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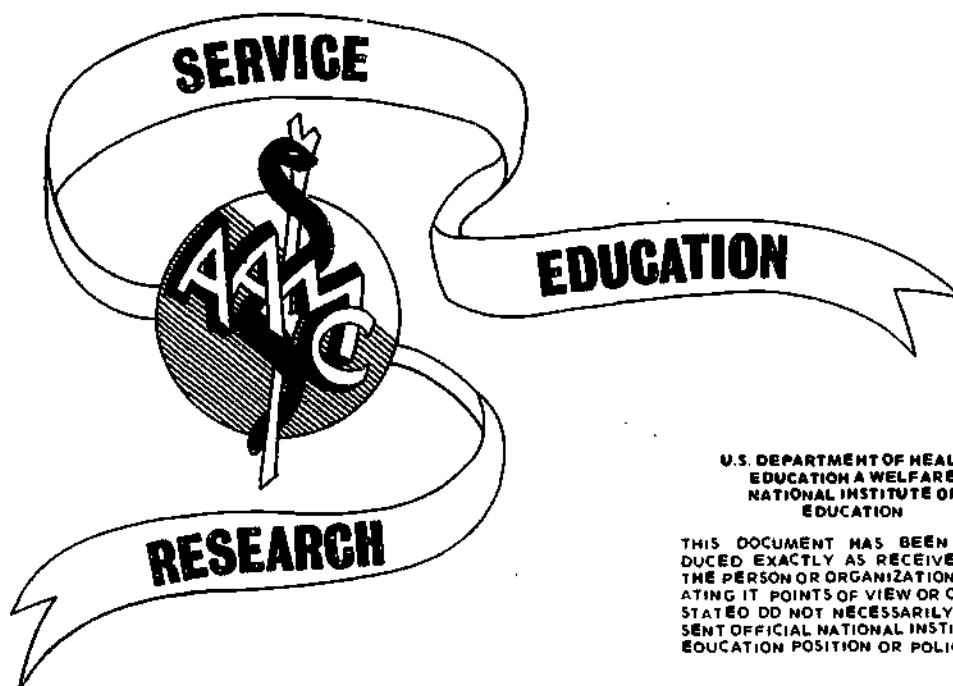
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ABSTRACT

This document divides a cluster of medical schools into seven groups based on percent change in entering class size from 1970-71 to 1973-74. These groups were then used to analyze differences between schools of differing class-size change patterns for 307 variables drawn from the Institutional Profile System of the Association of American Medical Colleges. The results indicated significant differences for 36 of the 307 variables analyzed. Schools that increased class size the most and least had much in common. They tended to be newer, smaller schools, employing more volunteer faculty. However, the schools that changed the least were slightly older than the schools increasing rapidly and the differences between the two seemed to be financial. The schools that changed the least tended to provide less student aid and have relatively fewer research funds. (Author/KE)

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VARIABLES RELATED TO INCREASES
IN MEDICAL SCHOOL CLASS SIZE



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Executive Summary

The report describes a clustering of medical schools into seven groups based on percent change in entering class size from 1970-71 to 1973-74. These seven groups were then used to analyze differences between schools of differing class size change patterns for 307 variables drawn from the Institutional Profile System of the Association of American Medical Colleges.

The results indicated significant differences for 36 of the 307 variables analyzed. Schools that increased class size the most and least had much in common. They tended to be newer, smaller schools, employing more volunteer faculty. However the schools that changed the least were slightly older than the schools increasing rapidly and the differences between the two seemed to be financial.

The schools that changed the least tended to provide less student aid and have relatively fewer research funds. Another financial finding is that schools which have increased their enrollment the most have tended to pay higher salaries to basic science faculty than other schools. The report discusses the possibility of direct funding for student aid and faculty salaries.

The variables which were not related to changes in class size included percentage of minority students and MCAT scores. Increases in women students may be related to class size increases but further study is needed before any conclusions are possible.

VARIABLES RELATED
TO
INCREASE IN MEDICAL SCHOOL CLASS SIZE

William E. Sedlacek

October 31, 1975

Variables Related to Increase In Medical School Class Size

The topic of optimal class size appears to have long intrigued educators; most often as a topic for conjecture and speculation and less often as a topic for research.

I. Review of Literature

Higher Education - General

The term "class size" generally refers to the size of instructional groups in the classroom in most studies in higher education. Research on class size in higher education, and for that matter, elementary and secondary as well, has rarely indicated any relationship between class size and educational outcomes. Extensive reviews of the literature by Hatch and Bennet (1960), Dressel et al (1961), McKeachie (1963), Lindbloom (1970), Templeton (1972) and Schofield (1974) provide overwhelming evidence that immediate or long term retention of knowledge is not influenced by class size. The only two studies found which show any contrary evidence are one by Macomber and Siegel (1960) who reported that students in small classes had a greater ability to make valid conclusions and interpretations and one by Simmons (1959) who found greater achievement in college algebra classes for smaller groups. Despite the consistency of the research results, most students and faculty continue to believe that teaching is more effective in small classes (e.g., Hatch and Bennet 1960; Macomber and Siegel 1960; Dressel et al 1961; Bosley, 1962; Eash and Bennett, 1964; and DeCecco, 1964).

In medical school, "class size" generally refers to the total number of students enrolled in a given year of the curriculum because the entire class is typically treated as a single instructional unit. Therefore, it may be appropriate to review studies on the relationships between total enrollments in colleges and universities and other variables of interest. Here again, the research results may run contrary to our expectations. Studies have shown that the larger the enrollment the greater the Ph.D. output (Thistlewaite, 1959), and the greater the percentage of faculty that held the Ph.D. (Astin 1962). Size of enrollment has generally not been found related to intellectualism of students (Astin, 1965), scholarship funds per student, percentage of National Merit scholars, faculty-student ratio (Astin, 1962), or quality of graduate education (Cartter, 1966).

There does appear to be good evidence that there is less personal contact between faculty and students at large schools than at small schools (Dressel et al, 1961; McKeachie, 1963; Orlans, 1962; and Astin, 1963, 1965). However, in studies using conventional educational criteria, such as student achievement or faculty productivity measures, there is no evidence that size of enrollment makes any difference, and in fact, on some dimensions large schools appear superior to small ones.

Medical Schools

Sanazaro (1966) did an extensive survey of the literature on class size (number in a yearly class) in medical schools

he analyzed existing data and concluded that class size was unrelated to the typical criteria used in evaluating medical education. Sanazaro used data from the Association of American Medical Colleges (AAMC) longitudinal study (Hutchins, 1964) and other sources and found no relationship between class size and the following variables: Medical College Admission Test (MCAT) scores, total school expenditures, attrition (see Johnson and Hutchins, 1966), career choice, medical school environment (see Hutchins, 1964), percentage of graduates serving as full time faculty. Sanazaro (1966), however, did find that schools with larger classes tend to: spend less money per medical student, score higher on Part I of the National Board examinations (see Sedlacek and Hutchins, 1966), and have less "general esteem" (see Hutchins, 1962) than smaller schools.

II. The Present Study

Recent Federal legislation has dealt directly with medical school class size. The Health Manpower Training Act of 1971 provided U.S. medical schools with capitation grants which required expanding first year enrollment in the 1972-73 school year by 10 students or 5% (whichever is larger) over the 1970-71 school year. Various other provisions of the Health Manpower Training Act of 1971 deal with increases in medical school class size.

It appears that a study of the changes in the medical schools associated with the changes in class size would be

particularly appropriate. Thus, the purpose of this study was to examine the relationship between increases in entering class size in U.S. medical schools and the concomitant changes on a variety of educational variables.

III. Method

Data were obtained from the AAMC Institutional Profile System (IPS). Because of completeness and accuracy of data and dates of legislation, changes in entering class size between 1970-71 and 1973-74 became the basic units of analysis. Where available, changes through 1974-75 were also examined.

Clustering Schools on Change

Data were available on 105 U.S. medical schools which had entering classes in 1970-71 and 1973-74. A series of analyses employing clustering and scaling methods were conducted to determine the optimal number of groups of schools for further analyses.

Using % change in entering class size from 1970-71 to 1973-74 as the criterion, empirical cluster analyses¹ were conducted to determine how to group schools for further study. Results were obtained for solutions ranging from 3 to 12 groups of schools. It was determined that the solution for 7 groups, varying in size from 7 to 24 schools each, provided the most

¹ Procedure minimizing error variance between clusters

meaningful clustering of schools. Means and standard deviations for each of the 7 groups of schools are given in Table 1. Table 1 shows that the mean % change for each group varied from less than 1% to more than 100%. Appendix A lists the schools in each of the seven groups.

Variables Analyzed

More than three hundred variables from the IPS (see Appendix B) were analyzed for the 7 groups using analysis of variance with Student-Newman-Keuls post hoc tests, and Chi square at the .05 level. The study was considered exploratory in nature and included a wide variety of variables. Unless otherwise noted, variables are for the 1973-74 school year.

IV. Results and Discussion

Of the 307 analyses of variance or Chi square analyses conducted, 36 achieved significance at the .05 level. Twenty-six of the 33 significant analyses of variance were also significant (.05 level) on the Student-Newman-Keuls post hoc test. Three Chi square analyses achieved significance at .05. According to calculations derived from Brozek and Tiede (1952) the probability of finding 36 significant results at the .05 level out of 307 tests due to chance alone is .08.

Non Significant Results
On Variables of Interest

Analyses of some variables are interesting in that they were not associated with changes in class size. For instance, increases in class size were not related to Medical College Admission Test (MCAT) scores, premedical grades, or ethnic composition of students. Thus, the quality of the entering pool as measured by MCAT and premedical grades, appeared not to be associated with changes in class size. Additionally, schools which increased more than others did not appear to have done so by adding differentially large numbers of minority students.

Other relevant variables which did not show significance were geographical location, number and percent of foreign medical students, and many curriculum variables such as types of electives or innovative courses offered. It should be added, however, that the curriculum variables contained some partial information and should be further explored before any definitive conclusions are reached.

Significant Results

In an effort to provide some structure to the results, they will be presented and discussed according to the results of factor analyses by Keeler et al (1972), Sherman (1975) and Nunn (1975) on variables similar to those included in this study. By employing the factors developed in other studies we can provide a conceptual framework to help interpret the results of the present study.

Factor I - Undergraduate Medical
Educational Programs

Table 2 shows that the schools that changed the least (Group 1) and the most (Group 7) tend to be the newest schools. This point should be kept in mind, for in many analyses of other variables, Groups 1 and 7 will appear most alike. For instance, in Table 2, Groups 1 and 7, as compared to the other schools, tend to enroll fewer M.D. students and have more university hospital beds per M.D. student.

On variables where Groups 1 and 7 do not appear similar, often either Group 1 or 7 individually appear different from the others. For instance Group 1 (lowest increase in class size) schools tend to: have a greater % of first year M.D. students with degrees other than bachelors, masters and doctorates, have a smaller % of third and fourth year M.D. students who requested aid receiving it, have a smaller average amount of aid for third year M.D. students, have fewer third and fourth year M.D. students who need aid that receive it.

Group 7 (most increase in class size) schools as compared to the others tend to: have more projected future growth, have fewer students receiving loans and larger library budgets.

In summary, on the variables on Factor I, we find that the newer schools which are smaller have either increased class size a great deal or very little. The new schools which show almost no class size increase are slightly older than those that changed

a great deal and are perhaps caught in the developmental period after their initial rapid enrollment increase. Perhaps they cannot provide sufficient aid to students and have not yet developed large endowments so they are trying to stabilize their situation, although the nature of the data from this study do not provide any direct evidence of this.

Factor-II Reliance on Non-Full Time Faculty

Table 3 shows that the schools that changed the most (Group 7) and those that changed the least (Group 1) tend to utilize relatively more volunteer clinical faculty than schools in the other groups. While not significant with a post hoc test, the same pattern is true for volunteer basic science faculty.

Compared to the other schools, Group 1 schools tended to: have relatively fewer full-time faculty per MD student, and have higher salaries for basic science faculty and anesthesiologists.

Schools that increased class size the most (Group 7), tended to have fewer total full time faculty and have a greater percentage of budgeted clinical faculty vacancies. We cannot easily relate faculty variables to changes in class size.

One might expect newer schools to rely more on volunteer faculty and higher salaries to attract full time faculty; Therefore the newness of the schools seems to best "explain"

the findings on this factor. Additionally, before we assume that reliance on volunteer faculty is undesirable, it could be that the newer schools tend to be more community oriented than their older counterparts. Newer programs in family medicine, public health and community medicine may require more participation from local professionals.

Factor III-Type of Control (Public-Private)

Table 4 shows that Groups 1 (least increase) and 7 (most increase) tend to have less total unrestricted revenue from student tuitions and fees, smaller revenues from all sources, and smaller unrestricted expenditures than the other schools, although only the student tuition and fees variable was significant on the post hoc test.

Compared to the other groups, Group 1 (increased least) tended to have relatively less revenue from federal sources and to have less total restricted professional MD fees.

The type of control variables appear to be related more to school size than to a public-private dimension. When tested directly, control type was not significantly related to increases in class size.

Factor IV-Federal Research Involvement

Table 5 shows that even though the post hoc differences were not significant, Groups 1 (least increase) and 7 (most increase) tended to have lower federal sponsored program

revenues, and lower NIH research grants than the other schools. Group 1 had a lower percentage of total sponsored research from federal sources than the other schools.

Clearly, newer, smaller schools would tend to have smaller absolute totals concerning federal research. However, it is notable that schools with a small percent of their sponsored research budgets from federal funds have tended not to increase their class sizes.

Factor V-Graduate Program Variables

Table 6 shows that the schools that increased their class size the most (Group 7) have fewer total residents instructed by MD faculty than other schools. Schools that have changed the least (Group 1) tend to have a smaller percentage of male MD graduates than other schools.

The first variable discussed is related to school size and graduate program development and is not surprising. That schools that have not increased in class size should graduate relatively fewer males is not expected. One may have hypothesized that schools seeking to increase enrollment have admitted more females. The opposite appears to be true although many other variables related to student sex were studied and not found significant. This finding should be explored further.

Factor VI-Non MD Educational Programs

Table 7 shows that even though no post hoc tests were

significant, Groups 7 and 1 (most and least increase) had fewer graduate students than the other schools. This finding would be expected of newer, smaller schools.

Chi Square Tests

The three significant Chi square tests involve curriculum variables and are relatively difficult to interpret. Schools that have increased most and least on class size (Groups 7 and 1) tend not to have training programs for physician assistants. Also, schools that change less (Group 1) tend to use computer assisted instruction and schools that change more (Group 7) tend to conduct formal reviews of the career choices of their graduates.

V. Limitations

While some cautionary statements have been made in the previous sections of this report, several additional points should be made.

The study is exploratory and involved the scanning of large numbers of variables to determine significance. The risk in doing this is to increase the probability that we will find significant results due to chance (Type 1 error). That we have an 8% chance of making a Type 1 error was noted earlier. Since this is an exploratory study, we are willing to assume

this risk of a higher Type 1 error, but we should be aware of it.

In order to provide some way of detecting chance findings, the results of this study were discussed around previously determined factors. Thus, results that do not as easily fit into these factors may be more likely to be spurious findings.

Another limitation to this study is that we cannot make cause-effect statements. There are a great many uncontrolled societal and educational variables which could have affected the results of this study, and preclude our ability to determine what was the result of an increase in class size.

However, what we can do is to generate ideas and hypotheses which are subject to verification in future studies. This is all we can ask of an exploratory study such as this.

Other methodological problems which should cause us to be cautious in interpreting results are the large, often heterogeneous (between groups) standard deviations, and the small and varying group sizes. In many cases we have violated the assumptions of Analysis of Variance.

Originally, the writer intended to investigate the relationship of class size in 1970 to the 307 variables in this study. Since school size was such an obvious confounding variable, nearly all results were significant and reporting of these results was considered meaningless.

A final caution relates to the complexity of the results. There is great temptation to overinterpret the results of such a

study. By limiting oneself to more general trends and conclusions it is easier to avoid the spurious and irrelevant. These general conclusions should be studied further before the more molecular findings are pursued.

Overall Summary and Conclusions

Schools that increased class size the most and least had much in common. They tended to be newer, smaller schools, employing more volunteer faculty. However, the schools that changed the least were slightly older than the schools increasing rapidly and the differences between the two seemed to be financial.

The schools that changed the least tended to provide less student aid and have relatively fewer federal research funds. Perhaps more direct research funding of particular schools or direct aid to students at those schools are policies worth further investigation. Another financial finding is that schools which have increased their enrollment the most have tended to pay higher salaries to basic science faculty than other schools. Again, direct funding of faculty salaries should be investigated as a way of providing federal support for medical education.

The variables that were not related to class size change should help eliminate some common myths. Schools which increased class size were clearly not doing so with minority students or low MCAT students since neither variable was related to class size. Increases in women students may be related to class size increases,

but further study is needed before any conclusions are possible. The reader is reminded that class size increases were unrelated to nearly 90% of the variables studied.

It is recommended that additional research on the topic of class size focus on the refinement and control of key variables from this study and the use of correlational type statistics, such as multiple regression and multiple discriminant analysis. However, since results may be curvilinear the Eta statistic may also be appropriate. (See Guilford and Fruchter, 1973).

TABLE 1

Means and Standard Deviations for Groups of
 Medical Schools on % Class Size Increase (1970-71 to 1973-74)

<u>Group</u>	<u>N</u>	<u>Mean (%)</u>	<u>S.D.</u>
1	9	0.61	0.93
2	16	8.04	1.49
3	24	12.77	2.28
4	17	21.33	2.22
5	17	27.97	1.89
6	15	42.30	10.42
7	7	126.37	34.34

TABLE 2

Means and Standard Deviations For Groups of Medical Schools
On Undergraduate Program Variables

<u>Group</u>	<u>N</u>	<u>Year Founded</u>		<u>Ratio-Univ. Hosp. Beds To M.D. Students</u>	
		Mean	S.D.	Mean	S.D.
1	9	1945.67	41.52	24.74	24.29
2	16	1877.00	46.50	6.50	3.40
3	24	1882.04	49.15	7.50	3.19
4	17	1886.76	42.56	6.79	4.51
5	17	1894.00	50.36	9.24	3.98
6	15	1914.20	47.86	9.48	5.10
7	7	1965.71	2.83	19.72	6.32

Student-Newman-
Keuls Comparisons
Significant at
.05

1 vs. 2,3,4,5
7 vs. 2,3,4,5,6

1 and 7 vs. 2,3,4,5,6

TABLE 2 (continued)

Group	N	Total M.D. Students 73-74		Proj. Enroll. % Growth Students 74-76		% Other Degree 1st Year M.D. Students		% 3rd Year M.D. Students Rec. Aid Req.	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	299.67	370.41	5.99	17.02	2.56	3.16	27.03	40.81
2	16	577.69	165.32	11.53	21.97	0.14	0.40	89.06	48.65
3	24	433.08	102.86	12.42	19.02	0.33	0.84	86.35	12.59
4	17	458.88	240.13	6.43	20.98	0.29	0.63	79.87	32.37
5	17	440.53	191.35	14.22	9.51	1.25	2.76	82.03	25.10
6	15	420.40	149.08	11.95	16.39	0.96	1.99	88.31	9.27
<u>7</u>	<u>7</u>	<u>160.29</u>	<u>85.14</u>	<u>26.76</u>	<u>27.26</u>	<u>0.49</u>	<u>0.93</u>	<u>72.33</u>	<u>36.16</u>

Student-
Newman-Keuls
Comparisons
Significant
at .05

1 vs. 2
7 vs. 2,3,4,5,6

7 vs. 1,2,3,4

1 vs. 2,3,4

1 vs. 2,3,4,5,6,7

23

TABLE 2 (continued)

Group	N	% 4th Year M.D. Student Rec. Aid Req.		Av. Amt. Aid 3rd Year M.D. Students		% 3rd Year M.D. Students Need Rec. Aid		% 4th Year M.D. Students Need Rec. Aid	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	51.30	40.36	909.53	1426.69	29.70	44.83	59.00	46.25
2	16	93.55	39.61	2190.55	943.55	96.30	50.21	99.81	41.18
3	24	86.07	13.07	2845.40	1040.99	91.95	10.92	91.72	13.12
4	17	71.89	37.55	2079.56	1055.14	85.57	36.25	78.06	39.80
5	17	87.33	19.79	2321.47	912.56	84.66	25.46	91.05	20.44
6	15	80.09	22.45	2237.92	737.32	95.32	8.82	94.90	8.26
7	7	76.44	37.28	1942.18	1210.66	80.22	36.01	85.27	38.10

Student-
Newman-
Keuls
Comparisons
Significant
at .05

1 vs. 2,3,5

1 vs. 2,3,4,5,
6,71 vs. 2,3,4,5,
6,7

1 vs. 2

TABLE 2 (continued)

<u>Group</u>	<u>N</u>	<u>Total M.D. Student Rec. Loans</u>		<u>Med. Coll. Libr. Bud. Books and Periodicals (thous.)</u>	
		Mean	S.D.	Mean	S.D.
1	9	40.56	61.66	117.32	64.81
2	16	91.87	74.46	116.98	37.83
3	24	50.22	43.07	134.23	51.10
4	17	70.88	55.22	105.16	43.48
5	17	79.25	56.91	129.18	68.87
6	15	62.33	45.19	111.74	34.44
7	7	7.57	8.38	177.32	35.77

Student-
Newman-Keuls
Comparisons
Significant
at .05

7 vs. 2, 5

7 vs. 4

TABLE 3

Means and Standard Deviations For Groups of Medical Schools on Reliance on Non-Full Time Faculty Variables

Group	N	FT Fac.-Total All Depts, 73-74		Ratio FT Fac. To M.D. Student		Ratio Vol. to FT Bas.Sc. Fac.		Ratio Vol. to FT Clin.Fac.		% Bud. Vac. Clin.Fac.	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	226.78	202.10	1.17	0.99	0.67	0.74	8.20	7.91	14.72	19.78
2	16	334.88	168.79	2.17	1.19	0.63	0.35	4.68	3.19	6.94	5.39
3	24	341.67	146.85	1.48	0.64	0.30	0.30	2.29	2.87	6.08	4.96
4	17	278.12	80.09	1.92	0.73	0.36	0.34	2.44	1.84	7.21	6.63
5	17	312.12	175.61	1.65	0.64	0.51	0.38	3.99	3.74	4.97	4.35
6	15	366.93	217.82	1.38	0.55	0.35	0.26	2.18	1.49	5.80	4.65
7	7	124.14	48.39	1.27	0.28	0.58	0.25	7.30	6.12	24.94	15.58
Student- Newman- Keuls Comparisons Significant at .05		7 vs. 3,6		1 vs. 2		None		1 vs. 3,4,6 7 vs. 3,4,5,6		7 vs. 1,2,3,4, 5,6	

TABLE 3 (continued)

Group	N	Av. Tot. Sal Prof. Bas. Sci. 74-75 (thous.)		Av. Tot. Sal. Assoc. Prof. Bas. Sci. 74-75 (thous.)		Av. Tot. Sal. Asst. Prof. Bas. Sci. 74-75 (thous.)		Av. Tot. Sal Assoc. Prof. Anesth 74-75 (thous.)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	33.60	6.55	26.24	5.43	20.59	3.78	58.29	4.30
2	16	29.31	3.83	22.88	2.23	18.22	1.36	47.82	5.44
3	24	30.02	3.68	23.72	2.56	18.67	1.56	41.95	6.08
4	17	27.56	3.15	22.39	1.67	17.82	1.21	46.63	3.64
5	17	27.47	2.11	21.52	1.63	17.27	1.28	44.36	5.03
6	15	31.12	4.13	23.60	3.03	18.95	1.70	38.25	8.82
7	7	29.07	2.36	23.77	2.90	19.39	1.63	43.50	3.54

Student-
Newman-Keuls
Comparisons
Significant
at .05

1 vs. 4, 5

1 vs. 4, 5

1 vs. 2, 3, 4, 5

1 vs. 3, 6

TABLE 4

Means and Standard Deviations For Groups of Medical Schools
on Type of Control (Public-Private) Variables

Group	N	Medical College Revenue-Total All Sources (thous.)		% Medical College Revenue from Federal Sources (thous.)		Medical College Rev. Tot. Restric. Profess. Fees-MD (thous.)		Med. Coll. Rev. Tot. Unrestric. Stud. Tui- tion and Fees (thous.)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	11,292.21	14,156.48	27.69	15.76	103.58	171.84	462.56	682.96
2	16	23,747.60	12,753.59	48.61	14.67	1751.90	1568.72	1288.32	601.95
3	24	24,277.84	14,614.81	50.64	15.43	2311.33	2011.23	910.08	526.25
4	17	18,962.08	13,072.83	48.62	17.21	938.42	1562.23	1002.44	660.20
5	17	19,440.55	11,714.18	49.50	16.77	1298.73	2212.89	885.42	692.51
6	15	25,404.28	15,433.96	50.83	16.43	1524.53	1488.57	643.38	540.31
7	7	8,584.67	6,073.29	32.86	18.02	261.99	605.40	278.65	301.68

Student-
Newman
Keuls
Comparisons
Significant
at .05

none

1 vs 2,3,4,5,6

1 vs 3

2 vs 1,6,7

TABLE 4 (continued)

Group	N	Medical College Expend. Tot. Unrestric. (thous.)		% of Total Unrestric. Medical College Expen-Admin & Gen. (thous.)	
		Mean	S.D.	Mean	S.D.
1	9	11,432.29	14,649.84	15.37	9.28
2	16	23,958.10	13,573.35	9.57	5.12
3	24	24,278.98	14,195.20	8.30	4.84
4	17	19,754.58	13,421.86	9.10	4.80
5	17	19,439.96	11,653.58	9.49	3.83
6	15	25,648.24	16,727.83	8.16	4.32
7	7	8,005.64	6,253.57	15.50	9.17
Student- Newman Keuls Comparisons Significant at .05		none		none	

TABLE 5

Means and Standard Deviations For Groups of Medical
Schools on Federal Research Involvement Variables

30

Group	N	Tot. Rev. Fed. Spons. Prog. (thous.)		% of Tot. Spons. Res. From Fed.		NIH Res. Grants 73-74 (thousand millions)	
		Mean	S.D.	Mean	S.D.	Mean	S.D.
1	9	3,673.47	5,285.23	54.01	37.25	1.30	1.75
2	16	10,772.52	7,316.74	80.39	10.76	3.72	3.07
3	24	11,756.71	8,874.98	80.05	9.95	3.88	3.08
4	17	8,175.66	6,183.42	79.58	8.62	2.14	1.82
5	17	9,120.58	7,421.03	76.29	22.05	2.56	2.09
6	15	10,981.86	6,143.55	80.57	10.13	3.09	2.26
7	7	2,611.37	2,097.81	84.26	6.58	1.31	0.56

Student-Newman
Keuls Comparisons
Significant at .05

none

1 vs 2,3,4,5,6,7

none

TABLE 6

Means and Standard Deviations for Groups of
Medical Schools on Graduate Program Variables

Group	N	Tot. Residents Instruc. By M.D. Fac. 73-74		% Male M.D. Graduates 73-74	
		Mean	S.D.	Mean	S.D.
1	9	196.44	220.27	56.81	43.24
2	16	426.69	298.39	89.84	2.01
3	24	293.36	213.67	89.93	4.65
4	17	189.69	136.11	78.47	29.92
5	17	281.76	183.28	79.60	25.94
6	15	262.13	139.08	87.99	5.56
7	7	126.00	70.69	77.30	34.47

Student-Newman-
Keuls Comparisons
Significant at
.05

2 vs. 4, 7

1 vs. 2,3,6

TABLE 7

Means and Standard Deviations for Groups of
Medical Schools on Non-M.D. Educational Program Variables

<u>Group</u>	<u>N</u>	Total Grad Students (Masters and Doctoral Candidates)	
		<u>Mean</u>	<u>S.D.</u>
1	9	52.89	71.17
2	16	134.81	115.18
3	24	116.09	83.37
4	17	79.18	53.84
5	17	139.65	99.02
6	15	95.80	77.46
7	7	42.57	46.80

Student-Newman-Keuls
Comparisons Significant
at .05

None

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APPENDIX A

SCHOOLS IN EACH OF
THE 8 CHANGE GROUPS

GROUP 1

East Virginia
Louisiana New Orleans
Mayo
Michigan
Minnesota Duluth
Ohio
Rush
SUNY Stoney Brook
Texas Tech

GROUP 2

California Irvine
California San Francisco
Colorado
Duke
Jefferson
Louisville
Loyola
MC of Wisconsin
Minnesota Minneapolis
Northwestern
Oklahoma
Pennsylvania
Pittsburgh
St. Louis
SUNY Downstate
Tennessee

GROUP 3

Arkansas
California Los Angeles
Chicago Medical
University of Chicago
Cincinnati
Cornell
Emory
Howard
Johns-Hopkins
MC of Virginia
Miami
Maryland
Missouri Columbia
Texas San Antonio
Stanford
SUNY Buffalo
SUNY Upstate
Temple
Vanderbilt
Vermont

GROUP 3 (continued)

Rutgers
Washington University St. Louis
West Virginia
Yale

GROUP 4

Bowman Gray
Creighton
Dartmouth
Georgetown
Georgia
Indiana
Kentucky
Nebraska
New York Medical
New York University
North Dakota
Oregon
Pennsylvania State
Rochester
South Dakota
Texas Galveston
Tufts

GROUP 5

Case Western Reserve
California San Diego
George Washington
Hahnemann
Hawaii
Illinois
Iowa
Kansas
Loma Linda
Louisiana Shreveport
Mississippi
North Carolina
MC of Pennsylvania
Puerto Rico
Southern California
University of Virginia
University of Washington Seattle

GROUP 6

Albany
Arizona
Baylor

GROUP 6 (continued)

Boston
Einstein
Florida
Meharny
Mt. Sinai
New Jersey
New Mexico
South Carolina
Texas Southwest
Utah
Wayne State
University of Wisconsin

GROUP 7

Brown
California Davis
Connecticut
Massachusetts
MC of Ohio Toledo
Michigan State
Texas Houston

APPENDIX B

LIST OF VARIABLES INCLUDED IN
THE CLASS SIZE STUDY

INSTITUTION

*** GENERAL CHARACTERISTICS ***

V1000 MC-IDENTIFICATION CODE
V1010 STATE MC LOCATED
V1020 REGION MC LOCATED
V1030 CONTROL TYPE
V1040 YEAR FOUNDED
V1045 AGE OF INSTITUTION
V1050 2 OR 4 YR SCH
V1060 ACCREDITATION
V1070 MC TYPE & HOSPITAL
V1071 UNIV AFFIL HOSPITAL
V1072 UNIV OR ANY AFFIL HOSPITAL
V1080 TOT BEDS AFFIL HOSPITAL
V1085 RATIO AFFIL HOSP BEDS TO MD STUDENTS
V1090 NUMBER OF DEANS APPNTD 60-74

*** DEMOGRAPHIC ***

V1100 MC LOCATION-SMSA POP 71
V1110 MC LOCATION-IMMEDIATE LOCATION POP 71
V1120 MC LOCATION-IMMEDIATE LOCATION POP-DENSITY 71
V1130 MC LOCATION-SMSA POP-PCT NON-WHITE
V1140 SMSA POP PER MD STUDENT

*** LIBRARY ***

V1200 MC LIBRARIES-TOT VOL
V1210 MC LIBRARIES-ACQUISITIONS
V1220 MC LIBRARIES-TOT SERIAL TITLES RECVD

FINANCES (ACADEMIC YR 72-73)

*** REVENUES ***

--TOTALS BY SOURCE--

V2000 MC REV-TOT ALL SOURCES
V2010 MC REV-TOT FED SOURCES
V2015 PCT OF MC REV FROM FED SOURCES

--TOTALS BY SOURCE (UNRESTR)--

V2100 MC REV-TOT UNRESTR PROFESSIONAL FEES, MD SERV PLANS
V2110 MC REV-TOT UNRESTR ENDOW & GIFTS
V2115 PCT OF TOT MC REV FROM UNRESTR ENDOW & GIFTS

V2120 MC REV-TOT UNRESTR STUDENT TUITION & FEES
 V2125 PCT OF TOT MC REV FROM UNRESTR STUDENT TUITION & FEES
 V2130 MC REV-TOT UNRESTR FED, ST, LOC SOURCES
 V2140 MC REV-TOT UNRESTR GIFTS BUSINESS & INDUS
 V2145 PCT OF TOT MC REV FROM UNRESTR GIFTS BUSINESS & INDUS
 V2150 MC REV-TOT UNRESTR GIFTS FOUNDATION
 V2155 PCT OF TOT MC REV FROM UNRESTR GIFTS FOUNDATIONS
 V2160 MC REV-TOT UNRESTR GIFTS ALUMNI
 V2165 PCT OF TOT REV FROM UNRESTR GIFTS ALUMNI
 V2170 MC REV-TOT GIFTS

--RECOVERY OF INDIRECT COSTS OF SPONS PROGS--

V2200 MC REV-TOT INDIRECT COSTS RECOVERY
 V2210 MC REV-INDIRECT COSTS RECOVERY NON-GOVT
 V2220 MC REV-INDIRECT COSTS RECOVERY FED PROG

--SPONSORED TOTALS BY SOURCE--

V2300 MC REV-TOT FED SPONS PROG
 V2310 MC REV-TOT MULTI & SERV SPONS PROG

--SPONSORED RESEARCH BY SOURCE--

V2400 MC REV-TOT SPONS RESRCH
 V2405 PCT OF TOT MC REV FOR SPONS RESRCH
 V2410 MC REV-TOT FED SPONS RESRCH
 V2415 PCT OF TOT SPONS RESRCH FROM FED
 V2420 MC REV-TOT ST, LOC SPONS RESRCH
 V2425 PCT OF TOT SPONS RESRCH FROM ST, LOC
 V2430 MC REV-TOT NON-GOVT SPONS RESRCH
 V2435 PCT OF TOT SPONS RESRCH FROM NON-GOVT

--SPONSORED TCH-TRN BY SOURCE--

V2500 MC REV-TOT SPONS TCH-TRN
 V2505 PCT OF TOT MC REV FROM SPONS TCH-TRN
 V2510 MC REV-TOT FED SPONS TCH-TRN
 V2515 PCT OF TOT SPONS TCH-TRN FROM FED
 V2520 MC REV-TOT ST, LOC SPONS TCH-TRN
 V2525 PCT OF TOT SPONS TCH-TRN FROM ST, LOC
 V2530 MC REV-TOT NON-GOVT SPONS TCH-TRN
 V2535 PCT OF TOT SPONS TCH-TRN FROM NON-GOVT

-- *** EXPENDITURES ***

--TOTALS BY FUNCTIONAL CATEGORY (UNRESTR)--

V2600 MC EXPD-TOT UNRESTR
 V2610 MC EXPD-TOT UNRESTR ADMN & GEN
 V2615 PCT OF TOT UNRESTR MC EXPD FOR ADMN & GEN
 V2620 MC EXPD-TOT UNRESTR ACADM SALARY, FEES TOT ACTUAL

V2625 PCT OF TOT UNRESTR MC EXPD FOR ACADM SALARY, FEES
V2630 MC EXPD-TOT UNRESTR INSTR & DEPT RESRCH
V2635 PCT OF TOT UNRESTR MC EXPD FOR INSTR & DEPT RESRCH
V2640 MC EXPD-TOT UNRESTR PUBLIC SERV

--EXPENDITURES PER STUDENT & STAFF--

V2700 INSTR & DEPT RESRCH EXPD PER STUDENT
V2710 INSTR & DEPT RESRCH EXPD PER FAC
V2720 MC EXPD-TOT UNRESTR PER MD STUDENT
V2730 MC EXPD-TOT UNRESTR PER FT FAC
V2740 SPECIAL PROJ \$ PER MD STUDENT 72-73
V2750 TOT MC EXPD PER TOTAL STUDENTS

--SPONSORED EXPENDITURES--

V2800 MC EXPD-TOT SPONS RESRCH
V2805 PCT OF TOT MC EXPD FOR SPONS RESRCH
V2810 MC EXPD-TOT SPONS TCH-TRN
V2815 PCT OF TOT MC EXPD FOR SPONS TCH-TRN
V2820 PCT SPONS FAC SALARY FROM FED \$ 72-73
V2830 MC EXPD-PCT SPONS PROG EXPD OF TOT
V2840 MC EXPD-TOT SPONS PROGS--ALL TYPES

*** NIH AWARDS ***

V2900 NIH AWARDS-PROG+PROJ & CENTER GRTS \$1000
V2910 NIH AWARDS-RESRCH GRTS \$1000 67-68
V2920 NIH AWARDS-RESRCH GRTS \$1000 68-69
V2930 NIH AWARDS-RESRCH GRTS \$1000 72-73
V2940 NIH AWARDS-RESRCH GRTS \$1000 73-74
V2950 NIH AWARDS PCT CHANGE

*** CONSTRUCTION ***

--FUNDS BY SOURCE--

V3000 CONSTR FUNDS-TOT FED
V3005 PCT OF TOT CONSTR FUNDS FROM FED
V3010 CONSTR FUNDS-TOT ST
V3015 PCT OF TOT CONSTR FUNDS FROM ST
V3020 CONSTR FUNDS-TOT PRIV GIFTS
V3025 PCT OF TOT CONSTR FUNDS FROM PRIV GIFTS
V3030 CONSTR FUNDS-TOT OTHER
V3035 PCT OF TOT CONSTR FUNDS FROM OTHER

--BUILDING COSTS--

V3100 BLDG CONSTR COSTS-TOT
V3110 MOVABLE EQUIP CONSTR COSTS-TOT

--BUILDING USE--

V3200 CONSTR BLDG USE-PCT FOR TCH
V3210 CONSTR BLDG USE-PCT FOR RESRCH
V3220 CONSTR BLDG USE-PCT FOR MD SERV
V3230 CONSTR BLDG USE-PCT FOR OTHER

*** GENERAL ***

V3300 PROFESSIONAL FEES RECVD PER CL SCI FAC
V3310 MC LIBRARIES-BUDGET, BOOKS, PERIODICALS, BINDING
V3320 MC EXPEN-SPONS RESRCH PER FT FAC
V3325 MC EXPEN-SPONS RESRCH PER MD STUDENT
V3330 MC EXPEN-SPONS TCH-TRN PER MD STUDENT
V3340 MC EXPEN-REG OP COSTS
V3345 MC EXPD-REG OP COSTS PER MD STUDENT
V3350 SPONS PROG EXPD PER FT FAC

ACADEMIC PROGRAM

*** GENERAL ***

V4000 OFFER COMBINED DOC+MD PROG 74-75
V4010 USE NATL BDS PT 1-PROMOTION TEST 74-75
V4020 USE NATL BDS PT 2-GRADUATION TEST 74-75
V4030 MINIMUM MONTHS INSTR FOR MD DEGREE
V4035 UNIT FOR RESRCH & DEV OF ED PROCESS
V4040 MC PERMITS PASS-FAIL GRADING
V4050 TYPE GRADING-HONORS, PASS, FAIL 74-75
V4060 HLTH PRACTITIONER PROG-PHYS ASST 73
V4070 HLTH PRACTITIONER PROG-NURSING 73
V4080 HLTH PRACTITIONER PROG-MEDEX 73
V4090 HLTH PRACTITIONER PROG-MIDWIFE NURSE 73

*** CURRICULUM ***

V4100 CURR INNOVATN-AMBUL PRIM CARE PROG 74-75
V4110 CURR INNOVATN-SPECLTY TRACKS 74-75
V4120 CURR INNOVATN-CL APPL COMPUTERS 74-75
V4130 CURR INNOVATN-COMPUTER ASSTD INSTR 74-75
V4140 CURR ELECTIVES-HUMAN SEXUALITY 74-75
V4150 CURR ELECTIVES-MD JURISPRUDENCE 74-75
V4160 CURR ELECTIVES-NUTRITION 74-75
V4170 CURR ELECTIVES-NON-WESTERN MEDICINE 74-75
V4180 CURR ELECTIVES-POP DYNAMICS 74-75
V4190 CURR ELECTIVES-DRUG ABUSE 74-75
V4200 CURR ELECTIVES-ALCOHOLISM 74-75
V4210 CURR ELECTIVES-MD HYPNOSIS 74-75
V4220 CURR ELECTIVES-ETHICAL PROBLEMS 74-75
V4230 CURR ELECTIVES-HLTH CARE DELIVERY 74-75
V4240 CURR-FAMILY MD PROG 74-75

V4250 CURR-FAMILY MD GRAD PROG 73
V4260 CURR-PRIMARY CARE PROG 74-75
V4270 CURR-ACCELRTD PROG-MD DEGREE LESS THAN 6 YRS
V4280 CURR-RESRCH & DEV OF ED PROCESS 74-75
V4290 CURR-REQUIRED AMBUL CARE EXPERIENCE 73
V4300 CURR-PCT UNDERGRAD EXPERIENCE AMBUL CARE 73
V4310 CURR-PRIM CARE DEPT ENCOURAGE GENERALIST 73
V4320 CURR-TOT MD STUDENTS OPERATIONAL HMO 73
V4325 CURR-HLTH PRACTITIONER PROG 73
V4330 CURR-EMERGENCY CARE PROG 73
V4340 CURR-PATIENT CARE PROG-ALCOHOLISM OR DRUG ABUSE73
V4350 CURR-HLTH CARE MANGMT PROG 73
V4360 STATEMNT OF BEHAV OBJS PUBLSHD

FACULTY

*** STAFF ***

--TOTAL TEACHING STAFF--

V5000 FT FAC-TOT ALL DEPT 72-73
V5010 FT FAC-TOT ALL DEPT 73-74
V5020 RATIO-FT FAC TO MD STUDENTS
V5025 RATIO FT FAC TO TOTAL STUDENTS
V5030 RATIO PT FAC TO FT FAC
V5040 RATIO VOL FAC TO FT FAC

--TOTALS BY MAJOR DISCIPLINE--

V5100 BAS SCI-TOT FT FAC
V5110 BAS SCI-TOT PT FAC
V5120 BAS SCI-TOT VOL FAC
V5130 CL SCI-TOT FT FAC 72-73
V5140 CL SCI-TOT FT FAC 73-74
V5150 CL SCI-TOT PT FAC
V5160 CL SCI-TOT VOL FAC

--TOTALS BY RANK--

V5200 PROF-TOT FT-CLI SCI
V5205 PROF-PCT FT-CLI SCI
V5210 ASSOC PROF-TOT FT-CLI SCI
V5215 ASSOC PROF-PCT FT-CLI SCI
V5220 ASST PROF-TOT FT-CLI SCI
V5225 ASST PROF-PCT FT-CLI SCI
V5230 INSTR-TOT FT-CLI SCI
V5235 INSTR-PCT FT-CLI SCI
V5240 PROF-TOT FT-BAS SCI
V5245 PROF-PCT FT-BAS SCI
V5250 ASSOC PROF-TOT FT-BAS SCI
V5255 ASSOC PROF-PCT FT-BAS SCI

V5260 ASST PROF-TOT FT-BAS SCI
V5265 ASST PROF-PCT FT-BAS SCI
V5270 INSTR-TOT FT-BAS SCI
V5275 INSTR-PCT FT-BAS SCI

--VACANCIES--

V5300 VACANCIES-FT FAC-CL SCI
V5310 VACANCIES-FT FAC-BAS SCI
V5320 PCT BUDGETED VACANCIES-CL SCI

*** SALARY ***

--BASIC SCIENCE BY RANK--

V5400 AV TOT SALARY-PROF-BAS SCI 74-75
V5410 AV TOT SALARY-ASSOC PROF-BAS SCI 74-75
V5420 AV TOT SALARY-ASST PROF-BAS SCI 74-75
V5430 AV TOT SALARY-INSTR-BAS SCI 74-75

--CLINICAL SCIENCE BY RANK--

V5500 AV TOT SALARY-PROF-CL SCI 74-75
V5510 AV TOT SALARY-ASSOC PROF-CL SCI 74-75
V5520 AV TOT SALARY-ASST PROF-CL SCI 74-75
V5530 AV TOT SALARY-INSTR-CL SCI 74-75

--DEPARTMENT OF MEDICINE BY RANK--

V5540 AV TOT SALARY-PROF MD-CL SCI 74-75
V5550 AV TOT SALARY-ASSOC PROF MD-CL SCI 74-75
V5560 AV TOT SALARY-ASST PROF MD-CL SCI 74-75
V5570 AV TOT SALARY-INSTR MD-CL SCI 74-75

--ANESTHESIOLOGY BY RANK--

V5600 AV TOT SALARY-PROF-ANESTH 74-75
V5610 AV TOT SALARY-ASSOC PROF-ANESTH 74-75
V5620 AV TOT SALARY-ASST PROF-ANESTH 74-75
V5630 AV TOT SALARY-INSTR-ANESTH 74-75

STUDENT ADMISSIONS

*** ENROLLMENT ***

--STUDENT BODY TOTALS--

V6000 ENROLL-TOT STUDENTS
V6010 TOT STUDENTS...ALL...INSTRUCTED AT MC
V6020 ENROLL-TOT MD STUDENTS 73-74

V6025 ENROLL-TOT MD STUDENTS 72-73
V6030 ENROLL-ACTUAL GROWTH RATE
V6040 ENROLL-TOT MD STUDENT EQUIV INSTR BY MD
V6050 ENROLL RATIO-MD STUDENTS EQUIV TO MD STUDENTS
V6080 ENROLL RATIO-INTERNS & RESDNTS TO MD STUDENTS
V6090 ENROLL RATIO-INTERNS TO MD STUDENTS
V6100 ENROLL RATIO-RESDNTS TO MD STUDENTS
V6110 ENROLL-TOT FINAL YR STUDENTS-MAS & DOC CAND-BAS SCI
V6120 ENROLL-TOT FINAL YR STUDENTS-MAS & DOC CONFRD
V6130 ENROLL-TOT FINAL YR STUDENTS-NON-DEGREE CAND
V6140 ENROLL RATIO-MAS & DOC BAS SCI TO MD STUDENTS
V6160 ENROLL RATIO-MAS & DOC CONFRD TO TOT ENROLL

--IN STATE-OUT OF STATE STUDENTS--

V6200 ENROLL-TOT IN ST MD STUDENTS
V6210 ENROLL-TOT OUT ST MD STUDENTS
V6220 ENROLL RATIO-IN ST TO OUT ST MD STUDENTS
V6230 PCT MD STUDENT FROM HOME STATE

--STUDENTS PER FACULTY--

V6300 TOT RESDNTS INSTR BY MD FAC 72-73
V6310 TOT RESDNTS INSTR BY MD FAC 73-74
V6320 TOT INTERNS INSTR BY MD FAC 72-73
V6330 TOT INTERNS INSTR BY MD FAC 73-74

--PROJECTED ENROLLMENT--

V6400 PROJTD ENROLL-TOT FINAL YR MD STUDENTS 74-75
V6410 PROJTD ENROLL-TOT FINAL YR MD STUDENTS 75-76
V6420 PROJTD ENROLL-TOT FINAL YR MD STUDENTS 76-77
V6430 PROJTD ENROLL-PCT GROWTH MD STUDENTS 74-77
V6440 PROJTD ENROLL-TOT 1ST YR MD STUDENTS 74-75
V6450 PROJTD ENROLL-TOT 1ST YR MD STUDENTS 75-76
V6460 PROJTD ENROLL-TOT 1ST YR MD STUDENTS 76-77
V6470 PROJTD ENROLL-TOT 1ST YR MD STUDENTS 77-78
V6480 PROJTD ENROLL-TOT 1ST YR MD STUDENTS 78-79
V6490 PROJTD ENROLL-PCT GROWTH 1ST YR MD STUDENTS 74-79

--BY CLASS--

V6500 ENROLL-TOT 1ST YR MD STUDENTS
V6510 ENROLL-TOT MID YR MD STUDENTS
V6520 ENROLL-TOT FINAL YR MD STUDENTS

--BY SEX--

V6600 ENROLL-TOT MALE 1ST YR MD STUDENT
V6605 ENROLL-PCT FEMALE 1ST YR MD STUDENT
V6610 ENROLL-TOT MALE MID YR MD STUDENT
V6615 ENROLL-PCT FEMALE MID YR MD STUDENT

V6620 ENROLL-TOT MALE FINAL YR MD STUDENT
V6625 ENROLL-PCT FEMALE FINAL YR MD STUDENT
V6630 ENROLL-TOT MALE MD STUDENT
V6635 ENROLL-PCT FEMALE MD STUDENT

--FOREIGN MEDICAL STUDENTS--

V6700 FMS ENROLL-TOT MD STUDENTS
V6705 FMS ENROLL-PCT MD STUDENTS
V6710 FMS ENROLL-TOT 1ST YR MD STUDENTS
V6715 FMS ENROLL-PCT 1ST YR MD STUDENTS
V6720 FMS ENROLL-TOT MID YR MD STUDENTS
V6725 FMS ENROLL-PCT MID YR MD STUDENTS
V6730 FMS ENROLL-TOT GRAD MD STUDENTS
V6735 FMS ENROLL-PCT GRAD MD STUDENTS

--ETHNIC COMPOSITION--

V6800 MD STUDENTS-TOT UNDER REP MINORITY
V6805 MD STUDENTS-PCT UNDER REP MINORITY
V6810 MD STUDENTS-TOT CAUCASIAN MALE
V6820 MD STUDENTS-TOT CAUCASIAN FEMALE
V6830 MD STUDENTS-TOT ORIENTAL-AM MALE
V6840 MD STUDENTS-TOT ORIENTAL-AM FEMALE

--REPEATERS--

V6900 REPEATERS-PCT 1ST YR MD STUDENTS
V6910 REPEATERS-TOT 1ST YR MD STUDENTS MALE
V6920 REPEATERS-TOT 1ST YR MD STUDENTS FEMALE

--WITHDRAWALS--

V7000 WITHDRL-TOT MD STUDENTS-ALL REASONS
V7005 WITHDRL-PCT MD STUDENTS-ALL REASONS
V7010 WITHDRL-TOT 1ST YR-ALL REASONS
V7015 WITHDRL-PCT 1ST YR-ALL REASONS
V7020 WITHDRL-TOT MID YR-ALL REASONS
V7025 WITHDRL-PCT MID YR-ALL REASONS
V7030 WITHDRL-TOT FINAL YR-ALL REASONS
V7035 WITHDRL-PCT FINAL YR-ALL REASONS

*** ENTERING QUALIFICATIONS ***

--GPA--

V7100 UNDERGRAD GPA-ENTERING 1ST YR MD STUDENTS
V7110 PRE MD GPA 3.6 TO 4.0-1ST YR MD STUDENTS
V7115 PRE MD GPA 3.6 TO 4.0-PCT 1ST YR MD STUDENTS

V7120 PRE MD GPA 2.6 TO 3.5-1ST YR MD STUDENTS
V7125 PRE MD GPA 2.6 TO 3.5 PCT 1ST YR MD STUDENTS
V7130 PRE MD GPA LESS THAN 2.6-1ST YR MD STUDENTS
V7135 PRE MD GPA LESS THAN 2.6-PCT 1ST MD STUDENTS
V7140 PRE MD GPA UNKNOWN-1ST YR MD STUDENTS
V7145 PRE MD GPA UNKNOWN-PCT 1ST YR MD STUDENTS

--MCAT--

V7200 MEAN MCAT SCORE SCI-1ST YR MD STUDENTS
V7210 MEAN MCAT SCORE VER-1ST YR MD STUDENTS
V7220 MEAN MCAT SCORE GEN-1ST YR MD STUDENTS
V7230 MEAN MCAT SCORE QUAN-1ST MD STUDENTS

--DEGREE STATUS--

V7300 TOT BACH-1ST YR MD STUDENTS
V7305 PCT BACH-1ST YR MD STUDENTS
V7310 TOT MAS-1ST YR MD STUDENTS
V7315 PCT MAS-1ST YR MD STUDENTS
V7320 TOT DOC-1ST YR MD STUDENTS
V7325 PCT DOC-1ST YR MD STUDENTS
V7330 PCT ANY DEGREE-1ST YR MD STUDENTS
V7340 TOT OTHER DEGREE-1ST YR MD STUDENTS
V7345 PCT OTHER DEGREE-1ST YR MD STUDENTS
V7350 TOT NO DEGREE-1ST YR MD STUDENTS
V7355 PCT NO DEGREE-1ST YR MD STUDENTS

--UNDERGRADUATE EDUCATION--

V7400 UNDERGRAD ED-2 YRS OR LESS-1ST YR MD STUDENTS
V7405 UNDERGRAD ED-2 YRS OR LESS-PCT 1ST YR MD STUDENTS
V7410 UNDERGRAD ED-3 YRS-1ST YR MD STUDENTS
V7415 UNDERGRAD ED-3 YRS-PCT 1ST YR MD STUDENTS
V7420 UNDERGRAD ED-4 YRS OR MORE-1ST YR MD STUDENTS
V7425 UNDERGRAD ED-4 YRS OR MORE-PCT 1ST YR MD STUDENTS

*** STUDENT AID ***

--REQUESTING--

V7500 REQ AID-TOT MD STUDENTS
V7505 REQ+RECVD AID-PCT MD STUDENTS
V7510 REQ AID-TOT 1ST YR MD STUDENTS
V7515 REQ+RECVD AID-PCT 1ST YR MD STUDENTS
V7520 REQ AID-TOT 2ND YR MD STUDENTS
V7525 REQ+RECVD AID-PCT 2ND YR MD STUDENTS
V7530 REQ AID-TOT 3RD YR MD STUDENTS

V7535 REQ+RECVD AID-PCT 3RD YR MD STUDENTS
V7540 REQ AID-TOT FINAL YR MD STUDENTS
V7545 REQ+RECVD AID-PCT FINAL YR MD STUDENTS

--RECEIVING--

V7600 RECVD AID-TOT MD STUDENTS
V7610 TOT AID TO MD STUDENTS
V7615 AV AMT AID TO MD STUDENTS
V7620 RECVD AID-TOT 1ST YR MD STUDENTS
V7630 TOT AID TO 1ST YR MD STUDENTS
V7635 AV AMT AID TO 1ST YR MD STUDENTS
V7640 RECVD AID-TOT 2ND YR MD STUDENTS
V7650 TOT AID TO 2ND YR MD STUDENTS
V7655 AV AMT AID TO 2ND YR MD STUDENTS
V7660 RECVD AID-TOT 3RD YR MD STUDENTS
V7670 TOT AID TO 3RD YR MD STUDENTS
V7675 AV AMT AID TO 3RD YR MD STUDENTS
V7680 RECVD AID-TOT FINAL YR MD STUDENTS
V7690 TOT AID TO FINAL YR MD STUDENTS
V7695 AV AMT AID TO FINAL YR MD STUDENTS

--NEEDING--

V7700 NEED AID-TOT MD STUDENTS
V7705 NEED+RECVD AID-PCT OF TOT MD STUDENTS
V7710 NEED AID-TOT 1ST YR MD STUDENTS
V7715 NEED+RECVD AID-PCT 1ST YR MD STUDENTS
V7720 NEED AID-TOT 2ND YR MD STUDENTS
V7725 NEED+RECVD AID-PCT 2ND YR MD STUDENTS
V7730 NEED AID-TOT 3RD YR MD STUDENTS
V7735 NEED+RECVD AID-PCT 3RD YR MD STUDENTS
V7740 NEED AID-TOT FINAL YR MD STUDENTS
V7745 NEED+RECVD AID-PCT FINAL YR MD STUDENTS

--AID DISPERSED TO STUDENTS--

V7800 AID-AMT PER MD STUDENT
V7810 RECVD AID-LOANS-TOT MD STUDENTS
V7815 RECVD AID-LOANS-PCT MD STUDENTS
V7820 RECVD AID-SCHLSHIP-TOT MD STUDENTS
V7825 RECVD AID-SCHLSHIP-PCT MD STUDENTS

*** EXPENSES ***

--TUITION, EXPENSES, & FEES--

V7900 TUIT+EXPEN PER IN ST MD STUDENT
V7910 TUIT+EXPEN PER OUT ST MD STUDENT
V7920 FEES+EXPEN EXCLUD TUIT PER MD STUDENT
V7930 AV EXPEN PER IN ST MD STUDENT UNMARRIED
V7940 AV EXPEN PER OUT ST MD STUDENT UNMARRIED
V7950 TUIT+EXPEN RATIO-IN ST TO OUT ST

*** STUDENT SELECTION ***

--YEAR--

V8000 YR SELECTD-HS SR 73
V8010 YR SELECTD-UNDERGRAD FR 74-75
V8020 YR SELECTD-UNDERGRAD SOPH 74-75
V8030 YR SELECTD-UNDERGRAD JR 74-75
V8040 YR SELECTD-UNDERGRAD SR 74-75

--APPLICANTS--

V8100 APPL-TOT
V8110 APPL-TOT MALE
V8115 APPL-PCT MALE TO TOT
V8120 APPL-TOT FEMALE
V8130 RATIO-MALE APPL TO ENTERING
V8140 RATIO-FEMALE APPL TO ENTERING
V8150 RATIO-APPL TO ENTERING

--STANDING--

V8200 MC ACCEPT TRANS STUDENTS
V8210 MC ACCEPT ADV STANDING STUDENTS

*** CAREER REVIEW ***

V8300 HLTH MANPOWER REV CAREER CHOICE WITHIN 5 YRS OF GRAD 73
V8310 HLTH MANPOWER REV CAREER CHOICE 5 YRS AFTER GRAD 73
V8320 HLTH MANPOWER REV CAREER CHOICE APPL 73
V8330 ADVIS PROG-STUDENT RETENTION 74-75
V8340 CAREER INTENT AFFECTS ADMISS DECISION

ABBREVIATIONS

ACADM	ACADEMIC
ADMISS	ADMISSIONS
ADMN & GEN	ADMINISTRATIVE & GENERAL
ADV DEGREE	ADVANCED DEGREE
ADVIS PROG	ADVISORY PROGRAM
AFFIL	AFFILIATED
AM	AMERICAN
AMBUL	AMBULATORY
AMT	AMOUNT
ANESTH	ANESTHESIOLOGY
APPL	APPLICANT, APPLICATION
ASSOC PROF	ASSOCIATE PROFESSOR
ASSOC PROF MD	ASSOCIATE PROFESSOR OF MEDICINE
ASSTD	ASSISTED
AV	AVERAGE
BACH	BACHELORS DEGREE
BAS SCI	BASIC SCIENCE
BEHAV OBSS PUBLSHD	BEHAVIORAL OBJECTIVES PUBLISHED
BLDG	BUILDING
CL SCI	CLINICAL SCIENCE
CONSTR	CONSTRUCTION
CURR	CURRICULUM
DEPT	DEPARTMENT
DEV	DEVELOPMENT
DOC	DOCTORATE
DOC CAND	DOCTORAL CANDIDATE
DOC CONFRD	DOCTORALS CONFERRED
ED	EDUCATION
ENDOW	ENDOWMENTS
ENTERING	ENTERING STUDENTS
EQUIP	EQUIPMENT
EXPD	EXPENDITURES
FAC	FACULTY
FED	FEDERAL
FMS	FOREIGN MEDICAL STUDENTS
FT FAC	FULL-TIME FACULTY
GPA	GRADE POINT AVERAGE
GRAD	GRADUATION
GRTS	GRANTS

HLTH
HMO
HOSPS
HS SR

HEALTH
HEALTH MAINTENANCE ORGANIZATIONS
HOSPITALS
HIGH SCHOOL SENIOR

INDUS
INNOVATN
INSTR
INSTR & DEPT RESRCH

INDUSTRY
INNOVATION
INSTRUCTOR, INSTRUCTED
INSTRUCTION & DEPARTMENTAL RESEARCH

LOC

LOCAL

MANGMT
MAS
MC
MCAT SCORE GEN
MCAT SCORE SCI
MCAT SCORE VER
MCAT SCORE QUAN
MD

MANAGEMENT
MASTERS DEGREE
MEDICAL COLLEGE
MCAT SCORE GENERAL KNOWLEDGE
MCAT SCORE SCIENCE
MCAT SCORE VERBAL
MCAT SCORE QUANTITATIVE
MEDICAL

NATL BDS
NEED & RECVD AID
NON-GOVT

NATIONAL BOARDS
NEEDED & RECEIVED AID
NON-GOVERNMENT

PCT
PHYS ASST
POP
PRIM CARE
PRIV
P. OF
PROF MD
PROG
PROJ
PROJTD
PT FAC

PERCENT
PHYSICIAN'S ASSISTANT
POPULATION
PRIMARY CARE
PRIVATE
FULL PROFESSOR
PROFESSOR OF MEDICINE
PROGRAM
PROJECT
PROJECTED
PART-TIME FACULTY

RECVD
REG OP COSTS
REQ AID
REQ & RECVD AID
RESDNNTS
RESRCH
REV
REV CAREER

RECEIVED
REGULAR OPERATING COSTS
REQUESTED AID
REQUESTED & RECEIVED AID
RESIDENTS
RESEARCH
REVENUES
REVIEW CAREER

SCH
SELECTD
SERV
SMSA
SPONS
ST
STUDENT EQUIV

TCH-TRN
TOT
TRANS STUDENTS
TUIT & EXPEN

UNIV
UNRESTR

VOL
VOL FAC

WITHDRL

YR

SCHOOL
SELECTED
SERVICE
STANDARD METROPOLITAN STATISTICAL AREA
SPONSORED
STATE
STUDENT EQUIVALENT

TEACHING-TRAINING
TOTAL
TRANSFERRED STUDENTS
TUITION & EXPENSES

UNIVERSITY
UNRESTRICTED

VOLUMES
VOLUNTARY FACULTY

WITHDRAWALS

YEAR

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