of this cost study) would result in a tremendous reallocation of funds between programs and institutions. This shift in funding would result without regard to any meaningful change in expenses by the respective institutions.

As a result, we recommend that this cost study not be used to modify the HRI I&O formula matrix at this time. Any results of this cost study and/or future cost studies should be provided to the HRI Formula Advisory Committee convened by the Texas Higher Education Coordinating Board. This advisory committee should review the results of any such cost studies to determine trends in expenses by program and level and make recommendations to the Coordinating Board regarding changes in the formula matrix.

Health-Related Institutions
HRI Cost Study - FY 2008 - All Expenditures w/o Revenues from Patient Services and External Grants
March 1, 2010

Total Costs for HRI Cost Study - FY 2008 - All Expenditures w/o Revenues from Patient Services

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline
Allied Health	$ 7,747,426	$ 10,322,820	$ 4,797,082	$ 9,620,088	$ 3,446,216	$ 1,196,022	$ 400,118	$ 11,776,046	$ 49,305,818
Biomedical Science	57,427,245	5,362,456	7,612,275	20,396,996	-	3,675,731	2,693,816	3,016,750	100,185,269
Nursing		13,893,956	15,356,957	11,204,818				13,431,382	53,887,113
Pharmacy						5,136,708		14,375,073	19,511,781
Public Health			30,172,274			8,076,610	1,735,395		39,984,279
Dental Education			29,927,035	41,074,049		38,048,336			109,049,420
Medical Education	80,022,730	131,854,200	79,037,813	100,100,937		28,776,399	41,695,995	56,234,074	517,722,148
Total Costs	$ 145,197,401	$ 161,433,432	$ 166,903,436	$ 182,396,888	$ 3,446,216	$ 84,909,806	$ 46,525,324	$ 98,833,325	$ 889,645,828
FY 2008 I&O Appropriations	$ 63,201,801	$ 61,849,984	$ 95,181,459	$ 83,269,802	$ 2,373,743	$ 52,048,345	$ 37,687,379	$ 68,854,745	$ 464,467,258
Costs Over (Under) Appropriation	$ 81,995,600	$ 99,583,448	$ 71,721,977	$ 99,127,086	$ 1,072,473	$ 32,861,461	$ 8,837,945	$ 29,978,580	$ 425,178,570
Percentage	229.7%	261.0%	175.4%	219.0%	145.2%	163.1%	123.5%	143.5%	191.5%

Total HRI State-Funded FTSE - FY 2008

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	Total Number of Programs
Allied Health	434.61	638.21	138.91	701.33	195.30	75.67	184.25	1,098.48	3,466.76	**8**
Biomedical Science	970.65	340.92	711.24	371.75		106.66	298.15	118.65	2,918.02	**7**
Nursing		579.36	737.92	570.69				770.07	2,658.04	**4**
Pharmacy						229.08		680.63	909.71	**2**
Public Health			741.67			221.50	162.53		1,125.70	**3**
Dental Education			368.00	446.00		476.00			1,290.00	**3**
Medical Education	915.00	882.00	876.00	869.00		371.00	593.00	571.00	5,077.00	**7**
Total FTSE	2,320.26	2,440.49	3,573.74	2,958.77	195.30	1,479.91	1,237.93	3,238.83	17,445.23	

Total Expenditure per FTSE - FY 2008 - All Expenditures w/o Revenues from Patient Services

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline
Allied Health	$ 17,826.16	$ 16,174.64	$ 34,533.74	$ 13,716.92	$ 17,645.76	$ 15,805.76	$ 2,171.60	$ 10,720.31	$ 14,222.45
Biomedical Science	59,163.70	15,729.37	10,702.82	54,867.51		34,462.13	9,035.10	25,425.62	34,333.30
Nursing		23,981.56	20,811.14	19,633.81				17,441.77	20,273.25
Pharmacy						22,423.21		21,120.25	21,448.35
Public Health			40,681.53			36,463.25	10,677.38		35,519.48
Dental Education			81,323.46	92,094.28		79,933.48			84,534.43
Medical Education	87,456.54	149,494.56	90,225.81	115,190.95		77,564.42	70,313.65	98,483.49	101,974.03
Total Expenditure per FTSE	$ 62,578.07	$ 66,147.96	$ 46,702.74	$ 61,646.19	$ 17,645.76	$ 57,374.98	$ 37,583.16	$ 30,515.13	$ 50,996.51

Weights based upon Total Expneditures w/o Revenues from Patient Services - FY 2008

		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	**FY 2008 Cost Study Weights**	Total Number of Programs
Allied Health		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	**1.0000**	**8**
Biomedical Science		3.3189	0.9725	0.3099	4.0000		2.1804	4.1606	2.3717	**2.4140**	**7**
Nursing			1.4827	0.6026	1.4314				1.6270	**1.4254**	**4**
Pharmacy							1.4187		1.9701	**1.5081**	**2**
Public Health				1.1780			2.3070	4.9168		**2.4974**	**3**
Dental Education				2.3549	6.7139		5.0572			**5.9437**	**3**
Medical Education		4.9061	9.2425	2.6127	8.3977		4.9074	32.3787	9.1866	**7.1699**	**7**

Change in Weights - Total Expenditures w/o Revenue from Patient Services - FY 2008

	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	Total Number of Programs
Allied Health	1.000	-	-	-	-	-	-	-	-	-	**8**
Biomedical Science	1.018	2.3009	(0.0455)	(0.7081)	2.9820		1.1624	3.1426	1.3537	1.3960	**7**
Nursing	1.138		0.3447	(0.5354)	0.2934				0.4890	0.2874	**4**
Pharmacy	1.670						(0.2513)		0.3001	(0.1619)	**2**
Public Health	1.721			(0.5430)			0.5860	3.1958		0.7764	**3**
Dental Education	4.601			(2.2461)	2.1129		0.4562			1.3427	**3**
Medical Education	4.753	0.1531	4.4895	(2.1403)	3.6447		0.1544	27.6257	4.4336	2.4169	**7**

% Change in Weights - Total Expenditures w/o Revenue from Patient Services - FY 2008

	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	
Allied Health		0%	0%	0%	0%	0%	0%	0%	0%	0%	
Biomedical Science		226%	(4%)	(70%)	293%		114%	309%	133%	137%	
Nursing			30%	(47%)	26%		0%		43%	25%	
Pharmacy							(15%)		18%	(10%)	
Public Health				(32%)			34%	186%		45%	
Dental Education				(49%)	46%		10%			29%	
Medical Education		3%	94%	(45%)	77%		3%	581%	93%	51%	

FY 2010-11 I & O Appropriations			Weights:	Appropriations	FTSE:	18,385.53	Rate:	$ 11,129	Total Allocated:	$ 1,033,362,810	
	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health	1.000	$ 9,358,918	$ 15,445,808	$ 4,824,042	$ 18,448,624	$ 6,004,316	$ 1,808,840	$ 4,591,432	$ 30,161,248	$ 90,643,228	$ 11,129
Biomedical Science	1.018	21,584,046	6,542,212	14,970,460	8,619,026		5,534,624	7,241,432	6,061,078	70,552,878	$ 11,329
Nursing	1.138		13,376,066	18,415,708	15,997,328		1,342,418		23,148,452	72,279,972	$ 12,664
Pharmacy	1.670						13,079,194		31,233,852	44,313,046	$ 18,585
Public Health	1.721			33,998,436			10,578,806	7,620,220		52,197,462	$ 19,152
Dental Education	4.601			40,142,854	48,672,878		50,382,722			139,198,454	$ 51,203
Medical Education	4.753	97,642,628	97,139,660	96,055,802	95,472,582		45,435,380	66,646,648	65,785,070	564,177,770	$ 52,894
Total FY 10-11 Appropriations		$ 128,585,592	$ 132,503,746	$ 208,407,302	$ 187,210,438	$ 6,004,316	$ 128,161,984	$ 86,099,732	$ 156,389,700	**$ 1,033,362,810**	

FY 2010-11 I & O Appropriations			Weights: All Expd. w/o P. Svcs.		FTSE:	18,385.53	Rate:	$ 7,700	Total Allocated:	$ 1,033,362,808	
	FY 2008 Cost Study Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health	1.000	$ 6,475,404	$ 10,686,904	$ 3,826,824	$ 12,923,944	$ 4,154,368	$ 1,251,530	$ 3,176,796	$ 22,013,296	$ 64,509,066	$ 7,700
Biomedical Science	2.414	35,413,398	10,733,946	24,562,350	14,141,418		7,609,540	11,881,170	7,866,308	112,208,130	$ 18,588
Nursing	1.425		11,592,482	15,960,132	13,864,222		1,163,418		20,069,956	62,650,210	$ 10,976
Pharmacy	1.508						8,171,944		20,902,938	29,074,882	$ 11,612
Public Health	2.497			34,115,448			10,619,548	7,648,238		52,383,234	$ 19,230
Dental Education	5.944			35,880,342	43,529,592		44,758,896			124,168,830	$ 45,766
Medical Education	7.170	101,912,660	101,317,168	100,256,442	99,562,192		47,346,022	69,561,188	68,412,784	588,368,456	$ 55,207
Total FY 10-11 Appropriations		$ 143,801,462	$ 134,330,500	$ 214,601,538	$ 184,021,368	$ 4,154,368	$ 120,920,898	$ 92,267,392	$ 139,265,282	**$ 1,033,362,808**	

Change in Approp. based upon FY 2008 Expenditure Study Weights w/o Pat. Svcs. - Increase (Decrease)							Rate:	$ (3,429)			
		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health		$ (2,883,514)	$ (4,758,904)	$ (997,218)	$ (5,524,680)	$ (1,849,948)	$ (557,310)	$ (1,414,636)	$ (8,147,952)	$ (26,134,162)	$ (3,429)
Biomedical Science		13,829,352	4,191,734	9,591,890	5,522,392		2,074,916	4,639,738	1,805,230	41,655,252	$ 7,259
Nursing			(1,783,584)	(2,455,576)	(2,133,106)		(179,000)		(3,078,496)	(9,629,762)	$ (1,689)
Pharmacy							(4,907,250)		(10,330,914)	(15,238,164)	$ (6,973)
Public Health				117,012			40,742	28,018		185,772	$ 77
Dental Education				(4,262,512)	(5,143,286)		(5,623,826)			(15,029,624)	$ (5,437)
Medical Education		4,270,032	4,177,508	4,200,640	4,089,610		1,910,642	2,914,540	2,627,714	24,190,686	$ 2,313
Total Change		$ 15,215,870	$ 1,826,754	$ 6,194,236	$ (3,189,070)	$ (1,849,948)	$ (7,241,086)	$ 6,167,660	$ (17,124,418)	$ (2)	

% Change in Approp. based upon FY 2008 Expenditure Study Weights w/o Pat. Svcs. - Increase (Decrease)

Rate: (31%)

		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health		(31%)	(31%)	(21%)	(30%)	(31%)	(31%)	(31%)	(27%)	(29%)	(31%)
Biomedical Science		64%	64%	64%	64%		37%	64%	30%	59%	64%
Nursing			(13%)	(13%)	(13%)		(13%)		(13%)	(13%)	(13%)
Pharmacy							(38%)		(33%)	(34%)	(38%)
Public Health				0%			0%	0%		0%	0%
Dental Education				(11%)	(11%)		(11%)			(11%)	(11%)
Medical Education		4%	4%	4%	4%		4%	4%	4%	4%	4%
Total Change		12%	1%	3%	(2%)	(31%)	(6%)	7%	(11%)	(0%)	

Expenditures included in cost study control total:
Stipends and teaching salaries for Biomedical Science currently coded as research, unless funded from patient services revenue.

Expenditures excluded from cost study control total:
Patient services and other patient income expenditures for all disciplines.
GME faculty salaries expenditures and resident salaries expenditures (if applicable), not otherwise excluded in patient services.
GME central administration expenditures not otherwise excluded in patient services.

Health-Related Institutions
HRI Cost Study - FY 2009 - All Expenditures w/o Revenues from Patient Services and External Grants
March 1, 2010

Total Costs for HRI Cost Study - FY 2009 - All Expenditures w/o Revenues from Patient Services

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline
Allied Health	$ 7,849,425	$ 8,051,030	$ 5,212,665	$ 11,372,123	$ 3,840,353	$ 1,100,300	$ 489,459	$ 12,045,329	$ 49,960,684
Biomedical Science	58,980,746	4,269,866	8,809,556	24,906,383	-	4,509,081	2,891,013	4,374,975	108,741,620
Nursing		10,309,715	16,070,251	12,861,675		2,692,109		15,617,867	57,551,617
Pharmacy						11,297,217		13,850,723	25,147,940
Public Health			30,621,499			8,993,575	2,154,536		41,769,610
Dental Education			31,507,540	44,874,424		35,084,174			111,466,138
Medical Education	75,924,029	165,497,220	90,395,612	105,409,537		30,232,855	40,208,869	49,811,422	557,479,544
Total Costs	$ 142,754,200	$ 188,127,831	$ 182,617,123	$ 199,424,142	$ 3,840,353	$ 93,909,311	$ 45,743,877	$ 95,700,316	$ 952,117,153
FY 2009 I&O Appropriations	$ 63,201,801	$ 61,849,984	$ 95,181,459	$ 83,269,802	$ 2,373,743	$ 52,048,345	$ 37,687,379	$ 68,854,745	$ 464,467,258
Costs Over (Under) Appropriations	$ 79,552,399	$ 126,277,847	$ 87,435,664	$ 116,154,340	$ 1,466,610	$ 41,860,966	$ 8,056,498	$ 26,845,571	$ 487,649,895
Percentage	225.9%	304.2%	191.9%	239.5%	161.8%	180.4%	121.4%	139.0%	205.0%

Total HRI State-Funded FTSE - FY 2009

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	Total Number of Programs
Allied Health	413.31	706.60	147.22	817.91	283.50	81.17	211.25	1,207.22	3,868.18	**8**
Biomedical Science	973.68	294.40	681.74	386.06		127.75	344.92	126.32	2,934.87	**7**
Nursing		546.04	738.87	641.12		75.43		955.24	2,956.70	**5**
Pharmacy						351.38		744.04	1,095.42	**2**
Public Health			766.34			267.38	189.22		1,222.94	**3**
Dental Education			392.00	497.00		513.00			1,402.00	**3**
Medical Education	924.00	949.00	908.00	884.00		422.00	630.00	568.00	5,285.00	**7**
Total FTSE	2,310.99	2,496.04	3,634.17	3,226.09	283.50	1,838.11	1,375.39	3,600.82	18,765.11	

Total Expenditure per FTSE - FY 2009 - All Expenditures w/o Revenues from Patient Services

	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline
Allied Health	$ 18,991.62	$ 11,394.04	$ 35,407.32	$ 13,903.88	$ 13,546.22	$ 13,555.50	$ 2,316.97	$ 9,977.74	$ 12,915.81
Biomedical Science	60,575.08	14,503.62	12,922.16	64,514.28		35,296.13	8,381.69	34,634.06	37,051.60
Nursing		18,880.88	21,749.77	20,061.26		35,690.16		16,349.68	19,464.81
Pharmacy						32,151.00		18,615.56	22,957.35
Public Health			39,958.11			33,635.93	11,386.41		34,155.08
Dental Education			80,376.38	90,290.59		68,390.20			79,505.09
Medical Education	82,168.86	174,391.17	99,554.64	119,241.56		71,641.84	63,823.60	87,696.17	105,483.36
Total FTSE	$ 61,771.88	$ 75,370.52	$ 50,250.02	$ 61,816.05	$ 13,546.22	$ 51,090.15	$ 33,258.84	$ 26,577.37	$ 50,738.69

Weights based upon Total Expneditures w/o Revenues from Patient Services - FY 2009

		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	**FY 2009 Cost Study Weights**	Total Number of Programs
Allied Health		1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	**1.0000**	**8**
Biomedical Science		3.1896	1.2729	0.3650	4.6400		2.6038	3.6175	3.4711	**2.8687**	**7**
Nursing			1.6571	0.6143	1.4429		2.6329		1.6386	**1.5071**	**5**
Pharmacy							2.3718		1.8657	**1.7775**	**2**
Public Health				1.1285			2.4813	4.9144		**2.6444**	**3**
Dental Education				2.2701	6.4939		5.0452			**6.1556**	**3**
Medical Education		4.3266	15.3055	2.8117	8.5761		5.2851	27.5462	8.7892	**8.1670**	**7**

Change in Weights - Total Expenditures w/o Revenue from Patient Services - FY 2009

	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	Total Number of Programs
Allied Health	1.000	-	-	-	-	-	-	-	-	-	**8**
Biomedical Science	1.018	2.1716	0.2549	(0.6530)	3.6220		1.5858	2.5995	2.4531	1.8507	**7**
Nursing	1.138		0.5191	(0.5237)	0.3049		1.4949		0.5006	0.3691	**5**
Pharmacy	1.670						0.7018		0.1957	0.1075	**2**
Public Health	1.721			(0.5925)			0.7603	3.1934		0.9234	**3**
Dental Education	4.601			(2.3309)	1.8929		0.4442			1.5546	**3**
Medical Education	4.753	(0.4264)	10.5525	(1.9413)	3.8231		0.5321	22.7932	4.0362	3.4140	**7**

% Change in Weights - Total Expenditures w/o Revenue from Patient Services - FY 2009

	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total By Discipline	
Allied Health		0%	0%	0%	0%	0%	0%	0%	0%	0%	
Biomedical Science		213%	25%	(64%)	356%		156%	255%	241%	182%	
Nursing			46%	(46%)	27%		131%		44%	32%	
Pharmacy							42%		12%	6%	
Public Health				(34%)			44%	186%		54%	
Dental Education				(51%)	41%		10%			34%	
Medical Education		(9%)	222%	(41%)	80%		11%	480%	85%	72%	

FY 2010-11 I & O Appropriations | **Weights:** | **Appropriations** | **FTSE:** 18,385.53 | **Rate:** $ 11,129 | **Total Allocated:** $ 1,033,362,810

	Approp. Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health	1.000	$ 9,358,918	$ 15,445,808	$ 4,824,042	$ 18,448,624	$ 6,004,316	$ 1,808,840	$ 4,591,432	$ 30,161,248	$ 90,643,228	$ 11,129
Biomedical Science	1.018	21,584,046	6,542,212	14,970,460	8,619,026		5,534,624	7,241,432	6,061,078	70,552,878	$ 11,329
Nursing	1.138		13,376,066	18,415,708	15,997,328		1,342,418		23,148,452	72,279,972	$ 12,664
Pharmacy	1.670						13,079,194		31,233,852	44,313,046	$ 18,585
Public Health	1.721			33,998,436			10,578,806	7,620,220		52,197,462	$ 19,152
Dental Education	4.601			40,142,854	48,672,878		50,382,722			139,198,454	$ 51,203
Medical Education	4.753	97,642,628	97,139,660	96,055,802	95,472,582		45,435,380	66,646,648	65,785,070	564,177,770	$ 52,894
Total FY 10-11 Appropriations		$ 128,585,592	$ 132,503,746	$ 208,407,302	$ 187,210,438	$ 6,004,316	$ 128,161,984	$ 86,099,732	$ 156,389,700	**$ 1,033,362,810**	

FY 2010-11 I & O Appropriations | **Weights: All Expd. w/o P. Svcs.** | **FTSE:** 18,385.53 | **Rate:** $ 6,903 | **Total Allocated:** $ 1,033,362,812

	FY 2009 Cost Study Weights	The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health	1.000	$ 5,805,004	$ 9,580,486	$ 3,594,976	$ 11,639,484	$ 3,724,264	$ 1,121,960	$ 2,847,902	$ 20,118,942	$ 58,433,018	$ 6,903
Biomedical Science	2.869	37,726,558	11,435,074	26,166,732	15,065,118		7,905,324	12,657,234	8,168,258	119,124,298	$ 19,802
Nursing	1.507		10,987,314	15,126,958	13,140,462		1,102,684		19,025,426	59,382,844	$ 10,403
Pharmacy	1.777						8,634,584		21,876,906	30,511,490	$ 12,269
Public Health	2.644			32,640,770			10,106,080	7,295,136		50,041,986	$ 18,254
Dental Education	6.156			33,312,416	40,431,048		41,555,538			115,299,002	$ 42,490
Medical Education	8.167	104,066,454	103,424,292	102,375,234	101,624,980		48,309,746	71,031,274	69,738,194	600,570,174	$ 56,374
Total FY 10-11 Appropriations		$ 147,598,016	$ 135,427,166	$ 213,217,086	$ 181,901,092	$ 3,724,264	$ 118,735,916	$ 93,831,546	$ 138,927,726	**$ 1,033,362,812**	

Change in Approp. based upon FY 2009 Expenditure Study Weights w/o Pat. Svcs. - Increase (Decrease) | **Rate:** $ (4,226)

		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health		$ (3,553,914)	$ (5,865,322)	$ (1,229,066)	$ (6,809,140)	$ (2,280,052)	$ (686,880)	$ (1,743,530)	$ (10,042,306)	$ (32,210,210)	$ (4,226)
Biomedical Science		16,142,512	4,892,862	11,196,272	6,446,092		2,370,700	5,415,802	2,107,180	48,571,420	$ 8,473
Nursing			(2,388,752)	(3,288,750)	(2,856,866)		(239,734)		(4,123,026)	(12,897,128)	$ (2,262)
Pharmacy							(4,444,610)		(9,356,946)	(13,801,556)	$ (6,316)
Public Health				(1,357,666)			(472,726)	(325,084)		(2,155,476)	$ (899)
Dental Education				(6,830,438)	(8,241,830)		(8,827,184)			(23,899,452)	$ (8,712)
Medical Education		6,423,826	6,284,632	6,319,432	6,152,398		2,874,366	4,384,626	3,953,124	36,392,404	$ 3,480
Total Change		$ 19,012,424	$ 2,923,420	$ 4,809,784	$ (5,309,346)	$ (2,280,052)	$ (9,426,068)	$ 7,731,814	$ (17,461,974)	$ 2	

% Change in Approp. based upon FY 2009 Expenditure Study Weights w/o Pat. Svcs. - Increase (Decrease)

Rate: (38%)

		The University of Texas Southwestern Medical Center	The University of Texas Medical Branch at Galveston	The University of Texas Health Science Center at Houston	The University of Texas Health Science Center at San Antonio	The University of Texas M.D. Anderson Cancer Center	Texas A&M University System Health Science Center	University of North Texas Health Sciences Center at Fort Worth	Texas Tech University System Health Sciences Center	Total Appropriations	Cost Of One Student
Allied Health		(38%)	(38%)	(25%)	(37%)	(38%)	(38%)	(38%)	(33%)	(36%)	(38%)
Biomedical Science		75%	75%	75%	75%		43%	75%	35%	69%	75%
Nursing			(18%)	(18%)	(18%)		(18%)		(18%)	(18%)	(18%)
Pharmacy							(34%)		(30%)	(31%)	(34%)
Public Health				(4%)			(4%)	(4%)		(4%)	(5%)
Dental Education				(17%)	(17%)		(18%)			(17%)	(17%)
Medical Education		7%	6%	7%	6%		6%	7%	6%	6%	7%
Total Change		15%	2%	2%	(3%)	(38%)	(7%)	9%	(11%)	0%	

Expenditures included in cost study control total:
Stipends and teaching salaries for Biomedical Science currently coded as research, unless funded from patient services revenue.

Expenditures excluded from cost study control total:
Patient services and other patient income expenditures for all disciplines.
GME faculty salaries expenditures and resident salaries expenditures (if applicable), not otherwise excluded in patient services.
GME central administration expenditures not otherwise excluded in patient services.

HRI Cost Study – Appendix C

Comparison of Weights Based On Expenditures from All Resources

Discipline	FY 2010-11 Weights	FY 2008 All Expenditure Weights	FY 2009 All Expenditure Weights
Allied Health	1.000	1.0000	1.0000
Biomedical Science	1.018	3.8297	4.3921
Nursing	1.138	1.3713	1.4491
Pharmacy	1.670	1.5268	1.7543
Public Health	1.721	2.5183	2.7347
Dental Education	4.601	6.1949	6.2746
Medical Education	4.753	18.6142	20.8334

Use of a methodology that includes all revenue sources results in Medical Education weight that is artificially and dramatically inflated by the inability to accurately separate the costs of providing education and providing patient care. Application of Medical Education weights of this magnitude would result in moving significant amounts of funding to Medical Education at the expense of other disciplines.

This document is available on the Texas Higher Education Coordinating Board web site: http://www.thecb.state.tx.us

For more information, contact:

Susan E. Brown
Planning and Accountability Division
Office of Finance and Resource Planning
Texas Higher Education Coordinating Board
P. O. Box 12788
Austin, Texas 78711
Phone: (512) 427-6130
Fax: (512) 427-6147
Susan.Brown@thecb.state.tx.us