

DOCUMENT RESUME

ED 069 315

LI 003 982

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TITLE A Cost Analysis Comparison of University Funded
Faculty Facsimile Service and Faculty Journal
Circulation Privileges.
INSTITUTION Wayne State Univ., Detroit, Mich. Library and
Biomedical Information Center.
PUB DATE Oct 72
NOTE 21p.; (7 References); Report No. 60
EDRS PRICE MF-\$0.65 HC-\$3.29
DESCRIPTORS *Comparative Analysis; *Cost Effectiveness;
*Facsimile Transmission; Faculty; Financial Support;
*Library Circulation; Library Services; Medical
Libraries; *Periodicals; Reprography; Research
Libraries; University Libraries
IDENTIFIERS *Library Role; Shiffman Medical Library; Wayne State
University Medical Library

ABSTRACT

The traditional avenue of accessibility to library materials for faculty members of a university has been virtually unlimited circulation of journals. In recent years the provision of facsimile copy service has supplemented and in some instances supplanted the circulation of journals as the mechanism for accessibility to research materials. This study compares the cost of faculty photocopy service at Shiffman Medical Library for September, 1971 and March, 1972 with the projected cost of journal circulation for the same months. Appendix 1 summarizes the cost of facsimile copying for September, 1971 and appendix 2 summarizes these costs for March, 1972. These summaries indicate the number of persons requesting service as well as the service load per department. The total costs for the services are \$710.20 (September 1971) and \$794.90 (March 1972). These costs are lower than the projected costs of journal circulation and the photocopy service had the additional advantage of freeing faculty time for other tasks. The economic and service advantages demonstrated in this report indicate that photocopy service for faculty members is the most feasible avenue of access to research materials in the university. (Author/NH)

Karen

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REPORT

No. 60

A Cost Analysis Comparison of
University Funded Faculty Facsimile Service and
Faculty Journal Circulation Privileges

**WAYNE STATE UNIVERSITY
SCHOOL OF MEDICINE
Library and Biomedical
Information Service Center
Detroit, Michigan**

LI 003 982

ED 069315

A Cost Analysis Comparison of
University Funded Faculty Facsimile Service and
Faculty Journal Circulation Privileges

by

Faith Van Toll

Detroit
October 1972

INTRODUCTION

The library's role in the university is a multi-faceted one which is modified, diversified, or intensified by the organization, objectives, operations, and facilities of the university in which it functions. Certain aspects of this role, however, are immutable and are automatically accepted. The support of the research effort of the university is such an aspect.

Universities began building their libraries as graduate schools developed and as they evolved into research institutions....Research collections were created for the use of faculty and perhaps some students. (1)

The most distinctive difference between the college and the university is found in the latter's emphasis upon research...it serves as the principal training ground for those who carry on investigation in government, industry, the sciences, and other fields. Of the estimated 100,000 individuals engaged in research, one-third are associated with colleges and universities. (2)

As important as the library's provision of materials to support the research effort is the accessibility it allows to these materials. The acquisition of research material is negated if accessibility is limited, restricted, or time-consuming.

Since the prime function of research library is to make documents accessible, any changes made cannot jeopardize accessibility... (3)

The traditional avenue of accessibility to library materials for the faculty member of a university has been virtually unlimited circulation of journals. In recent years the provision of facsimile copy service for the faculty has supplemented and in some instances supplanted the circulation of journals as the mechanism for accessibility to

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- (1) Pings, Vern M. A New Objective for Development. Detroit: Wayne State University, University Libraries, Working Paper No. 2, 1972, pp. 5-6.
 - (2) Wilson, Louis Round and Tauber, Maurice F. The University Library. New York: Columbia University Press, 1956, pp. 16-17.
 - (3) Pings, Vern M. A Proposed Working Definition for Reorganization of WSU Library System. Detroit: Wayne State University, Working Paper No. 5, 1972, p. 4.

research materials. In 1966, a photocopy service for faculty was initiated at the Wayne State University Medical Library (now called Shiffman Medical Library). The circulation of journals continued, giving the faculty the option of requesting a facsimile copy or borrowing the original journal. In July, 1967 the circulation of journals ceased, transferring the avenue of accessibility to facsimile copy service. Between 1967-70 the costs for the facsimile copy service as provided by the WSU Medical Library were absorbed by funds available through the Wayne State University School of Medicine. When the funds were depleted in 1970, faculty departments were billed for any copy service received. Consequently, departmental limitations on funds determined the ultimate accessibility to research materials via this service. When funds were exhausted, the faculty members of any given department would be dependent upon library use of journals.

METHODOLOGY

Ultimately the cost of any photocopy service for faculty is absorbed by the university. How does the cost of this method of accessibility to research material compare to the cost to the university faculty journal circulation privileges? The cost of faculty photocopy service at Shiffman Medical Library for the months of September, 1971 and March, 1972 are compared with the projected cost for journal circulation for the same months. These two months were selected because the number of faculty requests for facsimile copy received during these months varied by less than 10%. The cost of facsimile copy service can be ascertained by multiplying the number of pages provided by 10¢ -- the amount charged per exposure for faculty. The cost of 10¢ per exposure has been arbitrarily assessed as the additional costs to the library for providing facsimile copy in lieu of circulation of a journal. Studies by Cruzat and Pings document the cost of providing interlibrary loans and include information on the cost of the facsimile phase of such operations. (4, 5) Since the original copy of all faculty requests which include the number of pages provided are maintained at Shiffman Medical Library and are summarized monthly for accounting purposes, the determination of the cost of university funded faculty service is relatively straight forward. Appendix 1 summarizes the cost of faculty facsimile copying for the months of September, 1971 and March 1972 and indicate the number of persons requesting service as well as the service load per department. The total costs for the service are \$710.20 (September 1971) and \$794.90 (March 1972).

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- (4) Cruzat, Gwendolyn S. "An Evaluation of the Interlibrary Loan Service, Wayne State University Medical Library. III. Determination of Cost for Processing Interloans", Wayne State University School of Medicine Library and Biomedical Information Center. Report No. 17, 1966.
 - (5) Pings, Vern M. Kentucky, Ohio, Michigan Regional Medical Library. Executive Memo. No. 83, March, 1971.

The projection of the cost to the university for the circulation of journals is a complex procedure which is dependent upon the acceptance of certain assumptions (to be enumerated below) and upon the awareness of the multiple variables inherent in the data which is analyzed in making the projection. Initially the original copy for all requests for the months of the study were arranged alphabetically by journal title to determine the total number of volumes requested and the number of duplicate requests for the same volume. For the purpose of this study a volume is defined as one bound volume (not a volume as determined by publication pattern) or as one unbound issue of a journal. The duplicate requests for the same volume were analyzed to ascertain the number of persons requesting the duplicate volumes and the dates of each duplicated request. After the tally of the number of volumes requested was completed, the request forms were rearranged, now alphabetically by person. This enabled the investigator to discern the number of volumes requested by one person and the dates of such requests. The data secured by the analysis of the faculty requests for facsimile copy service formed the basis for estimating the amount of time that would be involved in utilizing faculty journal circulation privileges.

ANALYSIS

Before an estimate of the cost of faculty journal circulation privileges can be made, certain assumptions must be accepted. Cost is determined by estimating the amount of time expended utilizing journal circulation privileges. The time spent is calculated by ascertaining the number of trips made to the library. It will be assumed that: 1) each volume constitutes a separate trip to the library; 2) each trip to the library requires one-half hour of time; 3) trips to the library for the volume requested would be made by the faculty member and not by one of his staff members; 4) requests for several articles in one volume by one person could be satisfied with one loan of the volume; 5) journals which would have circulated will be out for the entire loan period and would not be overdue; 6) staffing costs would be approximately the same as at present because the decrease in the staffing of the facsimile copying operation would be counterbalanced by an increase in the circulation staffing.

An overview of the faculty facsimile copy requests (see Table 1) shows that while 1271 requests were received in September and 1397 were received in March, the total number of volumes requested were 920 and 1189. It would appear that, assuming each volume request would require a trip to the library, that there would have been 920 and 1189 trips respectively. This tally, however, would not account for the 73 volumes for which there were more than one request in September and 89 volumes for which there were more than one request in March. By examining the dates of the duplicate requests, it was possible to determine if any additional trips to the library would have

had to be made because the journal desired was in use. For example: Professor A checks out Volume 256 of Biochimica et Biophysica Acta on September 15. With a one week circulation period, the journal would be due on September 21. If Professor B requests the same volume any time between September 15 and September 22, he would find the journal was in use and would have to make another trip to the library to secure the desired volume. Examination of the duplicate requests revealed that with a one week circulation period for journals, 53 additional trips would have been required in September and 44 additional trips would have been made in March. With a two week circulation period, 78 additional trips would have been required in September and 70 would have been made in March. A comprehensive picture of the total number of trips that would have been made in September and March is presented in Table 2. Referring to Table 2 one sees that, in September, 1971 if a separate trip is required for each volume requested, 21 persons would have made one trip to the library, 12 persons would have made two trips, six people would have made three trips, four people would have made four trips, seven people would have made five trips, 14 people would have made 6-10 trips, 10 people would have made 21-50 trips, and five people would have made over 50 trips. Separate trips for each volume would have involved 1009 trips encompassing 95 faculty members.

Because it is possible that the circulation of journals would alter borrowing habits, Table 2 includes a breakdown of the number of trips that would be necessitated if faculty members would batch requests and make one trip to obtain several volumes. The original request forms, which formed the basis for the study, were arranged alphabetically by person. Each person's request forms were arranged chronologically. Then all requests dated within one calendar week were batched as one trip. If Professor A submitted three requests between Sunday, September 5 and Saturday, September 11, these requests would be grouped as one trip. Consequently in the month of September, 1971, with five weeks, the maximum number of trips that could be made with this batch procedure is five. In Table 2 the total number of trips in September, 1971 when batching is 194 involving 95 faculty members. Forty-four faculty members would have made one trip, 22 would have made two trips, 14 would have made three trips, 11 would have made four trips, and four would have made five trips. Table 2 also depicts the number of extra trips resulting from duplicate requests for the same volume. In September, 1971, with a one week circulation period, a total of 44 extra trips involving 27 faculty members would have been made. Fourteen people would have made one extra trip, 11 people would have made two extra trips, one person would have made three extra trips, and one person would have made five extra trips. With a two week circulation period, 37 people would have completed a total of 70 extra trips; 16 people would have made one extra trip, 16 people would have made two extra trips, two people would have made three extra trips, two people would have made five extra trips and one person would have made 6-10 extra trips. The data for March, 1972, is comparable to that of September, 1971.

Having projected the number of trips that would have been made to utilize faculty journal circulation privileges, it becomes possible to estimate the cost of such trips to the university. For the purposes of this study, it will be assumed that each trip to the library would take one-half hour. After calculating the hourly salary of the faculty, the cost of faculty journal circulation privileges is computed by multiplying the hourly salary by the amount of time used when making trips to the library. (6) For example, if the faculty salary is \$10.00 per hour and seven trips are made to the library, the cost to the university is \$35.00 (seven trips of one-half hour each = 3.5 hours; $3.5 \times \$10.00 = \35.00). Salary figures for medical school faculty were used to determine hourly faculty salaries. With the 1972 Medical School Faculty Salary Survey as a guide to faculty salaries, salaries of \$20,000, \$30,000 and \$40,000 were used as the low, medium, and high salaries in estimating costs. (7) Assuming a 40 hour work week, this is \$10.00, \$15.00 and \$20.00 per hour.

Table 3 projects the cost of faculty journal circulation privileges for the months of September, 1971 and March, 1972. In September, 1971, if it is assumed that each request would require a separate trip to the library, there would have been 1009 trips made to the library, involving 504.5 hours of faculty time. The cost at \$10.00 per hour would be \$5045.00, at \$15.00 per hour the cost would be \$7567.00, and at \$20.00 the cost would be \$10,090.00. The total cost would have to include the cost of extra trips made to the library because the item requested was in circulation. With a one week circulation period, there would have been 44 extra trips involving 22 hours of time. With a two week circulation period, there would have been 70 extra trips involving 35 hours of time. To calculate the total cost to the university, the cost of the added trips must be incorporated with the cost of the regular trips. In September, then, the cost to the university, assuming a one week circulation period would be a low of \$5265.00 ($\$5045.00 + \220.00) and a high of \$10,530.00 ($\$10,090.00 + \440.00). With a two week circulation period, the low cost would be \$5395.00 ($\$5045.00 + \350.00) and the high cost would be \$14,490 ($\$10,790.00 + \700.00). It is possible that the provision of a faculty facsimile copy service has altered the borrowing habits of faculty members. The return to journal circulation might also alter borrowing habits so it is likely that, instead of making a separate trip to the library for each item desired, the faculty member would, instead, batch the requests so that only one trip a week would be necessary.

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- (6) A similar method was used by Richard Meier at the University of Michigan. See Meier, Richard L. "Information Input Overload: Features of Growth in Communication-oriented Institutions," Libri, Vol. 13, 1963, pp. 1-44.
- (7) "Datagrams: Faculty Salaries", Journal of Medical Education, Vol. 46, 1971, pp.377-378.

If the requests were batched, then in September, 1971, a total of 194 trips involving 97 hours of faculty time would be required. At a rate of \$10.00 per hour, the cost would be \$970.00; at a rate of \$15.00 per hour, the cost would be \$1455.00; at a rate of \$20.00 per hour, the cost would be \$1940.00. Again the cost of added trips must be included. So, with a one week circulation period, the low total cost would be \$1190.00 (\$970.00 + \$220.00) and the high total cost would be \$2380.00 (\$1940.00 + \$440.00). With a two week circulation period, the low total cost would be \$1320.00 (\$970.00 + \$350.00) and the high total cost would be \$2640.00 (\$1940.00 + \$700.00). Figures for March, 1972 are within 10-20% of the September, 1971 data.

A comparison of the cost of faculty facsimile copy service and the cost of faculty journal circulation privileges illustrates that in no instance does the cost of faculty facsimile copy service exceed the cost of faculty journal circulation privileges. (See Table 4) The most economical manner of journal circulation (batched trips) ranges from a low of \$1190.00 in September, 1971 to a high of \$2910.00 in March, 1972. The most expensive of any of the methods of accessibility to research material, namely the circulation of journals with regular trips to the library, ranges from a low of \$5265.00 in September, 1971 to a high of \$13,580.00 in March, 1972.

DISCUSSION

The determination of the most economical avenue of accessibility to research materials involves also the assessment of the cost of such accessibility. The cost of faculty journal circulation privileges is, in effect, a hidden cost for the university. There is no budget allocation for such services. The cost to the university appears only as lost (but very expensive) faculty time. On the other hand, the more economical avenue of accessibility to research materials, faculty photocopy service, involves actual cost assessment. If facsimile copy service is to be a service provided by the library, the university would have to allocate approximately \$10,000.00 per year to finance such a service and consequently the library budget would necessarily be increased by \$10,000.00.

This analysis of the cost of various avenues of accessibility to research materials does not attempt to include the following variables which should be kept in mind when analyzing the data. There is no consideration of in-house use of journals. What effect would such use have on the number of trips made to secure a given journal? What effect would journal circulation have on the interlibrary loan service and vice-versa? How do overdue journals increase the cost of journal circulation? Would there be departmental use of a journal which has been loaned to an individual faculty member, thus resulting in a decrease in the trips to the Library? Does the present pattern

of submission of requests for photoduplication reflect the same use pattern as journal circulation would entail? Have the copyright restrictions had a significant influence on the submission of requests?

A final factor which cannot be measured through cost analysis is the service which is given through the provision of photocopy service. Not only does the faculty member receive the requested article, he also is freed from trips to the library, the shelf retrieval of journals, the checking of files, etc. Furthermore, incorrect citations may be located by the staff of the facsimile copy department, increasing the faculty member's research effort. The provision of facsimile copy service, in lieu of the circulation of journals, also allows multiple access to a given journal. If a journal is in the library, several people have access to it on any given day. If, on the other hand, the journal is in circulation, it is accessible only to the borrower.

CONCLUSION

The initiation of university funded photocopy service as the means of providing access to research materials not only reduces university expenses but also frees faculty time for the more important tasks of teaching and the pursuit of research. Even if the costs of faculty journal circulation privileges and faculty facsimile copy service were comparable, the advantages inherent in the facsimile copy service would point to the selection of facsimile copy service. With both the economic and service advantages demonstrated above, university funded faculty service is the most feasible avenue of access to research materials in the university.

ACKNOWLEDGEMENTS

The author would like to thank Mrs. Jeanne Lawson for her invaluable assistance in the organization of the data studied, and Mrs. Gloria Bathurst, Mrs. Elizabeth Gardner, and Miss Maria Walker for their aid in the determination of the actual number of volumes requested by the faculty.

Table 1 * Overview

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An overview of faculty facsimile requests, indicating the number of volumes requested, number of persons involved, number of duplicate requests, and the subsequent additional trips as a result of duplicate requests.

Total Requests	1271
Total Volumes	920
Number of Faculty	95
Duplicates - 73 or 8% of total volumes	
a)	62 duplicate requests involved 2 persons
b)	7 duplicate requests involved 3 persons
c)	3 duplicate requests involved 4 persons
d)	1 duplicate request involved 5 persons

Additional library visits as result of duplicate requests

- a) One week circulation
 - 44 additional trips or 61% of duplicate requests
 - 27 faculty members or 28% of all faculty submitting requests or 49% of faculty submitting duplicate volume requests
- b) Two week circulation
 - 70 additional trips or 96% of duplicate requests
 - 37 faculty members or 39% of all faculty submitting requests or 67% of faculty submitting duplicate volume requests
- c) Number of faculty involved 55 or 58% of faculty submitting requests

* Figures based on faculty requests submitting to Shiffman Medical Library, September 1971

* Overview

Total Requests	1397
Total Volumes	1189
Number of Faculty	113
Duplicate volume requests - 89 or 7% of total volumes	
a)	82 duplicate requests involved 2 persons
b)	4 duplicate requests involved 3 persons
c)	1 duplicate request involved 4 persons

Additional library visits as result of duplicate requests

- a) One week circulation
 - 53 additional trips or 60% of duplicate requests
 - 30 faculty members or 27% of all faculty submitting requests or 48% of faculty submitting duplicate volume requests
- b) Two week circulation
 - 78 additional trips or 88% of duplicate requests
 - 41 faculty members or 36% of all faculty submitting requests or 65% of faculty submitting duplicate volume requests
- c) Number of faculty involved
 - 63 or 57% of faculty submitting requests

* Figures based on faculty requests submitted to Shiffman Medical Library, March, 1972

Table 2
September 1971

Number of trips to library required as a result of journal circulation, both in regular trips and batched trips and incorporating the additional trips resulting from duplicate requests

	1	2	3	4	5	6-10	11-20	21-50	Over 50	Trips	Total	Faculty
Regular trips (assume each vol. is separate request)	21	12	6	4	7	14	16	10	5	1009		95
Batched trips (all requests submitted within one week pick- ed up at one time	44	22	14	11	4					194		95
Added trips (one week circulation	14	11	1		1					44		27
Added trips (two week circulation	16	16	2		2	1				70		37
<u>March 1972</u>												
Regular trips (assume each vol. is separate request)	19	18	7	10	8	22	14	11	4	1280		113
Batched trips (all requests submitted within one week pick- ed up at one time	47	40	15	10	1					213		113
Added trips (one week circulation	23	4	1		1		1			53		30
Added trips (two week circulation)	28	9	1	1	1		1			78		41

Table 3
September 1971

Cost to the university for faculty journal circulation based on hourly salary rate times amount of time involved and including both regular and added trips, with low, medium, and high salary ranges

Faculty salary amt. per hour	Added Trips						Total Cost			
	\$10	\$15	\$20	One Week		Two Week Circ.		\$10	\$15	\$20
				\$10	\$15	\$20				
Regular trips (assume each vol. 1 trip) 1009	5045	7567	10090	220	330	440		1 wk. 2 wk.	1 wk. 2 wk.	1 wk. 2 wk.
								5265 5395	7897 8092	10530 10970
Batched trips (all requests submitted in 1 week as 1 trip. 194	970	1455	1940	220	330	440		1190 1320	1785 1980	2380 2640
<u>March 1972</u>										
Regular trips (assume each vol. 1 trip) 1280	6400	9100	12800	265	397	530		6665 6790	9497 9695	13330 13580
Batched trips (all requests submitted in 1 week as 1 trip. 213	1065	1597	2130	265	397	530		1330 1455	1994 2182	2660 2910

Table 4
Cost comparison of faculty facsimile service and journal
circulation as avenue of access to research materials

September 1971

<u>Type of Service</u>	<u>Cost</u>	<u>Rating</u>
Faculty facsimile	\$710.20	-
Journal use		
a) Batched trips - 1 week circ.		
1) \$10.00 per hour	1190.00	+479.80
2) \$15.00 per hour	1785.00	+1074.80
3) \$20.00 per hour	2380.00	+1669.80
b) Batched trips - 2 week circ.		
1) \$10.00 per hour	1320.00	+609.80
2) \$15.00 per hour	1980.00	+1269.80
3) \$20.00 per hour	2640.00	+1929.80
c) Regular trips - 1 week circ.		
1) \$10.00 per hour	5265.00	+4554.80
2) \$15.00 per hour	7897.00	+7186.80
3) \$20.00 per hour	10530.00	+9819.80
d) Regular trips - 2 week circ.		
1) \$10.00 per hour	5395.00	+4684.80
2) \$15.00 per hour	8092.00	+7381.80
3) \$20.00 per hour	10790.00	+10079.80

March 1972

Faculty facsimile	\$794.90	-
a) Batched trips - 1 week circ.		
1) \$10.00 per hour	1330.00	+535.10
2) \$15.00 per hour	1994.00	+1199.10
3) \$20.00 per hour	2660.00	+1865.10
b) Batched trips - 2 week circ.		
1) \$10.00 per hour	1455.00	+660.10
2) \$15.00 per hour	2182.00	+1387.10
3) \$20.00 per hour	2910.00	+2115.10
c) Regular trips - 1 week circ.		
1) \$10.00 per hour	6665.00	+5870.10
2) \$15.00 per hour	9497.00	+8702.10
3) \$20.00 per hour	13330.00	+12535.10
d) Regular trips - 2 week circ.		
1) \$10.00 per hour	6790.00	+5995.10
2) \$15.00 per hour	9695.00	+8900.10
3) \$20.00 per hour	13580.00	+12785.10

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FACULTY PHOTODUPLICATION REPORT
SEPTEMBER, 1971

<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Anatomy				
Fox, C. A.	1	-	1	\$.10
Hatada, K.	9	-	42	4.20
Iwata, N.	11	-	21	2.10
Kitai, S. T.	93	8	810	81.00
Meyer, D. B.	1	-	6	.60
Yoshihara, H. M.	2	2	9	.90
Anesthesiology				
Aston, Roy	9	-	40	4.00
DeSanto, G.	11	-	45	4.50
Biochemistry				
Bowen, D.	6	1	46	4.60
Brown, R.	33	-	216	21.60
Dabich, D.	18	-	78	7.80
Doscher, M.	3	-	55	5.50
Goodwin, J.	8	1	49	4.90
Mitchell, R.	2	-	33	3.30
Orten, J. M.	16	1	100	10.00
Parker, C. J.	4	-	17	1.70
Kuyper, A. C.	1	-	5	.50
Community Medicine				
Meyer, R.	56	3	326	32.60
Nghiem, T. L.	1	-	17	1.70
Dermatology				
Pinkus, H.	2	-	8	.80
Ed. Serv. & Res.				
Gallagher, R. E.	1	-	6	.60
Hess, J. W.	5	-	23	2.30
Gyn. & Ob.				
Doehr, S.	4	-	27	2.70
Hafez, E.	35	3	193	19.30
Moghissi, K. S.	1	-	13	1.30
Syner, F.	5	1	20	2.00

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<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Medicine				
Abbasi, A.	1	-	4	.40
Arnstein, R.	23	1	64	6.40
Clapper, M.	5	-	28	2.80
Hull, F. E.	65	4	409	40.90
Lerner, A. M.	70	3	264	26.40
Madrid, F.	13	1	75	7.50
Power, L.	6	-	36	3.60
Schatz, I. J.	1	-	7	.70
Microbiology				
Brown, W. J.	2	-	9	.90
Kong, Y. M.	1	-	5	.50
Swanborg	2	-	24	2.40
Neurology				
Triana, E.	6	-	41	4.10
Neurosurgery				
Moore, G. A.	2	-	22	2.20
Occ. & Env. Health				
Kwanek, N.	1	-	7	.70
Reeves, A. L.	2	-	13	1.30
Oncology				
Al-Sarraf, M.	48	9	305	30.50
Reed, M.	2	-	22	2.20
Vaitkevicius, V.	10	1	81	8.10
Vaughn, C.	4	-	22	2.20
Ophthalmology				
McKinnon, P.	1	-	4	.40
Orthopedic Surgery				
Corondan, G.	1	-	4	.40
Ryan, J.	6	-	80	8.00
Salciccioli, G.	5	1	67	6.70
Horvath, J.	4	-	69	6.90

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<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Pathology				
Belamaric, J.	44	1	266	26.60
Cho, Yoonha	7	-	40	4.00
Feldkamp, C.	72	3	324	32.40
Konno, E. T.	27	-	249	24.90
Palutke, W. A.	2	-	10	1.00
Powsner, E.	1	-	5	.50
Rosenberg, B.	6	-	42	4.20
Zak, B.	10	-	61	6.10
Pediatrics				
Gregg, R.	14	1	43	4.30
Pharmacy				
Autio, D.	3	-	13	1.30
Phys. & Pharm.				
Anderson, G.	3	1	11	1.10
Barnhart, M.	104	19	390	39.00
Gala, R.	13	2	98	9.80
Grignol, G.	1	-	4	.40
Henry, R.	11	-	55	5.50
Kraft, J.	1	-	15	1.50
McCoy, L.	11	-	68	6.80
Manmen, E. F.	21	2	123	12.30
Pfiffner, J.	1	2	11	1.10
Rillema, J. A.	16	2	134	13.40
Rosenthal, S. L.	32	6	155	15.50
Sedensky, J.	8	-	87	8.70
Seegers, W. H.	32	14	200	20.00
Simon, P.	1	-	11	1.10
Walsh, R.	15	-	70	7.00
Psychology				
Sarkozy, K. S.	-	2	-	---
Surgery				
Arbulu, A.	10	-	49	4.90
Grifka, T.	10	1	91	9.10
Lucas, C.	3	-	17	1.70
Nigro, N. D.	14	1	71	7.10
Pelok, L.	7	-	42	4.20

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SEPTEMBER, 1971

<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Surgery				
Rosenberg, I. K.	23	3	134	13.40
Rosenberg, J. C.	17	3	83	8.30
Sardesai, V. M.	1	-	2	.20
Silva, Y.	3	-	16	1.60
Sugawa, C.	6	3	25	2.50
Thoms, N.	17	-	73	7.30
Wilson, R. F.	2	-	9	.90
Yao, S. T.	15	6	68	6.80
Urology				
Perlmutter, A.	11	-	63	6.30
Sinha, B. P.	1	-	6	.60
TOTAL	1205	112	7102	\$710.20

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MARCH 1972

<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Anatomy				
DeFrance, Jon	15	2	126	\$ 12.60
Fox, C. A.	9	2	49	4.90
Hatada, K.	6	2	68	6.80
Kitai, S. T.	6	1	100	10.00
Maisel, H.	--	1	---	----
Meyer, David	68	8	428	42.80
Tanka, T.	2	-	10	1.00
Anesthesiology				
Aston, R.	44	1	215	21.50
Beckman, D. L.	2	-	23	2.30
Biochemistry				
Bagshaw, J. C.	3	-	21	2.10
Bowen, D.	1	0	5	.50
Brown, R.	5	-	33	3.30
Doscher, M. S.	7	-	62	6.20
Hudson, R. A.	4	-	22	2.20
Kaplan, M.	1	-	9	.90
Kuyper, A. C.	1	-	6	.60
Mitchell, R. A.	11	-	134	13.40
Orten, J. M.	10	-	49	4.90
Parker, C. J.	9	-	47	4.70
Tsernoglou, D.	2	-	19	1.90
Vinogradov, S. N.	20	-	141	14.10
Biology				
Mizukami, H.	18	1	65	6.50
Center for Nursing Research				
Buelow, T.	7	-	42	4.20
Rice, Virginia	2	-	6	.60
Community Medicine				
Meyer, Ruben	14	-	76	7.60
Conjoint Teaching				
Bailey, Charles	1	-	10	1.00
Dermatology				
Pinkus, H.	48	-	241	24.10

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MARCH 1972 (cont.)

<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Educ. Serv. & Res.				
Hess, J. W.	18	1	110	11.00
Scott, N. C.	1	-	19	1.90
Gynec. & Obstet.				
Doehr, S.	3	-	14	1.40
Hafez, E.	26	1	178	17.80
Moghissi, K. S.	1	-	7	.70
Syner, F. N.	2	-	7	.70
Medicine				
Arnstein, R. A.	1	1	11	1.10
Clapper, M.	2	-	14	1.40
Cohen, Margo	7	-	34	3.40
Fernandez-Madrid, F.	3	-	28	2.80
Lerner, A. M.	31	1	170	17.00
Levy, S.	5	-	34	3.40
Lewis, B. M.	2	-	22	2.20
Malik, H.	3	-	25	2.50
Prasad, A. S.	4	-	35	3.50
Puri, P. S.	21	-	139	13.90
Microbiology				
Brown, W. J.	3	-	27	2.70
DeGiusti, D. L.	1	-	2	.20
Swanborg, R. H.	2	-	7	.70
Neurology				
Black, A. B.	5	-	31	3.10
Bauer, R. B.	1	-	5	.50
Gilroy, J.	8	-	88	8.80
Prakash, A.	6	-	36	3.60
Occ. Env. Health				
Berke, H. L.	2	-	14	1.40
Oncology				
Al-Sarraf, M.	181	17	945	94.50
Reed, M. L.	6	1	51	5.10
Vaitkevicius, V. K.	7	1	28	2.80
Vaughn, C.	17	1	87	8.70
Ophthalmology				
McKinnon, P.	2	-	15	1.50

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MARCH 1972 (cont.)

<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Pathology				
Belamaric, J.	2	-	7	.70
Konno, E. T.	19	2	155	15.50
Palutke, M.	1	4	5	.50
Palutke, W. A.	24	1	127	12.70
Pietruk, T.	10	1	44	4.40
Puro, H. E.	5	-	57	5.70
Riddle, J. M.	6	-	40	4.00
Rosenberg, B. F.	7	-	58	5.80
Rota, A.	2	-	13	1.30
Zak, B.	26	-	203	20.30
Pediatrics				
Goodwin, J.	2	-	8	.80
Krieger, T.	1	-	4	.40
Tidalgo, T. P.	4	-	29	2.90
<i>(Eligibility confirmed from Dr. Woolley's Office) 4/12-72 BMS</i>				
Pharmacy				
Autio, D.	3	-	40	4.00
Kamienny, F.	1	-	6	.60
McKenny, J.	16	1	106	10.60
Moore, L.	5	-	26	2.60
Mulvey, R. K.	110	4	628	62.80
Smith, R. E.	6	1	34	3.40
Phys. & Pharm.				
Agrawal, B.	1	-	6	.60
Anderson, G.	1	3	4	.40
Barchler, C.	5	-	14	1.40
Barnhart, M.	1	-	3	.30
Barraco, R.	13	4	73	7.30
Gala, R.	15	-	165	16.50
Grignol, G.	4	-	15	1.50
Henry, R. L.	6	-	34	3.40
Irwin, J.	3	-	21	2.10
Lawson, D. M.	6	-	26	2.60
Liu, D.	4	-	31	3.10
Mammen, E. F.	51	7	321	32.10
Rosenthal, S. L.	8	1	62	6.20
Simon, P.	5	2	54	5.40
Special IRB				
Seegers, W. H.	35	13	127	12.70
Psychology				
Sarkozy, K. S.	3	2	28	2.80

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MARCH 1972 (cont.)

Appendix I, cont'd

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<u>NAME</u>	<u>FILLED</u>	<u>UNFILLED</u>	<u>EXPOS.</u>	<u>AMOUNT</u>
Radiology				
Corrigan, K. E.	2	2	20	2.00
Stebner, F.	5	-	30	3.80
Regional Med. Prog.				
Meltzer, M.	1	-	9	.90
Wallace, J. L.	14	-	103	10.30
Surgery				
Arbulu, A.	8	-	50	5.00
Huang, C.	2	-	11	1.10
Lucas, C. E.	1	-	8	.80
Nigro, N. D.	37	3	204	20.40
Plant, John	12	1	93	9.30
Rosenberg, I. K.	35	10	201	20.10
Rosenberg, J. C.	30	7	200	20.00
Sardesai, V. M.	2	-	15	1.50
Silva, Y.	10	-	?	6.70
Sugawa, C.	5	-	30	3.00
Thoms, N.	11	-	60	6.90
Walt, A. J.	9	-	23	2.30
Wilson, R. F.	1	-	10	1.00
Zamick, P.	3	-	8	.80
Urology				
Perlmutter, A.	19	-	54	8.40
TOTALS	1305	109	7,949	\$794.90