NATIONAL LIBRARY OF MEDICINE

[redacted]
Mrs. Scott
Rm. 152

LIBRARY NETWORK/ MEDLARS technical bulletin

No. 33 January, 1972

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We Welcome Comments
and Suggestions

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
Issued monthly by the Office of the Associate Director for Library Operations

Dr. Joseph Leiter
Associate Director
for Library Operations

Mrs. Ann R. Lindsay, Managing Editor
Mrs. Grace T. Jenkins, Technical Editor

National Library of Medicine, 8600 Rockville Pike, Bethesda, Maryland 20014

NETWORK ACTIVITIES

December 1971

Dan Tonkery, Network Management Staff, NLM

Regional Medical Library Contracts

During the month of December, the University of Washington at Seattle signed a contract to continue their operation of the Pacific Northwest Regional Medical Library from December 30, 1971 - December 30, 1972. There are now eight RMLs operating under the contract mechanism.

MEDLARS Searches

Statistics from domestic MEDLARS Centers indicate that 1,255 searches were released during December. Exclusive of AIM-TWX and MEDLINE activities, the Fiscal Year 1972 cumulation of released searches totals 7,649.

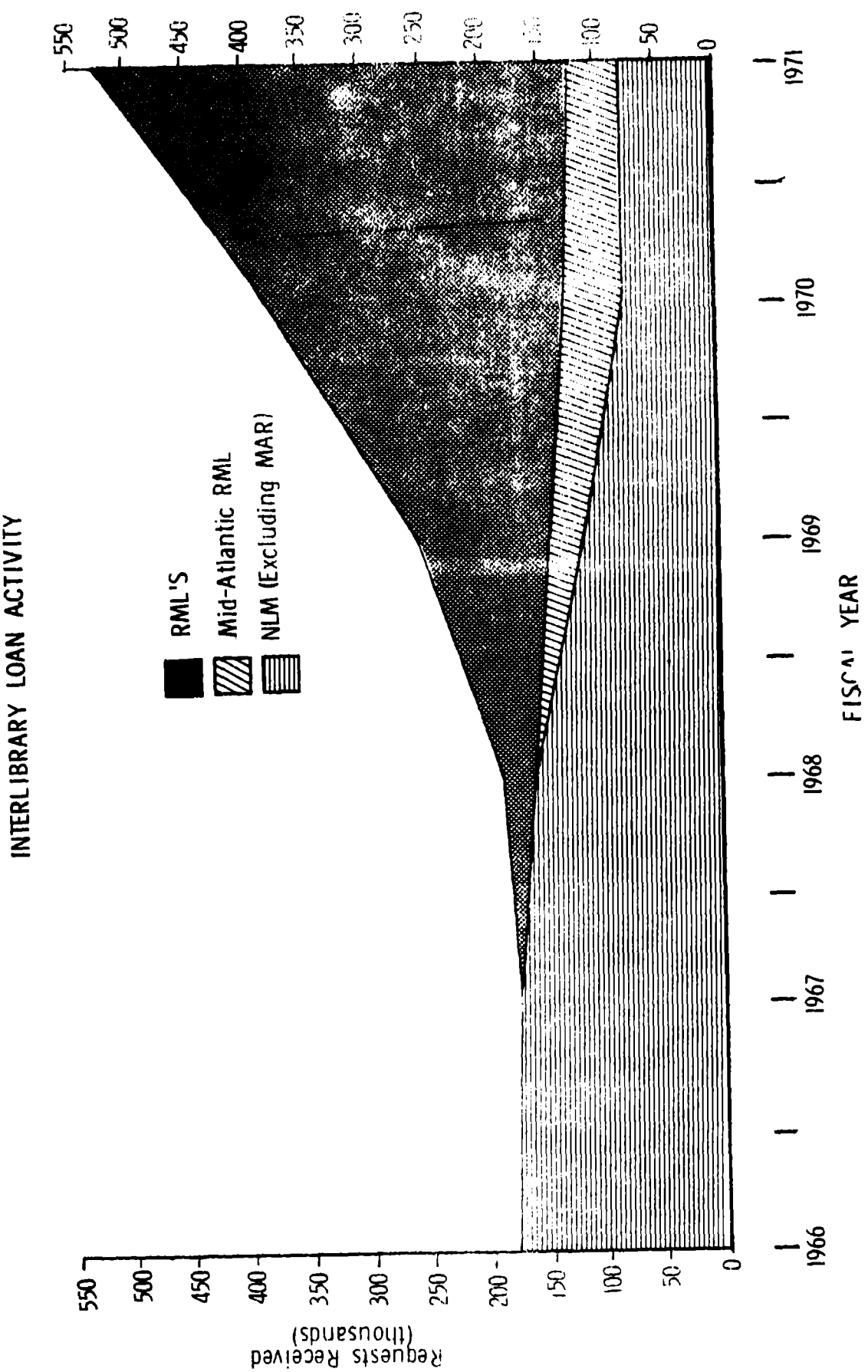
ORIENTATION PROGRAMS

DATE	TYPE OF ORIENTATION	PRESENTED AT	PRESENTED BY
12/2/71	AIM-TWX, MEDLINE and MEDLARS	U. S. C. School of Library Science	J. Boorkman P. Hanson
12/8/71	AIM-TWX, MEDLARS and MEDLINE	U. S. C. School of Library Science	J. Boorkman P. Hanson
12/8/71	MEDLARS	University of Illinois School of Veterinary Medicine and Life Sciences Department, Peoria, Ill.	M. Doherty
12/9/71	MEDLARS	Area librarians and health professionals	M. Doherty

NLM and RML FUNDED ILL ACTIVITY

	FY 1970	FY 1971	% INCREASE
TOTAL REQUESTS RECEIVED	380,236	525,771	37%
BY TWX	32,529	78,813	140%
TOTAL REQUESTS ACCEPTED	361,234	509,995	40%
TOTAL REQUESTS FILLED	302,623	416,252	36.7%
PHOTOCOPY	250,400	366,262	40%
ORIGINAL	52,723	51,280	-2.7%

NOTE: The original summary of FY 1970 that appeared in the Library Network/MEDLARS Technical Bulletin, No. 29, September 1971, page 5, was incorrect since it only represented three quarters of the Fiscal Year 1970 ILL activity.


INTERLIBRARY LOAN ACTIVITY
RML'S
Mid-Atlantic RML
NLM (Excluding MAR)
Requests Received
(thousands)
550
500
450
400
350
300
250
200
150
100
50
0
1966
1967
1968
1969
1970
1971
FISCAL YEAR

MEDLARS/MEDLINE/AIM-TWX SEARCH STATISTICS FOR December 1971
(11/26/71-12/30/71)
MEDLARS MANAGEMENT SECTION, NLM

The table below includes only a few items from each Center's monthly report:

Center	Searches Rejected	Current & Back-File Searches Released (Excluding RDS's) MED-LARS	MED-LINE	AIM-TWX	MEDLARS Recurring Demand Searches Released	Citations Retrieved per MEDLARS Search Mo.	Percentage MEDLARS Searches Released-CURRENT FILE only-by Calendar Days 0-15 Days	0-20 Days
UNITED STATES								
Alabama	2	72	8	18	9	6.1	67.1	99.9
Colorado	2	74	5	0	13	4.0	69.0	91.0
Crerar	2	57	1	2	3	7.7	22.2	75.9
Harvard	30	77	0	0	12	9.9	8.0	27.0
Michigan	9	49	0	0	129	8.1	43.6	76.2
New York	24	50	22	0	7	7.5	0	0
NIH	0	62	3	0	42	8.8	79.2	98.2
NLM-TARML	23	251	26	1	17	3.9	62.2	87.2
NLM-MMS	0	16	11	0	0	9.0	81.3	87.6
Ohio	8	123	127	0	130	7.2	84.5	100.0
Philadelphia	4	56	4	0	1	7.1	3.7	46.3
PMA	0	22	0	0	234	17.6	87.0	100.0
Texas	13	117	0	0	39	5.6	100.0	---
UCLA	34	167	2	204	39	6.0	9.1	34.1
Washington	15	62	15	11	2	7.0	47.0	77.0
TOTALS	166	1255	224	236	843	---	51.0	74.0
FOREIGN								
Australia	0	95	0	0	28	7.1	78.6	92.1
Canada	0	15	0	0	35	16.7	10.0	60.0
England	0	120	0	0	84	NA	46.6	75.9
France(INSERM)	2	99	0	0	466	2.9	13.0	38.0
Germany(DIMDI)	1	375	0	0	1,374	NA	9.0	14.0
Japan(JICST)	NA	NA	0	0	NA	NA	NA	NA
Sweden	2	120	0	0	443	4.9	60.0	87.5

Note: This form has been changed to include the number of MEDLINE and AIM-TWX searches released per center. Also, we are no longer including the percentage of back-file searches released in 0-15 days or 0-20 days.

TO COMMENT ABOUT MEDLINE SYSTEM

MEDLINE personnel would like to be notified about any system deficiencies or data base errors, including incorrect citations. You may use the Comment Command to do this. The Comment File is queried daily and answers provided as soon as possible. Always answer yes to the system question (REPLY? (YES/NO) whether or not you really want a reply and enter your business phone after your name. See examples below.

Form of Entry: "COMMENT" IN QUOTES

PROG:
SS I/C?---SEARCH STATEMENT I OR COMMAND:

USER:
"COMMENT" ← IN QUOTES

PROG:
REPLY? (YES/NO) ←

USER:
YES ← NO QUOTES

MUST ANSWER YES AT PRESENT. A NO ANSWER WILL PUT COMMENT IN FILE USED FOR THE NEWS.

PROG:
NAME?

USER:
GRACE T. JENKINS 301 496-6193

PLEASE ENTER TELEPHONE # AFTER YOUR NAME

PROG:
ADDRESS?

USER:
8600 ROCKVILLE PIKE, RM - 152

STREET ADDRESS ONLY

PROG:
CITY, STATE, AND ZIP--

USER:
BETHESDA, MARYLAND 20014

SPELL OUT STATE

PROG:
CONT. OR FINISHED- ←

USER:
HOW DO I SEARCH THE SUBHEADING OCCURRENCE ?

PROG:
CONT OR FINISHED-

USER:
FINISHED ←

TO OBTAIN MEDLINE SYSTEM NEWS

Presently there is no News Command in MEDLINE. To obtain system news, you must use a variation of the Comment Command. See examples below.

Form of Entry: "-------- COMMENT"

PROG:

SS I/C?---SEARCH STATEMENT I OR COMMAND:

USER:

"- - - - - - - - COMMENT"

IN QUOTES
8 HYPHENS, 1 SPACE, THE WORD COMMENT

PROG:

MEDLINE DATA BASE COVERS JAN 1969 THRU DEC 1971.

TO SEARCH THE SUBHEADING OCCURRENCE, YOU MUST USE
ITS ABBREVIATION OC EXAMPLE: SMALLPOX/OC

SS I/C?---SEARCH STATEMENT I OR COMMAND:

USER:

MEDLINE OFF-LINE PRINTS

Off-line printouts are mailed from NLM within 24 hrs. If your printout is not received within one week following the request, please contact Mrs. Grace T. Jenkins, MEDLARS Management Section, National Library of Medicine, (301-496-6193 - collect calls not accepted). See examples below for specifics on answering system questions for off-line prints.

PROG:
SS 6/C? ---SEARCH STATEMENT 6 OR COMMAND:

USER:
"PRINT 50 OFF-LINE" — SEE OPERATING GUIDE FOR PRINT COMMANDS & OPTIONS.

PROG:
NAME AND BUSINESS PHONE?

USER:
GRACE T. JENKINS 301 496-6193

PROG:
ADDRESS?

STREET ADDRESS ONLY

USER:
8600 ROCKVILLE PIKE, ROOM -152

PROG:
CITY, STATE (PLEASE DO NOT ABBREVIATE), AND ZIP--

USER:
BETHESDA, MARYLAND 20014

PROG:
REQUESTER'S NAME, OR SAME--

IF NO DIFFERENCE IN NAMES, ANS. SAME

USER:
DAVIS MCCARN

PROG:
SEARCH TITLE, OR NONE

USER:
SMALLPOX OCCURRENCE IN MALES.

PROG:
OK? (YES/NO) -

ANS. NO IF NAME OR ADDR. INCORRECT. SYSTEM WILL REPEAT QUESTIONS.

USER:
YES

PROG:
SS 6/C? ---SEARCH STATEMENT 6 OR COMMAND:

MEDLINE TRAINEES FOR JANUARY 17, 1972

The second MEDLINE Training Class was held at the National Library of Medicine on January 17-February 4, 1972. The following people attended:

Arberg, Mr. Philip	Environmental Protection Agency Washington, D. C.
Beavers, Mrs. Jean	University of N.C. Health Scien. Lib. Chapel Hill, North Carolina
Cobb, Miss Jocelyn	Georgetown University Med. Center Washington, D. C.
Fisher, Miss Janet	University of Utah Lib. of Med. Scien. Salt Lake City, Utah
Fulcher, Mrs. Jane M.	Washington Hospital Center Washington, D. C.
Gallagher, Miss Cathy	Washington Univ. School of Med. Lib. St. Louis, Missouri
Gladish, Ms. Mary Louise	Vanderbilt Univ. Sch. of Med. Library Nashville, Tennessee
Hidalgo, Mrs. Florence	Medical College of Ohio Toledo, Ohio
Kruse, Miss Catherine	Duke University Med. Center Library Durham, North Carolina
Lauer, Miss Carolyn	OBSERVER
Miller, Miss Virginia	Medical Univ. of S. C. Library Charleston, South Carolina
Murphy, Mr. Robert	West Virginia Univ. Med. Center Lib. Morgantown, West Virginia
Siegel, Miss Isabel	College of Medicine & Dentistry of N. J. Newark, New Jersey
Stangl, Mr. Peter	Stanford University Medical Center Lane Med. Lib., Stanford, California

PERSONNEL NOTICES

Miss Laura Osborn transferred from Ohio MEDLARS Center to the Texas Medical Center in Houston, Texas as Head, Public Services, effective 1/14/72.

Mrs. Ute Simons, formerly with the Texas MEDLARS Center, Houston, Texas, returned to her studies in Seattle, Washington when her husband was transferred. Miss Penny Worley is Head of the MEDLARS Center.

TTY NUMBER FOR INTER-LIBRARY LOAN REQUESTS

Inter-Library Loan Requests may be submitted on TTY 301-496-2704 in addition to TWX 710-824-9615 or 710-824-9616.

UPDATES TO MESH MATERIALS

1. ERRATA TO: S-5 SUPPLEMENTAL LIST OF PROVISIONAL HEADINGS, 2nd Quarter, January 1972

Page S-5	Change:	Caerulin
	To:	Caerulein

2. ERRATA TO: MESH 1972 #2, January 1, 1972

Page 192	Change:	Methyltiperidininopyrazine
	To:	Methylpiperidininoprazine

REQUESTS FOR MEDICAL SUBJECT HEADINGS CHANGE

The Medical Subject Heading section encourages the users of MEDLARS to inform them of difficulties with the system caused by inadequacies of the indexing vocabulary. A standard form has been developed for this purpose, a copy of which is shown. The full completion of this form is at the discretion of the individual suggesting the term; however, it is most helpful if a specific article in which the term is used correctly is cited in the Authority field. Suggestions for Main Headings, provisional terms and cross-references are all included. In addition, MeSH is interested in proposals for new topical subheadings which can be incorporated into the MEDLARS II system when expansion of the entire vocabulary will be possible.

The forms should be mailed to:

Medical Subject Heading Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

REQUEST FOR MEDICAL SUBJECT HEADINGS CHANGE

Suggested change:

Reason for change:

Authority:

Related changes which will also be required:

Other MeSH headings:

Cross references:

Category numbers:

Indentions:

Name of individual suggesting change:

Approved by:

UPDATES TO MEDLINE JOURNALS

Please make the following changes in your lists: MEDLINE JOURNALS (dated January 17, 1972) and MEDLINE JOURNALS BY SUBJECT (dated January 6, 1972).

MEDLINE JOURNALS

Add

EI3 Enzymol Biol Clin (Basel)

Change

DSZ Clin Biochem

to

DBV Clin Biochem

Delete

254 Acta Tuberc Scand
BBK Bull Assoc Fr Etud Cancer
BUO Bull Res Counc Isr Exp Med
FGT Gastroenterologia
HCN J Antibiot A (Tokyo)
HD3 J Antibiot B (Tokyo)
J3R J Med Pharm Chem
M7Q Med Pharmacol Exp (Basel)
MCE Med Res Counc Mem (Lond)
MG6 Med Thorac
QC2 Psychiat Quart Suppl
WE0 Transfusion (Paris)
Y26 Z Vererbungsl

MEDLINE JOURNALS BY SUBJECT

BIOCHEMISTRY

Add

EI3 Enzymol Biol Clin (Basel)

Change

DSZ Clin Biochem

to

DBV Clin Biochem

CHEMISTRY

Delete

J3R J Med Pharm Chem

DIGESTIVE SYSTEM

Delete

FGT Gastroenterologia

EXPERIMENTAL MEDICINE

Delete

BUO Bull Res Counc Isr Exp Med
M7Q Med Pharmacol Exp (Basel)

UPDATES TO MEDLINE JOURNALS (cont.)

GENERAL MEDICINE

Change

DSZ Clin Biochem

to

DBV Clin Biochem

Delete

BUO Bull Res Counc Isr Exp Med

MCE Med Res Counc Mem (Lond)

GENETICS

Delete

Y26 Z Vererbungsl

HEMATOLOGY

Change

DSZ Clin Biochem

to

DBV Clin Biochem

Delete

WEO Transfusion (Paris)

NEOPLASMS

Delete

BBK Bull Assoc Fr Etud Cancer

PHARMACY

Delete

J3R J Med Pharm Chem

HCN J Antibiot A (Tokyo)

HD3 J Antibiot B (Tokyo)

PHARMACOLOGY

Delete

HCN J Antibiot A (Tokyo)

HD3 J Antibiot B (Tokyo)

M7Q Med Pharmacol Exp (Basel)

PSYCHIATRY

Delete

QC2 Psychiat Quart Suppl

RESPIRATORY SYSTEM AND THORACIC DISEASES

Delete

MG6 Med Thorac

TUBERCULOSIS

Delete

254 Acta Tuberc Scand

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 34 February 1972

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EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . .Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

Note from the Editor

As you will notice, a subtitle has been added to the name of this bulletin. The addition reflects our intention to be a reporting tool for all areas of the biomedical communications network as it impacts on our readers.

We encourage you to submit notes, articles, etc. for publication which you think would be of interest and use. As always, comments or suggestions are welcomed.

NETWORK ACTIVITIES
January 1972
Dan Tonkery, Network Management Staff, NLM

MEDLARS Searches

Statistics from domestic MEDLARS Centers indicate that 995 searches were released during January. Exclusive of AIM-TWX and MEDLINE activities, the Fiscal Year 1972 cumulation of released searches totals 8,644.

ORIENTATION PROGRAMS

Date	Type of Orientation	Presented At	Presented By
1/19/72	MEDLARS-MEDLINE	University of Minnesota Minneapolis, Minnesota	M. Doherty
1/20/72	AIM-TWX	Continuing Education Institute, Miramar Hotel, Santa Monica, California	J. Boorkman L. Angold
1/26/72	MEDLINE	Michigan Department of Public Health Lansing, Michigan	L. Hirschfeld
1/26/72	MEDLINE	Michigan State University Science Library Lansing, Michigan	L. Hirschfeld

MEDLARS/MEDLINE/AIM-TWX SEARCH STATISTICS FOR JANUARY 1972
(12/31/71-1/27/72)
MEDLARS MANAGEMENT SECTION, NLM

The table below includes only a few items from each Center's monthly report:

Center	Searches Rejected	Current & Back-File Searches Released (Excluding RDS's) MED-LARS	MED-LINE	AIM-TWX	MEDLARS Recurring Demand Searches Released	Citations Retrieved per MEDLARS Search Mo.	Percentage MEDLARS Searches Released-CURRENT FILE only by Calendar Days 0-15 Days	0-20 Days
UNITED STATES								
Alabama	5	63	19	0	13	5.7	55.3	97.9
Colorado	2	59	2	0	13	4.4	55.0	100.0
Creighton	3	46	0	0	4	6.4	5.0	25.0
Harvard	14	62	0	0	14	10.1	12.0	37.0
Michigan	4	62	7	0	136	6.5	4.8	29.0
New York	44	35	36	0	8	11.6	0.0	0.0
NIH	0	75	0	0	42	6.3	68.0	88.0
NLM-MARML	17	150	32	1	19	4.9	64.0	90.6
NLM-MMS	2	9	4	0	5	15.0	50.0	75.0
Ohio	14	62	0	143	0	5.2	47.5	78.7
Philadelphia	5	51	11	0	17	6.2	2.0	22.0
PMA	0	31	0	0	238	11.5	100.0	-
Texas	15	93	0	0	39	5.7	100.0*	-
UCLA	29	123	9	141	43	7.2	8.5	23.0
Washington	2	74	62	1	2	4.9	54.0	82.0
TOTALS	156	995	182	286	593	-	42.7	64.9
FOREIGN								
Australia	0	61	0	0	0	5.8	62.3	73.8
Canada	1	13	0	0	0	8.7	0	50.0
England	NA	NA	0	0	NA	NA	NA	NA
France(INSERM)	NA	NA	0	0	NA	NA	NA	NA
Germany(DIMDI)	0	314	0	0	1466	NA	8.0	14.0
Japan(JICST)	NA	NA	0	0	NA	NA	NA	NA
Sweden	0	123	0	0	436	8.4	73.8	91.3

*Texas 0-10 days

The January throughput times for MEDLARS searches show a decrease in the total number of searches released in fifteen and twenty days. This decrease was caused by many factors including a reduction in the total amount of computer time available due to normal year-end processing. Other factors attributing to the decrease include: (1) attendance of the MEDLINE workshop, and (2) an overall reduction in total MEDLARS productive hours because of training commitments, illnesses, etc.

DEMAND SEARCH PROCESSING ON THE IBM 370

P.E. Pothier, MEDLARS Management Section, NLM

Commencing in March 1972, demand searches will be processed on the IBM 370, using the programs prepared for the Swedish MEDLARS system. Since processing will also continue on the IBM 7094, searches should be written in such a way that they can be run on either system.

In order that searches can be processed on either system, depending on system availability, searchers must formulate their searches in terms of the most restrictive requirements of each system. If the searcher cannot observe one or more of these restrictions, he must indicate the fact plainly on the top of the DSFR. The searcher must realise, however, that a search in which any restriction is not observed must be processed in a separate batch, thus entailing a processing delay. Furthermore, it will be up to the discretion of the MEDLARS Management Section whether the overriding of a restriction will be observed or whether the element, logic or format involved will be changed to one compatible with the system available at the time.

I. Restrictions on the Number and Kinds of Search Elements and Logic.

1. There is a maximum of 99 two-digit element numbers per element type in both the 7094 and the 370 systems. However, both systems impose lower limits on various element types as summarised in the following table. The searcher is requested to observe the more restrictive limit of each element type and to note any violations of these limits on the top of the DSFR.

Occurrence Limits for Each Element Type

7094	Element	370
99	M unexploded	99
99	M exploded	50
99	T	99
99	Z	99
99	X	99
84	X implied*	no limit
64	S	64
99	G	99
25	C	50
25	L	99
25	J	99
10	Q	99
10	Y	99
5	I	99
5	F	0
3	N	1

*The number of implied "X" elements is calculated by multiplying the number of mainheadings by the number of subheadings in an "X" element.

(7094 processing is assumed to be at DIA. Users of the Common Research Computer Facility in Houston are presumed to know and abide by the restrictions of that Facility.)

2. No "F" elements are permitted in the 370 system. Use "M" elements for Special List Dental, Special List Nursing, Historical Biography and Current Biog-Obit. If it is necessary to specify Review, do so as an "F" element, and note "F Element" on the top of the DSRF.

3. The "N" element produces different results in the different systems; its use is therefore to be avoided if at all possible. In the 370 system only one "N" element is allowed, and it is applied to each subsearch. In the 7094 system a single "N" element will apply only to Section 4. N1 may be any number up to 9999.

4. It is not permitted to search on authors' names.

5. Do not abbreviate MeSH terms.

6. "I" and "Y" elements are not inclusive in the 370 programs. Therefore, routinely enter "greater than" statements one day or one year less than the desired date and "less than" statements one day or one year more than the desired date.

7. Explosions
   a) Exploded elements must be accompanied by a category number with no period at the end.
   b) Separate elements must be used if it is desired to explode a term in more than one category.
   c) Category numbers must be checked carefully; the 370 program looks only at the number and does not check to see that it matches the main heading.
   d) No more than 50 exploded "M" elements are permitted because the 370 program renumbers exploded "M" elements as C51-C99. (The searcher need not worry about exploded "M" elements included in sums of single "M" elements; the program will make the necessary alterations.)
   e) Do not explode "T" or "Z" elements, since the 7094 programs will not accept them. If you must explode a "T" or "Z" element, note it at the top of the DSFR.
   f) Neither system permits exploded "T" or "Z" elements with subheadings.

8. There is no OR NOT (+-) strategy available in the 370 programs.

II. Output and Formatting.

1. Card output is not presently available on the 370. If card output is required, "Card Output" must be indicated on the DSFR. Since card output at present must be run on the 7094, searches requiring card output cannot have exploded "T" or "Z" elements.

2. Report Generator.
   a) Since there is no Report Generator, as such, in the 370 system, the following standard output options should be used on the Report Generator:

	Columns				
1-6	7-8	10-14	15	16	17-24
Search No	1	ALL	P	X	A or SA

   The only exceptions permitted are card output (C in column 15), which must be noted on the DSFR as well as on the Report Generator, and Q expansions (column 25), which also require 7094 processing and are only available without tracings.
   b) Report Generators are still necessary in order to insure proper sorting on the 7094 and to record titles of subsearchers.

3. If not overridden by an "N" element, the maximum number of citations per search in each system is as follows:

7094	1500 (500 per subsearch)
370	900 (300 per subsearch)

4. Both systems permit three subsearches, but the sorting mechanisms are different and result in significant differences in retrieval, of which the searcher should be aware.
   a) The IBM 7094 program stops looking at citations when the primary sort is full (i.e. has 500 citations). The subsearch, therefore, retrieves the same proportion of the citations qualifying for it as the main search retrieves of the citations which qualify for it. For example, in a search with one subsearch, if there are 25,000 citations in the data base which qualify for the main search and 300 of these qualify for the subsearch, only six citations will have "dropped" into the subsearch when the primary search has 500 citations and retrieval stops.
   b) The IBM 370 program looks at the logic of the subsearches at the same time as it looks at the logic of the main search. Therefore, each subsearch can retrieve its full complement of 300 citations regardless of the number of citations qualifying for the main search.

5. The sorting mechanisms of the 370 and 7094 programs differ also in that sorts overflow in the 7094 system, but not in the 370. For example, in the 7094 system, if 600 citations qualify for the most specific

sort, 300 will be printed in that sort, and the remaining 100 will be printed in the next sort along with the citations which genuinely qualify for the second sort. In the 370 system 300 citations will be printed in the most specific sort; the remaining 300 will not be printed at all.

III. Summary of Items Requiring Special Processing.

The following is a list of elements, element types, strategies and format options whose use may render the search incompatible with the system being used. The use of any of these items must be noted on the top of the DSFR.

1. More than:
   - 50 exploded "M" elements
   - 25 categories (C)
   - 25 languages (L)
   - 25 journals (J)
   - 10 places of publication (Q)
   - 10 publication years (Y)
   - 5 entry dates (I)
   - 84 implied "X" elements
   - 1 "N" element
2. "F" element
3. Exploded "T" or "Z" element
4. OR NOT (+-) strategy
5. Card output
6. Q expansion

IV. Edits in the 370 System.

The following information will be of interest mainly to personnel concerned with batching and debatching. It is presented here only so that searchers will be able to interpret the edits if they should need to refer to them

The 370 programs produce what, in effect, are two edits: the Pre-Processor Program Image and the Search Input Processing Program Image.

1. The Pre-Processor Program.

The Pre-Processor Program converts the NLM search formulation to the 370 format, altering element symbols and operators which are unacceptable to the 370 programs to program-acceptable symbols and operators.

a) The NLM search number is changed to a different six-digit number. This change is necessary because the NLM search number really has seven digits (six plus one for each card type), and the 370

programs accept only six digits. The numbers in any one batch are sequential and incremented by 10. (E.g., if the first search is 000010, the second is 000020).

b) The following is a list of element symbols and operators in the 370 programs and their NLM equivalents.

370	NLM
K	Exploded "T" element
P	Exploded "Z" element
U	"X" element (mainheading/ subheading combination)
B	"I" element when < a date is requested
D	"I" element when > a date is requested
E	"I" element when = a date is requested
W	"Y" element when < a publication year is requested
X	"Y" element when > a publication year is requested
Y	"Y" element when = a publication year is requested
I	Hybrid sum. Certain unlike elements may be summed. E.g., ≧ when stated in a formulation as "I1 + I2" or as "I3" (the sum of I1 and I2) becomes an "I" element in the 370 programs because > requires a "D" element and = requires an "E" element, and "D" and "E" are unlike elements.
R	Request statement. The 04, 05, and 06 of the DSFR become R01, R02, and R03.
C51-C99	Exploded "M" elements
& (ampersand)	OR (+) on Pre-Processor Program image only. The Search Input Processing Program listing will have the + sign for logical OR.
-	AND NOT (*-)
+	Sum indicator

c) At the end of each search formulation, on the listing generated by the Pre-Processor Program, is a table of program-generated elements and the original formulation elements to which they correspond.

2. The Search Input Processing Program.

At the end of each run a listing generated by the Search Input Processing Program is prepared, which shows for each search the number of simple and combined elements referred to in each subsearch as well as elements in the RED list which were not used in the logic. On the final page of this listing are shown the total number of citations processed, the total number of citations retrieved, and the number of citations retrieved by each subsearch.

ERRATA TO MEDICAL SUBJECT HEADINGS 1972
(Part II, January 1972 Index Medicus)

Page 162	**Column 1**	**At top of page add: PIPERIDINES (D2)** **xu phencyclidine (D2)**
Page 162	**Column 2**	**At top of page add: PLACEBOS (D13)** **PLACENTA (A10)**
Page 354	Column 1	should read: AMIDOHYDROLASES Asparaginase Glutaminase Penicillinase Urease AMINO ACYL T RNA SYN- THETASES

MEDLINE NEWS BRIEFS

by
Barbara Greehey
MEDLARS Management Section, NLM

ENGLISH CITATIONS:

Of the approximately 400,000 citations presently in the MEDLINE data base, about 300,000 are in the English language. Thus when AND ENGLISH is requested in a search statement the computer has a vast list to pull aside. Since this involves considerable waiting time not only for the individual requester but for other users as well, the following was devised as a more efficient way of obtaining English citations.

Foreign language citations, which amount to approximately 100,000 citations as compared to the 300,000 English citations, were tagged. Negating these 100,000 foreign language citations also retrieves the English citations but considerably fewer citations are searched. Thus requesting AND NOT FOREIGN in a search statement achieves the same results as entering AND ENGLISH but the process is more efficient and much faster.

```
SS 1/C?----SEARCH STATEMENT 1 OR COMMAND?
USER:
ASTHMA AND CLIMATE AND NOT FOREIGN
PSTG (10)
```

For those who wish non-English articles with English abstracts also, the request might look something like this:

```
SS 2/C?----SEARCH STATEMENT 2 OR COMMAND?
USER:
1 OR ASTHMA AND CLIMATE AND ENGLISH ABSTRACT
PSTG (11)
```

OFF-LINE PRINT:

The number of citations which may be printed off-line has been increased from 100 to 300.

UPDATES TO MEDLINE JOURNALS

P.E. Pothier, MEDLARS Management Section, NLM

Please make the following changes in your lists: MEDLINE JOURNALS (dated January 17, 1972) and MEDLINE JOURNALS BY SUBJECT (dated January 6, 1972).

MEDLINE JOURNALS

Add

OKC	Acta Chir Scand
08Q	Acta Anaesthesiol Scand Suppl
1BU	Acta Neurol Scand Suppl
1CG	Acta Neuropathol Suppl (Berl)
1EW	Acta Odontol Scand Suppl
1TK	Acta Physiol Pol Suppl
1XZ	Acta Radiol Diagn Suppl (Stockh)
20W	Acta Rheumatol Scand Suppl
3A4	Allerg Immunol (Leipz)
5ZT	Ann Rech Vet
DNE	Commun Behav Biol
EOH	Demography
EHZ	Environ Lett
ERM	FAO Nutr Meet Rep Ser
*GQ8	Int J Addict
HIN	J Bioenerg
JAM	J Neurobiol
KEM	J Wildl Dis
KQB	Jap J Surg
MXT	Microsc Acta
NVJ	Neirofiziologiia
NZS	Neurosci Res Program Bull
O4Z	Nord Vet Med
O5Q	Nouv Presse Med
PL5	Prep Biochem
PZT	Prog At Med
QD2	Psychiatry Med
R5B	Rep Public Health Med Subj (Lond)
R62	Res Commun Chem Pathol Pharmacol
R6D	Res Prog Org Biol Med Chem
RK9	Rev Bras Pesqui Med Biol
RU9	Rev Esp Fisiol
VRY	Tijdschr Diergeneeskd
WG2	Trop Anim Health Prod
WSJ	Urologe A
XBP	Vet Med (Praha)
XBQ	Vet Pathol
Y52	Zentralbl Bakteriol Orig A
Y53	Zentralbl Bakteriol Orig B
*GRJ	Int J Health Serv

Delete

1BH	Acta Neurol Psychiatr Belg
1DM	Acta Neuroveg (Wien)
1J4	Acta Paediatr (Stockh)

2K3 Adv Chemother
2PM Adv Tracer Methodol
6AJ Ann Zool
9R4 Berufsdermatosen Monogr
DQ2 Confront Radio Anat Clin
F6E Fortschr Paedol
GS7 Int J Neuropsychiatry
VYH Tr Inst Genet (Mosk)
VZ7 Tr Inst Norm Patol Fiziol (Mosk)
Y5M Zentralbl Gesamte Rechtsmed

MEDLINE JOURNALS BY SUBJECT

Add

ANESTHESIOLOGY
08Q Acta Anaesthesiol Scand Suppl

ANATOMY
MXT Microsc Anat

BIOCHEMISTRY
HIN J Bioenerg
PL5 Prep Biochem
R6D Res Prog Org Biol Med Chem

BIOLOGY
DNE Commun Behav Biol
PL5 Prep Biochem
RK9 Rev Bras Pesqui Med Biol

CHEMISTRY
R6D Res Prog Org Biol Med Chem

COMMUNICABLE DISEASES
Y52 Zentralbl Bakteriol Orig A

DENTISTRY
1EW Acta Odontol Scand Suppl

ENVIRONMENTAL HEALTH
EHZ Environ Lett

GENERAL MEDICINE
05Q Nouv Presse Med

HYPERSENSITIVITY
3A4 Allerg Immunol (Leipz)

IMMUNOLOGY
3A4 Allerg Immunol (Leipz)

METABOLISM
HIN J Bioenerg

MICROBIOLOGY
Y52 Zentralbl Bakteriol Orig A
Y53 Zentralbl Bakteriol Orig B

NEUROLOGY AND NEUROSURGERY
!BU Acta Neurol Scand Suppl
!CG Acta Neuropathol Suppl (Berl)
JAM J Neurobiol
NVJ Neirofiziologiia
NZS Neurosci Res Program Bull

NUTRITION
ERM FAO Nutr Meet Rep Ser

PHARMACOLOGY
R62 Res Commun Chem Pathol Pharmacol

PHARMACY
R6D Res Prog Org Biol Med Chem

PHYSIOLOGY
!TK Acta Physiol Pol Suppl
RU9 Rev Esp Fisiol

PSYCHIATRY
GQ8 Int J Addict
QD2 Psychiatry Med

PSYCHOLOGY
DNE Commun Behav Biol

PUBLIC HEALTH
EOH Demography
R5B Rep Public Health Med Subj (Lond)
Y53 Zentralbl Bakteriol Orig B
GRJ Int J Health Serv

RADIOLOGY AND NUCLEAR MEDICINE
!XZ Acta Radiol Diagn Suppl (Stockh)
PZT Prog At Med

RHEUMATISM
20W Acta Rheumatol Scand Suppl

SOCIAL MEDICINE
R5B Rep Public Health Med Subj (Lond)
GRJ Int J Health Serv

SURGERY
KQB Jap J Surg
OKC Acta Chir Scand Suppl

TECHNOLOGY, MEDICAL
PL5 Prep Biochem

TROPICAL MEDICINE
WG2 Trop Anim Health Prod

UROLOGY
WSJ Urologe A

VETERINARY MEDICINE
5ZT Ann Rech Vet
KEM J Wildl Dis
O4Z Nord Vet Med
VRY Tijdschr Diergeneeskd
WG2 Trop Anim Health Prod
XBP Vet Med (Praha)
XBQ Vet Pathol

Delete

DERMATOLOGY AND VENEREAL DISEASES
9R4 Berufsdermatosen Monogr

GENETICS
VYH Tr Inst Genet (Mosk)

INDUSTRIAL MEDICINE
9R4 Berufsdermatosen Monogr

JURISPRUDENCE AND FORENSIC MEDICINE
Y5M Zentralbl Gesamte Rechtsmed

NEUROLOGY AND NEUROSURGERY
1DM Acta Neurovag (Wien)
GS7 Int J Neuropsychiatry

PATHOLOGY
VZ7 Tr Inst Norm Patol Fisiol (Mosk)

PEDIATRICS
1J4 Acta Paediatr (Stockh)
F6E Fortschr Paedol

PHARMACOLOGY
2K3 Adv Chemother

PHYSIOLOGY
VZ7 Tr Inst Norm Patol Fisiol (Mosk)

PSYCHIATRY
1BH Acta Neurol Psychiatr Belg
GS7 Int J Neuropsychiatry

RADIOLOGY AND NUCLEAR MEDICINE
2PM Adv Tracer Methodol
DQ2 Confront Radio Anat Clin

TECHNOLOGY, MEDICAL
2PM Adv Tracer Methodol

ZOOLOGY
6AJ Ann Zool

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

o. 35 March 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Mayner
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . .Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

MESH SUGGESTIONS

The Medical Subject Headings section requests that users of MEDLINE who have suggestions for additions, deletions, or corrections to the vocabulary utilize the "comment" command for submitting these suggestions. The MEDLINE comment file will be queried each day and suggestions given to the MeSH section for consideration.

IMPORTANT NOTICE TO AIM-TWX USERS

Rose Marie Woodsmall
Lister Hill National Center for Biomedical Communications

Three major operational changes will take place on April 1, 1972:

1. AIM-TWX access time will change; the system will be available from 12:00 noon to 3:30 p.m. Pacific time. (3:00-6:30 p.m. in Washington, D. C.)

2. The computer programs for MEDLINE, the operational on-line bibliographic system of NLM, will be used for AIM-TWX. These programs are much faster and will speed up the search and retrieval process. The only disadvantage is that the MEDLINE programs do not contain the TITLE SEARCH capability and the APPLY Command for subheadings. Title search is scheduled for implementation in the MEDLINE programs by the Fall of 1972.

3. AIM-TWX will be accessible through the TYMSHARE network for all users on the telephone network (not TWX). This will reduce the long distance charges for many users. All users should call the nearest node to them on the TYMSHARE network. (See numbers on page 14)

Except for changes in codes, the procedure for accessing AIM-TWX via Tymshare is the same for accessing MEDLINE. See instructions beginning on page 6.

STATUS OF THE "RML SERIAL LOCATOR INDEX" PROJECT

Cecile C. Quintal, Technical Information Specialist
Serial Records & Binding Section, TSD

A serials workshop for Regional Medical Library representatives was held at the National Library of Medicine on March 2 and 3, 1972. The purpose of the meeting was to reach a consensus on the plan of action to be followed in order to bring the project to completion. Throughout the two days of meetings, the Project's goal--provision of a low cost, usable tool, supplying both bibliographic and locator information within the framework of the RML Network--was reiterated and served as the basis for the discussions. At the conclusion of the meeting a preliminary working list of substantive biomedical serials had been established, and the participants had agreed to participate in a test to determine the utility and practicability of an on-line serials data base containing these substantive titles.

The preparation for testing of the on-line serials data base has been divided into three working phases: 1) creation of the test data base for the ca. 5,000 substantive titles which have already been identified; 2) identification of additional titles with which to augment the data base and 3) conversion of the UCMP data and generation of the on-line data base.

Work on the first phase is scheduled for completion by May. The Medical Library Center of New York has already merged the holdings data for existing UCMP users onto the 5,000 title master file, and the RML's which have not produced UCMP-based union lists are in the process of completing their checking operation. This remaining data will then be added to the master file. Work can begin on conversion to an on-line data base, and plans will be developed for testing the usefulness and practicability of the on-line data base as a national cooperative effort.

UPDATES TO MESH MATERIALS

1. ERRATA TO: MESH 1972 #2, January 1, 1972

Page 228, Col. 2 at margin ADD: Douglas' Pouch

VETERANS ADMINISTRATION'S USE OF MEDLINE

The Veterans Administration has been authorized to install MEDLINE in eight locations for a six-month period as follows:

VA Station	NLM REGION	Training Class	Terminal Installation Date
Sepulveda, California	XI	March 6 (UCLA)	April 1, 1972
Central Office, D. C.	IV	April 10	As Soon As Possible
Wood, Wisconsin	VII	May 22	June 12, 1972
Erie, PA (AHEC)	III	July 10,	July 31, 1972
Boise, ID (AHEC)	X	August 21	September 11, 1972
Atlanta, GA	VI	October 2	October 23, 1972
Lincoln, NB (AHEC)	VIII	November 6	November 27, 1972
Washington, D. C.	IV	Trained	Replace Present Terminal as Soon as Possible

During the six-month trial period, the VA will gather data on the usefulness of the MEDLINE system within VA and its affiliated institutions.

Three of the stations, Erie, Boise, and Lincoln, are among the eight VA hospitals involved in Area Health Education Centers which are being established as consortia of institutions providing improved delivery of health services through coordination in meeting health manpower needs.

Henry J. Gartland is Director, Library Service, Veterans Administration. Allen J. Sprow, Administrative Librarian (Machine Applications) is providing liaison between the VA departments of Medicine and Surgery and Data Management and between VA and NLM for this trial. For further information, call:
Mr. Sprow (202) 389-2711

MEDLARS/MEDLINE/AIM-TWX SEARCH STATISTICS FOR FEBRUARY 1972
(1/28-2/24/72)
MEDLARS MANAGEMENT SECTION, NLM

The table below includes only a few items from each Center's monthly report:

Center	Searches Rejected	Current & Back-File Searches Released (Excluding RDS's) MED-LARS	MED-LINE	AIM-TWX	MEDLARS Recurring Demand Searches Released	Citations Retrieved per MEDLARS Search Mo.	Percentage MEDLARS Searches Released-CURRENT FILE only by Calendar Days 0-15 Days	0-20 Days
UNITED STATES								
Alabama	7	83	28	1	9	7.4	85.0	98.8
Colorado	1	60	16	2	13	4.3	90.0	100.0
Crerar	10	55	15	0	4	12.8	22.3	51.9
Harvard	27	47	0	0	14	8.3	2.0	27.0
Michigan	9	105	23	0	127	7.3	33.6	78.8
New York	11	30	38	2	8	8.4	3.4	16.7
NIH	0	49	0	0	42	6.6	91.2	100.0
NLM-MARML	15	285	57	1	19	3.8	65.8	90.7
NLM-MMS	2	18	13	0	0	4.0	100.0	--
Ohio	28	91	133	0	270	9.5	88.4	100.0
Philadelphia	7	10	59	0	17	10.2	0.0	20.0
PMA	1	42	0	0	220	9.9	100.0	--
Texas	8	131	30	0	39	5.7	100.0*	--
UCLA	47	151	71	150	41	5.8	11.7	15.1
Washington	43	53	115	1	3	12.2	57.0	86.0
TOTALS	216	1,210	598	157	826	---	59.0	76.1
FOREIGN								
Australia	1	77	0	0	63	5.4	78.0	92.3
Canada	0	9	NA	NA	40	44.6	11.1	44.4
England	NA	NA	NA	NA	NA	NA	NA	NA
France(INSERM)	5	122	--	--	0	4.5	77.0	87.0
Germany(DIMDI)	NA	NA	NA	NA	NA	NA	NA	NA
Japan(JICST)	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	0	171	0	0	450	8.5	85.4	94.3

*TEXAS 0-10 - 100.0%

UPDATES TO MEDLINE JOURNALS

Please make the following changes in your lists MEDLINE JOURNALS (dated January 17, 1972) and MEDLINE JOURNALS BY SUBJECT (dated January 6, 1972)

MEDLINE JOURNALS

Add

1HD Acta Otolaryngol Suppl (Stockh)
1LX Acta Paediatr Scand Suppl

MEDLINE JOURNALS BY SUBJECT

Add

OTORHINOLARYNGOLOGY
1HD Acta Otolaryngol Suppl (Stockh)

PEDIATRICS
1LX Acta Paediatr Scand Suppl

ERRATUM, Please note that the journal listed in the LIBRARY NETWORK/TECHNICAL BULLETIN for February, 1972, as ØKC Acta Chir Scand should be ØKC Acta Chir Scand Suppl.

ACCESSING MEDLINE AND AIM-TWX VIA THE TYMSHARE NETWORK

Rose Marie Woodsmall, LHNCBC
Barbara Greehey, MEDLARS Management Section

Letters are being mailed to MEDLINE and AIM-TWX users containing Tymshare numbers and procedures for accessing these systems. The procedures are reproduced on the following pages. The directions apply to AIM-TWX as well as to MEDLINE, except for a difference in codes. The codes for AIM-TWX are:

User name = AIM
Password = MED
Terminal ID = your institution's identification code
(NOTE: AIM-TWX users will be given new IDs. MEDLINE users will now use their MEDLINE ID to access either MEDLINE or AIM-TWX)

The change from Western Union to Tymshare lines constitutes phase II of the MEDLINE communications network. Additional users will now be able to use MEDLINE and AIM-TWX after dialing their local numbers.

When you dial and login you will be communicating with minicomputers in the Tymshare system. Your login information is verified and then your terminal is directly connected to the NLM or SDC computer through Tymshare Inc. leased telephone lines. The same telephone numbers accommodate your various terminals and various speeds. As you will see in the following pages, the Tymshare computers enable you to obtain 'news' in the hours when MEDLINE is not operating.

It is to be emphasized that the operation of MEDLINE will be the same. The changes are in the login and logout processes. Local users will continue to use their regular telephone numbers and login procedure when connecting with MEDLINE. The closest Tymshare number will also be distributed to local users in order that they may access the 'news' mentioned above and the AIM-TWX system (the Virginia multiplexor will no longer be operational after April 1).

If there are any questions or if any difficulties arise please call MEDLARS Management: 301/496-6193.

GENERAL INSTRUCTIONS: (R E A D C A R E F U L L Y)

To access the MEDLINE system via the TYMSHARE communications network, the user must enter five (5) fields of information:

1. Type of terminal and transmission speed in cps (characters per second) to be used; this is indicated by an identification character.

Identification Character	Terminal(s)
D	= Model 33 Teletype = Teletype-compatible terminals* set at 10 cps = CRT set at 10 cps
E	= Teletype-compatible terminals* set at 30 cps = CRT terminals set at 30 cps with paper printer
CR (carriage return)	= IBM 2741 = Datel = Novar = Dura
A	= CRT terminals set at 30 cps without paper printer
G	= Memorex set at 30 cps = GE Terminet set at 30 cps

* Execuport 300, Tymshare 1030, 1030 Teleterm, etc.

2. Whether transmission will be in half duplex or full duplex

Full duplex - The TYMSHARE network normally operates on full duplex; if the user wishes to use full duplex, no further indication is necessary.

Half duplex - If the user wishes to use half duplex, it is necessary to depress and continue to hold down the Control (CTRL) key, then depress the letter H key, then release both keys. This is written H^c in the Login instructions.

The IBM 2741 is always in half duplex and no indication to the TYMSHARE network is necessary.

(In full duplex the keyboard is no longer connected to the printer and all printed characters are sent from the network. This allows immediate verification of material sent to the computer.)

3. User Name

User name = NLM (CR)

4. Password

Password = MED (CR)

Note: If the terminal is operating in full duplex, the password will not actually print on the paper and carriage will not return.

5. Terminal ID

Terminal ID = your institution's individual 8-character terminal identification code supplied by NLM

MEDXXXXX (CR)

LOGIN/LOGOUT PROCEDURES

VIA THE TYMSHARE NETWORK

1. LOGIN PROCEDURES

If applicable, set the duplex switch to half or full.

Dial the nearest Tymshare number and make connection.

As soon as the connection to the Tymshare computer is made, the system sends an initial message. This message is sent at 10 cps (characters per second) and is readable only on a 10 cps terminal. On other terminals, a sequence of characters will print and then the terminal will pause.

Type the identification character for your terminal (selected from those listed in the General Instructions). This character tells the system which code and transmission speed to use to communicate with your terminal.

The system will then return the carriage and display . . . . .

PLEASE LOG IN:

The user enters the user name. If half duplex is to be used, it must be indicated immediately preceding the user name . . . . .

NLM (CR) (full duplex)

H^cNLM (CR) (half duplex)

The system requests the password . . . . .

PASSWORD:

The user enters the password. This will not actually print if in full duplex and the carriage will not return . . . . .

MED (CR)

The system checks the user's password and indicates that it is legal by printing a semicolon (;). If on half duplex, this semicolon will be superimposed on the P in the word Password. To avoid this, use the line feed after the password and carriage return are input. (MED (CR) (LF))

After receiving the semicolon indicating the legality of the user, the user enters the terminal ID for his institution. . . . .

MEDXXXXX (CR)

The "HELLO FROM MEDLINE" message is then received and the user begins interacting with the NLM computer.

2. ERRORS

If there are errors while logging in, the system replies with an error message. The user must then enter the correct input.

3. SUMMARY OF LOGIN

TYMSHARE SYSTEM	USER INPUT	
(initial message)	(Identification character for user's terminal)	
PLEASE LOG IN:	NLM (CR)	(full duplex)
	or	
	H^C NLM (CR)	(half duplex)
PASSWORD:	MED (CR)	(will not print in full duplex)
;	MEDXXXXX (CR)	

4. LOGOUT PROCEDURES

Use the "STOP" command in the usual manner and receive the "Goodbye" message from MEDLINE.

Disconnect terminal by breaking phone connection.

5. NEWS OF THE MEDLINE SYSTEM

News of the MEDLINE system may be obtained (even when MEDLINE is down) through the TYMSHARE system. The procedure is similar to that of accessing MEDLINE through TYMSHARE.

The first steps are exactly the same as for MEDLINE:

Set the duplex switch
Dial TYMSHARE number and make connection
Receive initial message from TYMSHARE and type identification character for your terminal

System will respond with . . . . .

PLEASE LOG IN:

User enters user name . . . . .

NLM4 (CR) (preceded with H^C for half duplex)

Only one terminal at a time can be logged in under each user name while obtaining news. If a terminal is already using a user name and an attempt is made to enter another terminal under the same name, the message

ALREADY ENTERED

will print. Then the computer will again type . . . . .

PLEASE LOG IN:

The MEDLINE user then enters one of the following user names . . . . .

NLM4A
NLM4B
NLM4C
NLM4D
NLM4E

When the user types a user name not already in use, the system will respond with . . . . .

PASSWORD

User enters the password . . . . .

MED (CR)

System responds with . . . . .

PROJ CODE:

User enters Terminal ID . . . . .

MEDXXXXX (CR)

System will type time and date and a hyphen . . . . .

TYMSHARE Mo/Day Time
-

User enters (following the hyphen) . . . . .

TYPE NEWS (CR)

System will respond with any news it has for MEDLINE. After news is finished, system will type another hyphen . . . . .

-

User responds with (following the hyphen) . . . . .

LOG (CR)

System will give computing time in seconds and actual terminal time in hours, minutes, and seconds . . . . .

CPU TIME: nSECS
TERMINAL TIME: Hours:minutes:seconds

System will then give the user an opportunity to access the MEDLINE system . . . . .

PLEASE LOG IN:

User either accesses MEDLINE through TYMSHARE or disconnects the terminal.

6. SUMMARY OF NEWS

TYMSHARE SYSTEM	USER INPUT
Login:	
(initial message)	(Identification character for user's terminal)
PLEASE LOG IN:	NLM4 (CR) (full duplex)
	or
	H^C NLM4 (CR) (half duplex)
PASSWORD:	MED (CR) (will not print in full duplex)
PROJ CODE:	MEDXXXXX (CR)
TYMSHARE Mo/Day Time -	TYPE NEWS (CR)

Logout:

\- LOG (CR)

CPU TIME
TERMINAL TIME

PLEASE LOG IN: (user disconnects or accesses MEDLINE through TYMSHARE)

NOTE: USER NAMES NLM4A, NLM4B, NLM4C, NLM4D, or NLM4E MAY BE USED

N O T E: I B M 2 7 4 1 U S E R S

SPECIAL INFORMATION FOR THOSE USING IBM 2741 TERMINALS TO ACCESS MEDLINE THROUGH THE TYMSHARE NETWORK

IBM 2741's have one of three "codes." These are:

- Correspondence Code
- BCD Code
- EBCDIC CODE

The BCD Code terminals cannot communicate with the TYMSHARE network.

The EBCDIC Code terminals can communicate with the following TYMSHARE nodes:

Washington, D. C.	703-920-7660
Englewood Cliffs, New Jersey	201-894-8250
Manhattan	212-551-9322
Syracuse	315-437-7111
Buffalo	716-856-0511
Palo Alto	415-961-9330

The Correspondence Code terminals can use all TYMSHARE numbers not listed above.

LIST OF TYMSHARE NUMBERS FOR MEDLINE AND AIM-TWX USERS

The following list shows the cities, states, and telephone numbers for the TYMSHARE network. Because of state versus interstate telephone rates, the cost for calling a node within your state may be higher than that for a node outside. We suggest you check rates with your local telephone office to determine which number is least expensive for you to call. If the node you usually call is busy, you may dial other numbers on this list. Telephone charges are only to the number you dial — for example, if you are in New Mexico and you select the Sacramento Tymshare number to call, your line charges will be New Mexico to Sacramento, California rates. In case you have problems with these numbers, please contact MEDLARS Management through the MEDLINE "COMMENT" command or call (301) 496-6193.

CITY	STATE	NUMBER	CITY	STATE	NUMBER
INGLEWOOD	CAL	213-673-5185	BOSTON	MASS	617-731-4300
LOS ANGELES	CAL	213-637-9900	BALTIMORE	MD	301-760-5000
LOS ANGELES	CAL	213-687-9930	DETROIT	MICH	313-522-6380
MOUNTAIN VIEW	CAL	415-961-9330	ST. LOUIS	MO	314-968-4710
NEWPORT BEACH	CAL	714-540-9560	ENGLEWOOD CLIFFS	NJ	201-894-8250
OAKLAND	CAL	415-465-7000	BUFFALO	NY	716-856-0510
OXNARD	CAL	805-487-0424	BUFFALO	NY	716-856-8750
PALO ALTO	CAL	415-328-5350	NEW YORK CITY	NY	212-551-9322
RIVERSIDE	CAL	714-687-1881	NEW YORK CITY	NY	212-750-9433
SACRAMENTO	CAL	916-441-5450	ROCHESTER	NY	716-461-1410
SAN DIEGO	CAL	714-291-8700	SYRACUSE	NY	315-457-7111
SAN FRANCISCO	CAL	415-468-4400	PORTLAND	ORE	503-224-0750
SAN JOSE	CAL	408-257-9050	PHILADELPHIA	PENN	215-667-6420
DARIEN	CONN	203-655-8931	DALLAS	TEX	214-638-5800
HARTFORD	CONN	203-528-4811	FORT WORTH	TEX	214-263-2410
WASHINGTON DC	DC	703-920-7000	HOUSTON	TEX	713-785-4411
TAMPA	FLA	813-877-0141	SEATTLE	WASH	206-622-7930
CHICAGO	ILL	312-782-2303	DENVER	COL	303-399-747
SOUTH BEND	IND	219-259-0941	SAN ANTONIO	TEX	512-000-000
BATON ROUGE	LA	504-927-6400			
NEW ORLEANS	LA	504-834-7100			
NEW ORLEANS	LA	504-834-7111			

NOTE: These numbers are subject to change. For the latest list of Tymshare numbers type COM PHONES after accessing NLM4, NLM4A, etc., the Tymshare news file described beginning on page 10.

NATIONAL LIBRARY OF MEDICINE

Mrs. Yvonne Scott
MMS

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 36

APRIL 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . .Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

SCHEDULING OF MEDLINE DEMONSTRATIONS

It is important that NLM know of planned MEDLINE demonstrations even though the demonstration may be scheduled to be held durii normal hours of MEDLINE operation. When demonstrations are scheduled, we will make sure that MEDLINE is available at the scheduled time and that the system is not brought down during the demonstration period. However, in case of MEDLINE system failure, we recommend that you schedule demonstrations during 3:00 to 6:30 (EST) when AIM-TWX is available as a back-up.

Please inform Ms. Grace T. Jenkins, MEDLARS Management Section, by MEDLINE "comment", telephone, or letter, of demonstration as far in advance as possible. For demonstrations planned for non-standard hours (MEDLINE is now up from 10:00-4:00 p.m., Mon., Tues., Thurs., Fri.; 10:00-9:00 p.m., Wed. and Sat. 10:00-1:00 p.m. (all hours EST)), please inform Ms. Jenkins so MEDLINE can be made available if possible.

PHASING-IN THE TYMSHARE NETWORK

Davis B. McCarn, Associate Director
Science Communications and
Computer Engineering Services

During the period March 13-24, the National Library of Medicine was trying to iron out difficulties which had been encountered in the connection to the Tymshare Network. Users of that Network may have noticed that either they could not get into the NLM system or that they seemed to come in the middle of the searches of other users. After extensive testing and analysis, it became clear that, in fact, there was a problem with the Tymshare Network when users hung up without "STOP"ing and that the NLM computer was not appropriately notified of such terminations, so that users often came back into the middle of some other search. This problem has now been corrected and the interface to the Tymshare Network is running with reasonable reliability. Users of the Network will still notice, however, that response times are somewhat slower using the Network than with direct dial. It is anticipated that this problem will be ironed out in the near future. Finally, the present program which connects NLM to the network does not now provide accounting information, i.e., it does not let Tymshare know how many users have been using the Network, how much time they have been connected to it, and how many characters they have transmitted to or from the computer. Sometime in the next two weeks, a revised version of the program will be installed. When this happens, a test will be announced in the TEST message, so that we can test the new connection to the Network during off-service hours and be sure that things are running smoothly before we introduce the new program during actual operating hours.

DISTRIBUTION OF SELECTED NLM PUBLICATIONS BY THE NATIONAL TECHNICAL INFORMATION SERVICE

Within the last year, there has been a great increase in requests for copies of a number of NLM publications that were originally developed primarily for use by MEDLARS staff. The great interest shown in these tools, as their existence has become known to the medical library community, seems to attest to their usefulness. Because of the cost and effort required to satisfy this outside demand, NLM has sought assistance in handling the distribution of these publications.

Beginning April 6, 1972, the following NLM publications will be available to the public by purchase from the National Technical Information Service, U. S. Department of Commerce, Springfield, Virginia 22151. (Specify publication title and accession number when ordering.)

Accession No.	Publication Title	Paper Copy	Microfiche
PB-207 175	*MEDLARS Indexing and Searching Aids	$6.00	$ .95
PB-207 176	Medical Subject Headings Tree Structure 1972	$6.00	$ .95
PB-207 177	Medlars Training Program Medline Training Syllabus	$3.00	$ .95
PB-207 180	Medical Subject Headings Alphabetic List 1972	$6.00	$ .95
PB-207 181	Medlars Indexing Manual	$6.00	$ .95
PB-207 707	**Permuted MeSH 1972	$6.00	$ .95

* The MEDLARS Indexing and Searching Aids includes five items:

Hints for Index Medicus Users
Medical Subject Headings 1972 - New Main Headings
Alphabetic List of Provisional Headings in MEDLARS - 1972
Eponymous Syndromes - MEDLARS Indexing Instructions
Tumor Manual - MEDLARS Indexing Instructions

These five items are available only as a unit, and may not be purchased separately.

** Available approximately by May 1, 1972.

NLM will no longer be able to honor direct requests for these publications, or for other NLM publications as they become available through NTIS.

REQUEST FOR ARTICLES FROM NETWORK PARTICIPANTS

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN is a communication link between NLM and system users (including MEDLINE and AIM-TWX users) which can be used to share the experiences and ideas of each member user. To effectively intercommunicate with the expanding number of users, we invite all network participants to submit articles to be included in future issues of the Bulletin and we ask the MEDLARS Centers, both foreign and domestic, to continue to report on their activities as they have in the past.

A number of activities would be appropriate topics for discussion as suggested below:

-A description of one's MEDLARS/MEDLINE services, personnel, physical facilities, geographic location, types of requestors (MD's, students, faculty, etc.) or requests (clinical, biochemical, etc.).

-Comparison of MEDLARS/MEDLINE services with other bibliographic services, e.g., with regard to recall and precision, success or failure.

-Effective public relations methods, such as orientation packages, brochures, etc., one has utilized in helping the requester interact with MEDLINE or AIM-TWX.

-Evaluation studies on consumer satisfaction with MEDLARS or online products.

-Constructive comments or ideas on improving existing services.

-Identification of problem areas accompanied by suggestions for change of procedures.

-Any other topic that you think our readers would like to hear about.

PROCEDURE: Contributions can be accepted at anytime. We would like to hear from all system users at least once during this year. We encourage the members of the November 1971 and January 1972 MEDLINE Training Classes to relate their experiences in a narrative for publication in one of the summer issues of the Bulletin.

Please submit articles typed and double-spaced to:

Ms. Grace T. Jenkins
LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
National Library of Medicine
MEDLARS Management Section, Rm. 152
8600 Rockville Pike
Bethesda, Maryland 20014

SPEED OF MEDLINE

Davis B. McCarn, Associate Director
Science Communications and
Computer Engineering Services

The MEDLINE service on the NLM computer is now averaging over 10 simultaneous users and sometimes there are as many as 20-23 simultaneous users on the system. These facts are evidenced to users by regularly increasing response times on MEDLINE, that is, the time to log into the system or to get an answer from it has been increasing as service use has gone up. The search system for MEDLINE acts like a single server, i.e., each user who inputs a message requiring action by the computer is placed in a line and handled as his turn comes up by the program which performs the action requested. The system operates like a grocery store with one check-out counter. The present performance of the system indicates that it cannot support as many simultaneous users as was previously anticipated. This reduced capability seems to be the result of two factors. The first of these is that users are putting in substantially more complicated searches than the prior experience on AIM-TWX indicated. The second factor is that a growing number of the users of MEDLINE are using 30-character-a-second terminals which provide much faster interaction speeds than the 10-character-a-second terminals used on AIM-TWX. Our operating statistics indicate that, while on AIM-TWX, users produced about one interaction every two minutes; on MEDLINE, users are interacting 2½ times every minute; there is a five-fold increase in the interaction activity. We are in the process of revising the computer model of the service to identify the impact of this on response times under the present organization of the computer programs.

The first factor, search complexity, is somewhat more serious. The more complex the searches, the more time is required to perform them. With the present organization of the service, all users are penalized for very long searches. As an example, some users have searched "ALL 71#", which is a "simple" search statement to a user but one which is complex to the system as it requires the oring-together of 149 posting lists, each of which averages over 8,000 postings. Although the 370/155 is a fast computer, this search still takes five minutes. In addition, this particular search is almost meaningless in that it provides a list of citations input in 1971 (which does not correspond to the 1971 published edition of INDEX MEDICUS) plus two journals whose titles begin with 71 for the entire life of the data base (it, of course, does <u>not</u> provide a list of those journals published in 1971 which can be provided by using the "and 1971 thru 1971" wording in a search request.). To protect against such lengthy searches, we have incorporated a new check in the program, such that if the list of all the postings in an exploded or truncated search exceeds 80,000, the program will indicate an overflow with the "partials" message.

This, of course, is only a temporary solution to this problem. The fundamental problem is that all users are penalized by extensive searches by one user. We are investigating how to convert the system so that a lengthy search by an individual user will only affect his response time on the system rather than those of everyone using the system.

SENDING MAIL TO MMS THROUGH TYMSHARE

Leonard J. Bahlman
MEDLARS Management Section, NLM

You may send messages to MEDLARS Management Section through the TYMSHARE Network in lieu of a phone call if it is not urgent enough to require immediate attention. To do this, (after logging in and receiving the cue -) the user types SEND MMS (see example) and a carriage return, he then types the message he wishes to send to MEDLARS Management Section. After the user types the last line of the message (include name, address, and phone no.) he presses the carriage return (CR). He then holds down the Control Key (CTRL), presses the letter D next and then releases both keys at once. MMS will check daily for mail and respond as soon as possible.

You may SEND mail between 8:00 am and 3:00 am (Eastern Time), even when MEDLINE is not operational, by logging in on NLM4, NLM4A, NLM4B, NLM4C, NLM4D, or NLM4E. You may still use the "COMMENT" command in MEDLINE when the system is available.

SENDING MAIL

Example:

please log in: NLM4 (or NLM4A, NLM4B, NLM4C, NLM4D, NLM4E)

password: MED

proj code: (enter your MEDLINE User ID here)

tymshare 4/6/72 11:36

-SEND MMS

We were having difficulties using the "TREE" command today.

Mr. Tom Jones, U of Mich, 3492 Waverly Lane, Ann Arbor, Mich., 301-562-8975

D^C (Hold down the control key(CTRL) and then press the letter D and release both keys at the same time)

MEDLINE NEWS BRIEFS

Barbara Greehey
MEDLARS Management Section, NLM

There have been a few recent changes in the Elhill programs which you will notice as slight variations in the operation of MEDLINE. These changes have been reported in the Elhill file of the Tymshare news and are also described in the following:

ERRORS IN PRINT COMMANDS: If an error is made when typing any of the print commands, the program responds with an error message and the print command is deleted. The user can then re-enter his command after the usual readiness cue. When an error was made in the past, MEDLINE would point out the error, then proceed to print out an unwanted variation of the command.

RE-LOGGING: When logging in after an accidental disconnect the program will no longer respond with a multimeaning message. Instead, the readiness cue message will prompt the user with the last search statement number before the disconnect. The DIAGRAM command can be used to verify where one is in an interaction.

DELETING COMMENT & PRINT-OFF LINE: When entering text or an address during a COMMENT or PRINT-OFF LINE command, the whole process will be aborted if the space bar and carriage return are pushed immediately after a USER cue. MEDLINE will respond with the next search statement number.

LARGE TRUNCATIONS OR EXPLOSIONS: The program has been modified so that any truncation or explosion which would yield over 80,000 postings will cause an OVFLOW REC, PARTIALS message to appear. See article by Davis B. McCarn, "Speed of MEDLINE," page 5.

@ SIGN: We would like to keep statistics on the number of individual searches that are being run on MEDLINE. When multiple searches are performed during one connect period, we are requesting MEDLINE users to type an @ sign at the end of each search. When one user completes his search and he is not logging out,

@ SIGN: We would like to keep statistics on the number of individual searches that are being run on MEDLINE. To do this, we are requesting MEDLINE users to type an @ sign at the end of each intellectual search. When one user completes his search and he is not logging out, the @ sign should be entered followed by a carriage return. The next user may then begin his search. When one user has a number of different search requests the @ sign should be used after each completed search. If you login, perform one search, and then logout, type in the @ sign so that the single search will be counted. @ should be typed immediately after a user cue and then followed by a carriage return. MEDLINE will respond with another USER cue and the user may then enter his new search.

ORIENTATION PROGRAMS

DATE	TYPE OF ORIENTATION	PRESENTED AT	PRESENTED BY
2/9/72	MEDLINE	John Crerar Library Chicago, Illinois	Dr. J. Leiter M. Doherty
2/21/72	MEDLARS, MEDLINE	University of Michigan MEDLARS Center, Ann Arbor	L. Hirschfeld
2/4/72	MEDLINE	New York Academy of Med. MEDLARS Center, New York	Adele Lerner
2/7/72	MEDLINE	New York Academy of Med. MEDLARS Center, New York	Adele Lerner
2/25/72	MEDLINE	Stephenville, Texas	Cherry Green
2/ /72	MEDLARS, MEDLINE	Ohio State University Columbus, Ohio	Jody Suleiman
3/1/72	MEDLINE	S. M. U., Science Library Dallas, Texas	Cherry Green

MEDLINE STATISTICS

The following report shows the total number of MEDLINE searches released to users by MEDLARS Centers for November 1971 through March 1972 and the total number of off-line printouts requested by the centers and released by NLM. Statistics for searches released to users are not reported for other MEDLINE user institutions.

The total number of off-line prints distributed from MEDLARS Management Section, NLM, for the November 1971 through March 1972 time period is 1,700 of which the MEDLARS Centers account for 1,165.

CENTER	Nov. '71 Total Rels'd.	Nov. '71 Off-Line	DEC. '71 Total Rels'd.	DEC. '71 Off-Line	JAN. '72 Total Rels'd	JAN. '72 Off-Line	FEB. '72 Total Rels'd.	FEB. '72 Off-Line	MAR. '72 Total Rels'd.	MAR. '72 Off-Line	TOTAL Total Rels'd.	TOTAL Off-Line
ALABAMA	-	1	8	-	19	2	28	-	86	7	141	10
COLORADO	-	-	5	1	2	4	16	6	44	16	67	27
CRERAR	-	-	1	1	-	1	15	4	46	25	62	31
HARVARD	-	-	-	-	-	-	-	-	-	-	-	-
MARML	31	-	26	29	32	42	57	80	158	185	304	380
MICHIGAN	-	-	-	-	7	-	23	6	56	19	86	25
NEW YORK	26	9	22	10	36	22	38	21	81	50	203	112
N.I.H. Library	-	-	3	-	-	-	-	-	34	34	37	34
NLM (including Reference * & MMS)	2	25	11	64	4	28	90	46	692	180	799	343
OHIO	13	-	127	-	143	1	133	-	140	-	556	1
PHILADELPHIA	1	-	4	1	11	1	59	2	165	8	240	13
TEXAS	-	-	-	-	-	-	30	3	185	32	215	35
UCLA	-	-	2	2	9	4	71	23	167	80	249	109
WASHINGTON	6	-	15	6	62	6	115	10	228	23	426	45
TOTAL: *partial statistics	79	79	224	114	325	111	675	201	2082	659	3385	1165

MEDLARS/MEDLINE/AIM-TWX SEARCH STATISTICS FOR MARCH 1972
(2/25-3/30/72)
MEDLARS MANAGEMENT SECTION, NLM

The table below includes only a few items from each Center's monthly report:

Center	Searches Rejected	Current & Back-File Searches Released (Excluding RDS's) MED-LARS	MED-LINE	AIM-TWX	MEDLARS Recurring Demand Searches Released	Citations Retrieved per MEDLARS Search Mo.	Percentage MEDLARS Searches Released-CURRENT FILE only by Calendar Days 0-15 Days	0-20 Days
UNITED STATES								
Alabama	8	93	86	0	12	5.5	88.9	100.0
Colorado	1	76	44	2	28	3.3	79.0	100.0
Crerar	18	79	46	0	8	7.7	13.0	45.5
Harvard	30	87	1	0	14	12.6	12.0	44.0
Michigan	9	78	56	0	50	4.4	24.8	49.2
New York	49	84	81	0	8	7.7	5.4	36.5
NIH	0	82	34	0	88	6.3	78.9	94.7
NLM-MARML	8	163	158	1	39	4.3	71.9	92.7
NLM-MMS	2	21	10	0	8	22.0	90.0	100.
Ohio	17	108	140	0	144	7.4	90.6	100.
Philadelphia	41	21	165	0	17	5.7	0.0	33.3
PMA	1	92	0	0	225	6.3	100.0	----
Texas	65	105	185	0	40	6.0	*100.0	----
UCLA	22	145	167	137	42	9.1	4.5	26.9
Washington	37	105	228	1	7	12.5	71.0	91.0
TOTALS	308	1339	1401	141	730	--	53.2	74.2
FOREIGN								
Australia	1	116	0	0	0	3.8	40.0	63.3
Canada	0	19	0	0	40	14.3	11.1	50.0
England	NA	NA	NA	NA	NA	NA	NA	NA
France(INSERM)	NA	NA	NA	NA	NA	NA	NA	NA
Germany(DIMDI)	1	319	0	0	0	NA	4.0	10.0
Japan(JICST)	NA	NA	NA	NA	NA	NA	NA	NA
Sweden	0	112	0	0	0	6.9	93.0	96.5

*TEXAS 1 - 10 days

EXPLOSIONS INCLUDED IN SUMS for 370 PROCESSING

P. E. Pothier
MEDLARS Management Section, NLM

If you use an exploded term as the first or last element in a sum of M, T, or Z elements, do not skip numbers after an initial or before a terminal explosion. The reason for this restriction is that the 370 program processes explosions in sums by creating a new sum of C elements for the exploded terms and ORing it with the sum of M, T, or Z elements. When it does this, it treats the original sum as if it began with the next higher sequential number or ended with the next lower one. But if there is no next higher or next lower number, then an error condition results.

If you wish to skip numbers in your sums, simply put the explosions in the middle of the sum.

The following chart shows the incorrect and correct positioning of exploded elements in sums for processing on the 370.

INCORRECT		CORRECT		CORRECT	
M1	E	M1	E	M1	
M2	E	M2	E	M4	E
M4		M3		M6	E
M5		M5		M7	E
M6		M9		M8	
M10	E	M10	E	M10	
(M20=SUM M1-M10)					

DEMAND SEARCH PROCESSING ON THE IBM 370 - ERRATUM

On Page 6 of the LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN for February, standard options were given for filling out the Report Generator Form. Please note that columns 7-8 should read F1, not simply 1.

MEDLINE TRAINEES FOR FEBRUARY 28, 1972

The third MEDLINE Training Class was held at the National Library of Medicine on February 28 - March 17, 1972. The following people attended:

Barnes, Mr. Alvin J.	References Services Division, NLM
Cothren, Miss Diane	University of Virginia Medical Library, Charlottesville, Virginia
Divett, Dr. Robert	University of New Mexico School of Medicine Library, Albuquerque
Greenberg, Miss Bette	Yale University Medical Library, New Haven, Connecticut
Howard, Mrs. Ellen	Bowman-Gray School of Medicine Library, Winston-Salem, North Carolina
Johnson, Miss Kathryn S.	University of Texas Medical Library, Galveston, Texas
Jones, Mrs. Esther B.	J. Hillis Miller Health Center Library, University of Florida, Gainesville
Jones, Miss Virginia A.	University of Tennessee Medical Library, Memphis, Tennessee
Kenne, Miss Jackie	University of Kentucky Medical Center Library, Lexington, Kentucky
McKinnin, Mrs. Emma Jean	University of Missouri Medical Library, Columbia, Missouri
Piellucci, Mrs. Connie	Middleton Medical Library, University of Wisconsin, Madison, Wisconsin
Rose, Mrs. Mary	Clendening Medical Library, University of Kansas Medical Center, Kansas City
Wood, Miss M. Sandra	Hershey Medical Center Library, Pennsylvania State University, Hershey, Pennsylvania
Van Berg, Miss Julie	University of Iowa Health Sciences Library, Iowa City, Iowa

UPDATES TO MEDLINE JOURNALS

Please make the following changes in your lists MEDLINE JOURNALS (dated January 17, 1972) and MEDLINE JOURNALS BY SUBJECT (dated January 6, 1972).

MEDLINE JOURNALS

Add

ØOA	Acta Gastroenterol Latinoam
45A	An Acad Bras Cienc
4CY	An Fac Quim Farm (Santiago)
6TH	Arch Biol Med Exp (Santiago)
79Y	Arch Inst Biol Andina
7RD	Arch Latinoam Nutr
8VF	Arq Inst Biol (Sao Paulo)
8WY	Arq Neuropsiquiatr
DOC	Comput Biol Med
FL2	GEN
GOM	Inhaled Part
NGO	Mod Vet Pract
NYL	Neurol Neurocir Psiquiatr
RFX	Rev Biol Trop
RXK	Rev Farm Bioquim Univ Sao Paulo
S&J	Rev Inst Antibiot (Recife)

MEDLINE JOURNALS BY SUBJECT

Add

BIOCHEMISTRY
- RXK Rev Farm Bioquim Univ Sao Paulo

BIOLOGY
- 6TH Arch Biol Med Exp (Santiago)
- 79Y Arch Inst Biol Andina
- 8VF Arq Inst Biol (Sao Paulo)
- DOC Comput Biol Med
- RFX Rev Biol Trop

CHEMISTRY
- 4CY An Fac Quim Farm (Santiago)

DIGESTIVE SYSTEM
- ØOA Acta Gastroenterol Latinoam
- FL2 GEN

ENVIRONMENTAL HEALTH
- GOM Inhaled Part

EXPERIMENTAL MEDICINE
- 6TH Arch Biol Med Exp (Santiago)

GENERAL MEDICINE
DOC Comput Biol Med

NEUROLOGY AND NEUROSURGERY
8WY Arq Neuropsiquiatr
NYL Neurol Neurocir Psiquiatr

NUTRITION
7RD Arch Latinoam Nutr

PHARMACOLOGY
S8J Rev Inst Antibiot (Recife)

PHARMACY
4CY An Fac Quim Farm (Santiago)
RXK Rev Farm Bioquim Univ Sao Paulo

PSYCHIATRY
8WY Arq Neuropsiquiatr
NYL Neurol Neurocir Psiquiatr

RESPIRATORY SYSTEM AND THORACIC DISEASES
GOM Inhaled Part

SCIENCE
45A An Acad Bras Cienc

TECHNOLOGY, MEDICAL
DOC Comput Biol Med

TROPICAL MEDICINE
RFX Rev Biol Trop

VETERINARY MEDICINE
NGO Mod Vet Pract

INDEX TO LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN 1971

The Index to the LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN for 1971 accompanies this issue of the Bulletin.

ANTIPARKINSON DRUGS LISTED IN MeSH

Estela Gonzalez Barry
Medical Subject Headings Section, BSD

Parkinsonism means different things to different people. The term is often used to describe a syndrome of unknown etiology characterized by tremor, loss of posture reflexes and persistent muscular rigidity. The symptoms have been observed to occur in a variety of central nervous disorders involving the basal ganglia and/or structures in the extrapyramidal system. It is different from a drug-induced symptomatic Parkinsonism which may disappear spontaneously or when the causative agent is discontinued.

The older term "shaking palsy (paralysis agitans)" was used by James Parkinson in 1817 when he described the syndrome that now bears his name. Even then, he did not agree with the terminology and wrote: "The term shaking palsy has been vaguely employed by medical writers in general." Fortunately, this term is used infrequently; it is a misnomer since the disease has nothing to do with paralysis. Postencephalitic Parkinsonism likewise has nothing to do with Parkinsonism since it is caused by viral damage to areas of the cortex, brain stem and basal ganglia.

Many pharmacologic techniques have been devised for screening potential anti-Parkinson drugs, e.g., lesions in discrete areas of the central nervous system or by the administration of agents such as NICOTINE (D2, D5), TREMORINE (D5) or *OXOTREMORINE (D2, D5). These special techniques or drugs might induce, in various species, neurologic effects similar to those seen in human Parkinsonism. However, antagonizing these neurologic effects in experimental animals does not guarantee that the activity of the new agent being tested will be an effective anti-Parkinson drug for humans. Before the use of synthetic drugs, the medicinal treatment of the disease was limited to various preparations of belladonna alkaloids. Now synthetic drugs can be designed to provide specific physiologic actions effective against the various symptoms of the disease.

The aim of drug therapy in Parkinsonism is to relieve the progressive rigidity, tremor and disorders of movements seen in these patients.

The following agents, listed in MEDICAL SUBJECT HEADINGS (MeSH), have been used alone or in combination with solanaceous alkaloids [(SCOPOLAMINE D2, D5), BELLADONNA (B6, D5)] in treating Parkinsonism.

*Provisional term in MeSH

1. *ANTIPARKINSON DRUGS (D6)

A. ANALEPTICS (D6)

METHYLPHENIDATE (D6)
PENTYLENETETRAZOLE (D6)

B. ANTIDEPRESSIVE AGENTS (D6)

AMITRIPTYLINE (D6)
IMIPRAMINE (D6)
DESIPRAMINE (D6)
DEXTRO AMPHETAMINE (D6)
MONOAMINE OXIDASE INHIBITORS (D6)
TRANYCLOPROMINE (D6)

C. ANTIHISTAMINICS (D6)

DIPHENHYDRAMINE (D6)
*DOXYLAMINE (D2, D6)
PROMETHAZINE (D6)

D. PARASYMPATHOLYTICS (D5)

BELLADONNA (B6, D2, D5)
ATROPINE (D2, D5)
SCOPOLAMINE (D2, D5)
*BIPERIDIN (D5)
*BENZTROPINE (D2, D5)
CHLORPHENOXAMINE (D5)
ORPHENADRINE (D5)
*PROCYCLIDINE (D5)
TRIHEXYPHENIDYL (D5)

E. TRANQUILIZING AGENTS (D6)

MEPAZINE (D6)

F. MISCELLANEOUS Drugs

DOPA (D2, D10)
*ETHOPROPAZINE (D2, D6)
AMANTADINE (D3)

There is no known specific antiparkinson drug. More agents having this therapeutic application will be added to MeSH as they appear in the literature.

*Provisional term in MeSH

USE OF EBCDIC IBM 2741 TERMINALS THROUGH TYMSHARE

Davis B. McCarn
Associate Director for
Science Communication and
Computer Engineering Services

Special procedures are required to use EBCDIC IBM 2741 terminals through the TYMSHARE Network. First, when using this network only certain nodes of the network can be called; see the Technical Bulletin of March, #35, for a list of appropriate numbers. Second, when logging in you must use a user code ending in 01-49. If you do not have an appropriate code, request one from MEDLARS Management Section. Third, the backspace will not erase a prior character when using the network. To erase a single character, input a cent sign,¢, followed by a question mark, ?, or slash, /.

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 37

MAY 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

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of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN is issued monthly by the Office of the Associate Director for Library Operations.

MEDLINE PUBLICITY

We would like to request that you send us any items concerning MEDLINE published in local or in-house newspapers, pamphlets, etc. We will keep a file of these in MEDLARS Management.

We would also like to learn about the different ways libraries are demonstrating and publicizing MEDLINE so we may pass this information on to other libraries. If you believe that others may benefit from what your library is doing, please let us know. Your information will appear either as a separate article in the Technical Bulletin or as a composite article describing the various ways used to publicize MEDLINE. See the article by Peter Stangl below.

SPREADING THE WORD ABOUT MEDLINE

Peter Stangl, Director
Lane Medical Library, Stanford, California

Until this year, Lane Library had not been involved in any automated bibliographic services. Therefore, we felt that starting on the right foot with our user population was essential. Rather than relying exclusively on brochures and announcements in in-house publications, we felt it was more effective to bring MEDLINE to our users' attention by scheduling demonstrations for them. What we wanted was to show our users accurately what MEDLINE could, and could not do, rather than merely to publicize the existence of the system. Demonstrations seemed the best way. Admittedly, this is a time consuming effort, but we are convinced that it is far more effective than brochures and announcements, which often find their way directly into a wastebasket.

Typically, we schedule demonstrations for Wednesday afternoon (the only afternoon MEDLINE is available on the Pacific Coast) since it is difficult to assemble our users in the morning. One or two departments come for each session; usually the audience consists of faculty, house staff, and post doctoral fellows or graduate students in the department. We generally ask one of the members of the group to suggest a search topic to us so the topic used for the demonstration will be a familiar one. We use two techniques of possible interest to other MEDLINE users which I will try to describe here.

First, our live demonstrations are video-supported. Since it is cumbersome for more than two or three people to group around a terminal and see the output, we use a video camera fairly close to the terminal to record the output, and display its image on a television monitor by closed circuit. The text on the monitor is large enough for a group of twenty to read, and this method does not take anything away from the spontaneity of a live demonstration. Reception of this method has been enthusiastic. The camera and the monitor, and the associated wires and trappings are on semi-permanent loan from the Medical Center's Instructional Media Department. They are old, beatup, and fairly obsolete pieces of equipment, but they are eminently usable for our purposes.

Before we started scheduling demonstrations, caution dictated the decision that we need to provide a back-up system in the event MEDLINE should not be available at the appointed time. Again, with the aid of the Instructional Media Department, which is a fancy name for a combination of services including television production, we came up with a video taped version of a demonstration. What is noteworthy about this is that it was done on a shoestring. A couple of days' worth of planning and a single session with the television people resulted in a demonstration package of approximately half an hour, which can stand entirely by itself. It may be worthwhile to describe briefly the video program.

After the opening Stanford seal, Mr. Paul Hanson, our Reference Librarian in charge of MEDLINE, launches into a brief introduction, logs in and proceeds to retrieve a single article by a given author. Two cameras are used throughout. Mr. Hanson is shown on the screen any time he is explaining something, and while the terminal prints the output, text fills the screen. This was done simply by switching from one camera's view to another's during the recording. After the article is retrieved and shown on the television monitor, there is a programmed halt where Paul states that he will personally take over and give a live explanation of certain principles. Here we turn off the video tape and continue in person. We explain the contents of a MEDLINE record, the searchable data elements in detail, and the uses of the logical AND and OR. After this explanation we resume with the video tape.

Part two of the tape shows Paul retrieving the same article as in part one, but this time by MeSH headings and the use of the logical AND. Here follows another programmed halt where we take over in person.

Our live explanation this time consists of a review of the MeSH tree structure and the Explode capability. Part three of the video portion consists of a sample search. The topic used is "Vision Disorders in Newborn Infants". First we narrow the search down to too few citations, then use the Explode capability to increase retrieval to a large number of citations, then proceed to restrict this retrieval by date and language limitations to a manageable size. The video and live portions of the demonstrations are by-and-large equally divided, this enabled us to come up with a half hour demonstration with only fifteen minutes of video tape. Using the programmed halt also enables us to tailor the explanation to the group we are demonstrating the system to, and, very importantly, it allows us to maintain a certain degree of spontaneity which an entirely video demonstration would not have.

So far we have had to use the tape on only one occasion when we were unable to log in at the time of the demonstration. Reception of the tape was excellent. We have every reason to believe that the hybrid video-live presentation was as successful as any of the live demonstrations we have conducted. For further information about our video tape, if interested, contact Peter Stangl, Director, Lane Medical Library, Stanford University Medical Center, Stanford, California, Zip Code 94305.

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
Barbara Greehey
MEDLARS Management Section, NLM

DEMONSTRATION: If MEDLINE is down and you have a demonstration scheduled you might wish to use the prepared demonstration which has been entered into the TYMSHARE news files. To obtain this demonstration (1) log into TYMSHARE through NLM4 to NLM4E and (2) type COM DEMONSTRATION after you are cued with a dash. Pauses have been built into the search after each USER cue so that you may stop for explanations. To continue printing, type a dash and a carriage return after the USER cue. For those with 30 character per second terminals, we suggest you set your terminals at 10 characters per second for a more readable search. The demonstration runs for approximately 15 minutes at 10 characters per second. Note section below on Escape key.

ESCAPE KEY: When logged into one of the Tymshare news files, a printout may be interrupted by pressing the Escape (ESC) key. (For 2741 terminals, see article appearing on p. 7), You are then cued with a dash and you may type LOG to leave the Tymshare news files or you may access another one of these files. A reminder that there is no interrupt once you are connected do MEDLINE.

@ SYMBOL: Please remember to type the @ symbol at the end of each intellectual search. It should be typed immediately after a USER cue and then followed by a carriage return. MEDLINE will respond with another USER cue and the user may then enter his new search, eraseall or go through the stop or restart procedure.

SENDING MAIL: Please add to article in April Technical Bulletin, "Sending mail to MMS through TYMSHARE." Messages are limited to 240 characters. The system will remind you if you exceed the limit.

VOLUME NUMBERS IN MEDLINE: The pre-processor program for data base generation has been dropping the volume numbers in MEDLINE citations whenever the volume number is preceded by an upper case shift code. The program has been corrected, and the citations already on the file will be corrected when file is completed sometime this Fall.

AIM-TWX

If called upon to give a demonstration during non-MEDLINE hours, remember that AIM-TWX is available from 3:00 p.m.-6:30 p.m. (Eastern Time), and utilizes the same programs as MEDLINE. The difference between AIM-TWX and MEDLINE is the size of the data base and the years covered. AIM-TWX contains 128 journal titles 1966 to date while MEDLINE contains 1143 journal titles 1969 to date.

MEDLINE TRAINEES FOR APRIL 10, 1972

The fifth NLM MEDLINE Training Class was held April 10-28, 1972. The following people attended:

Blanton, Mr. Michael	Sparks Regional Med. Ctr., Ft. Smith, AK
Feng, Mr. Cyril	University of Miami, Miami, FL
Foreman, Ms. Gertrude	University of Minnesota, Minneapolis, MN
Grainger, Ms. Shirley	Dartmouth College Biomedical Lib., Hanover, NH
Griffitts, Ms. Donna	Joint Med. Lib., Office of the Surgeon Gen., Department of the Army, Washington, D. C.
Haabala, Ms. Sylvia	Mayo Clinic, Rochester, MN
Hawke, Ms. Laura	University of Michigan, Ann Arbor, MI
Idzikowski, Ms. Elaine	Michigan State Univ., East Lansing, MI
Raquet, Ms. Robin	University of Texas, San Antonio, TX
Spitzen, Ms. Rosemary	Stitt Library, National Naval Medical Center, Bethesda, MD
Van Camp, Ms. Ann	Indiana University Medical Center, Indianapolis, IN
Wisniewski, Ms. Claudia	Central Office, Veterans Admin., Wash., D. C.
Young, Ms. Penny	University of Cincinnati, Cincinnati, OH
Eastwood, Dr. Douglas (Auditor)	Lister Hill National Center for Biomedical Communications, NLM
Titley, Ms. Joan (Auditor)	University of Louisville, Louisville, KY

ORIENTATION PROGRAMS

DATE	TYPE OF ORIENTATION	PRESENTED AT	PRESENTED BY
1/19/72	MEDLINE	University of Colorado Medical Center, Denver, Colorado	Dr. Rogers M. Peterson
2/15/72- 2/25/72	MEDLINE (9 sessions)	University of Colorado Medical Center, Denver, Colorado	Dr. Rogers S. Davis
2/29/72	MEDLINE	University of Colorado Boulder, Colorado	Dr. Rogers
3/22/72	MEDLINE	University of Michigan Medical Center, Ann Arbor	L. Hirschfeld
3/9/72	MEDLARS, MEDLINE	Graduate Center, City Univ., New York	R. Marcolina
3/28/72	MEDLARS, MEDLINE	Pratt Institute School of Library & Information Science, Brooklyn, New York	R. Marcolina
3/14/72	MEDLARS, MEDLINE	Long Beach Memorial Hospital Long Beach, California	J. Boorkman
4/72	MEDLINE (14 sessions)	University of Colorado Medical Center, Denver, Colorado	Dr. Rogers
4/21/72	MEDLARS, MEDLINE	John Crerar Library, Chicago, Illinois	M. Doherty
4/27/72- 4/28/72	MEDLARS, MEDLINE	Iowa State University, Ames, Iowa	M. Doherty
4/72	MEDLARS, MEDLINE	Francis A. Countway Library Boston, Massachusetts	F. Solomon
4/72	MEDLINE (6 sessions)	University of Michigan MEDLARS Center, Ann Arbor	L. Hirschfeld
4/17/72	AIM-TWX	Case Western Reserve University, Medical Library, Cleveland, Ohio	J. Suleiman
4/20/72	MEDLARS, MEDLINE	Ohio State University, MEDLARS Center, Columbus, Ohio	J. Suleiman

ORIENTATION PROGRAMS

DATE	TYPE OF ORIENTATION	PRESENTED AT	PRESENTED BY
4/6/72	MEDLINE	A.S.I.S. - Los Angeles Chapter, Santa Monica, California	Angie Durso
4/17/72-4/19/72	MEDLINE	Association of Western Hospitals Convention, Anaheim, California	Angie Durso JoAnne Boorkman
4/20/72	MEDLINE	USC School of Library Science, Los Angeles, California	Angie Durso JoAnne Boorkman
4/22/72-4/25/72	MEDLINE	Southern California Dental Assoc. Convention, Anaheim, California	Angie Durso JoAnne Boorkman
4/26/72	MEDLARS, MEDLINE	USC School of Library Science Los Angeles, California	Angie Durso JoAnne Boorkman

MEDLINE TRAINEES AT U.C.L.A. FOR MARCH 6, 1972

The first MEDLINE Training Class at the University of California, Los Angeles was given by Angie Durso, Head, Information and Bibliographic Services Section, PSRML, Biomedical Library, on March 6-23, 1972. The following people attended:

Bell, Miss Elizabeth	Medical Library, University of California, San Francisco, California
Connolly, Mrs. Betty	Veterans Administration Hospital, Sepulveda, California
Enari, Mrs. Helena	Medical Sciences Library, University of California, Irvine, California
Johnston, Mr. Lee	Vernier Radcliffe Memorial Library, Loma Linda University, Loma Linda, Calif.
Marquez, Mrs. Susan	Norris Medical Library, Univ. of Southern California, Los Angeles, California
Osborne, Mrs. Maurica	Life & Health Sciences Library, Univ. of Nevada, Reno, Nevada
Rosenberg, Miss Annelie	Biomedical Library, University of Calif., Los Angeles, California

MEDLINE AND THE IBM 2741

Barbara Greehey
MEDLARS Management Section, NLM

This article was written for those users with the IBM 2741 or 2741-type terminals (NOVAR, DATEL, DURA, etc.) and enumerates characteristics unique to these terminal types.

The IBM 2741 has either a Correspondence code, EBCD code or BCD code. To determine which type of terminal you have, check the character over the numeral 2.

	Lower case	Upper case
Correspondence	2	@
EBCD	2	¢
BCD	2	•

The BCD code terminal cannot access MEDLINE through TYMSHARE. The Correspondence and EBCD code terminals can be used with only some of the TYMSHARE telephone numbers. The March issue of the Technical Bulletin lists the appropriate numbers for each of these terminals. However, any of the above terminals can be used when dialing MEDLINE directly.

The login procedure using the 2741-type terminal is slightly different from other types of terminals. Also, when communicating with MEDLINE and TYMSHARE News files certain keys are used which are not available on the 2741's keyboard. Thus, conversion characters have been substituted which will perform the same operation.

ACCESSING MEDLINE

Direct dial

The keyboard unlocks when you have contacted the NLM computer. When you hear the click, type in your login information.

Users with the 2741 type of terminal have been given two ID's. When dialing directly, type your ID ending in 51 or 52, e.g. MEDXXX51.

TYMSHARE

Press the return key after dialing your TYMSHARE number. Your ID ending in 01 or 02, e.g., MEDXXX01, is used when accessing MEDLINE through TYMSHARE.

When accessing the TYMSHARE News files, either of your IDs may be typed after PROJ CODE. When leaving the TYMSHARE News files after typing LOG you are given your connect and computer time. You

may then turn the terminal off or if you wish to access MEDLINE, press the return key and go through the usual login procedure after you are cued with PLEASE LOG IN. (See March 1972 issue of Technical Bulletin for TYMSHARE procedures.)

CORRECTING ERRORS

Direct Dial

For each character to be deleted:
Press the backspace

Entire Line:
Dollar sign ($) and return key deletes the entire line

* TYMSHARE

For each character to be deleted:

Correspondence terminals	EBCD terminals	
Press:	Press:	Press:
(1) ±	(1) ¢ or	(1) ¢
(2) /	(2) /	(2) .

Entire Line:
Dollar sign ($) and return key deletes the entire line

*ESCAPE OR INTERRUPT

(NOTE: Can be used only when using the TYMSHARE News files and not when communicating with MEDLINE.)

Correspondence terminals	EBCD terminals
Press:	Press:
(1) Attention (ATTN) key	(1) Attention (ATTN) key
(2) ±	(2) ¢
(3) 3	(3) 3
(4) Return key	(4) Return key

You are then cued with a dash and you may type LOG to leave the TYMSHARE News files or you may access another one of these files.

STOP

When connected to MEDLINE and going through the stop procedure, turn the terminal off after the program types GOOD-BYE.

---

*For each character to be corrected or to escape, press the keys in the order they appear following the numbers in parens.

MEDLARS/MEDLINE/AIM-TWX SEARCH STATISTICS FOR APRIL
(3/31 - 4/27/72)
MEDLARS Management Section, NLM

The table below includes only a few items from each Center's monthly report:

Center	MEDLARS** Searches Rejected	Current & Back-File Searches Released (Excluding RDS's) MED-LARS	MED-LINE	AIM-TWX	MEDLARS Recurring Demand Searches Released	Citations Retrieved per MEDLARS Search No.	Percentage MEDLARS Searches Released-CURRENT FILE only by Calendar Days 0-15 Days	0-20 Days
NITED STATES								
Alabama	3	48	64	0	12	5.9	89.5	100.0
Colorado	2	45	101	0	14	4.6	100.0	---
Crerar	7	27	48	0	3	4.4	43.5	69.6
Harvard	21	41	0	0	14	11.3	15.0	30.0
Michigan	4	60	33	0	141	6.5	28.1	63.2
New York	52	36	88	0	9	6.5	2.9	31.4
NIH	0	34	70	0	45	5.1	53.9	69.3
NLM ARML	10	73*	93	0	20	7.2	53.4	77.5
NLM EMS	6	22	6	0	6	27.0	100.0	-----
Ohio	44	64	189	0	143	8.5	89.7	100.0
Philadelphia	47	19	181	0	16	4.1	5.5	33.3
PMA	2	45	0	0	229	11.8	100.0	----
Texas	63	49	153	2	41	6.4	100.0	----
UCLA	8	69	175	50	43	6.1	6.4	23.0
Washington	44	45	193	1	5	8.5	90.0	100.0
TOTALS	313	677	1394	53	741		58.2	73.1
FOREIGN								
Australia	1	127	--	--	52	6.3	56.6	79.7
Canada	0	15	--	--	43	15.6	----	18.2
England	0	NA	--	--	98	NA	NA	NA
France(INSERM)	NA	NA	--	--	NA	NA	NA	NA
Germany(DIMDI)	NA	392	--	--	1935	NA	2.0	3.0
Japan(JICST)	NA	NA	--	--	NA	NA	NA	NA
Sweden	0	113	--	--	462	5.0	75.2	83.2

* Includes one SUNY search.

** Although rejected as MEDLARS searches, these requests are often filled by MEDLINE or AIM-TWX searches.

MEDLINE JOURNALS

A revised list of MEDLINE JOURNALS and MEDLINE JOURNALS BY SUBJECT incorporating all changes made through April, 1972, accompanies this issue of the Bulletin.

Please add the following journals to these lists:

QMH Radiat Data Rep
Subjects: Environmental Health, Public Health, Radiology and Nuclear Medicine

UCT Scand J Gastroenterology Suppl
Subject: Digestive System

UPDATES TO MESH MATERIALS

TREE STRUCTURES 1972 #2

Page 180 Change: IPRINDOLE D6.54.26 to IPRINDOLE D6.54.25

ALPHABETIC LIST OF PROVISIONAL HEADINGS WITH DEFINITIONS April 1, 1972

Page 28 Col. 1 CI-581 change indexing instructions to:
INDEX UNDER: ANESTHETICS
CYCLOHEXANE

Col. 1 CIRCULAR DICHROISM change definition to:
a phenomenon in which right-circularly polarized light is absorbed to a different extent than left-circularly polarized light. Used in determining variations in molecular structure.

INDEX UNDER: SPECTRUM ANALYSIS

Page 37 Col. 2 DIET, CARIOGENIC change (D5)to (E5)

Page 106 Col. 1 REFRACTORY PERIOD, PSYCHOLOGIC change definition to:
a delayed response interval occurring when two stimuli are presented in close succession.

INDEX UNDER: REACTION TIME

Page 110 Col. 2 SEPTAL NUCLEI add: A8.30.13.1

Page 327 of the April 1972 MeSH (ALPHABETIC LIST) the main heading WRIST INJURIES has been omitted. Please insert
WRIST INJURIES C14.88.8.1

Scott

NATIONAL LIBRARY OF MEDICINE

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STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
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@ SYMBOL

Please remember to use the @ symbol after each completed search. We are trying to obtain an accurate count of how many searches are being entered without asking users to submit statistics.

Each completed subject request should be viewed as one search. You might try a number of different strategies to answer one question but this should be counted as one search. It is preferable to use @ immediately after each completed search; but if forgotten until the end of a connect session, type @ and a carriage return (wait for USER cue each time) for every completed search. (See May Technical Bulletin, p. 4, for further instructions).

IBM 370/155 PERFORMANCE

Barbara Sternick
Office of Computer and
Engineering Services

In December 1971, the National Library of Medicine replaced its IBM 360/50 computer and direct access storage devices (2314's) with an IBM 370/155 and faster and larger direct access storage devices (3330's). The primary purpose for upgrading was to more adequately support the NLM's on-line bibliographic retrieval system, MEDLINE. The new computer and discs were some of the first to be delivered by the IBM Corporation after announcing the new product lines.

Though it is not uncommon to experience a few failures with new hardware or to make software adjustments shortly after installation, the NLM computer system has continuously experienced failures. These failures reached a high proportion in May 1972 with a total of 15 core memory and 11 disc malfunctionings. If no more than 3 disc drives were down, and these drives were allocated to MEDLINE, short periods of service disruptions were required to reassign the discs. If more than 3 drives were down (infrequent occurrences), service was disrupted until IBM made the necessary repairs.

Core failures, on the other hand, caused major disruptions in service because the computer could not recover from catastrophic errors (there is circuitry built in enabling the computer to recover from a single error). These failures can be thought of as resulting from conditions or states which cannot be corrected by applying predetermined rules. In each case of catastrophic failure, NLM has had to call for an IBM engineer to correct the problem; locating the engineer, his traveling to NLM, and fixing the computer takes at least an hour. Finally, on May 31 and June 1, 1972, NLM turned over the computer system to IBM to perform exhaustive maintenance on the equipment and it is hoped that with preventive maintenance increased reliability will be realized.

PERFORMANCE OF MEDLINE

Davis B. McCarn, Associate Director
Science Communications and
Computer Engineering Services

Early in the development of the MEDLINE service, a simple analytic model of the proposed service was developed. This model was based on the well-known mathematical model of the single-server queue with random arrivals and an exponentially distributed service time. This model fitted the experience with AIM-TWX and has been found to fit many communications systems. The model describes mathematically situations such as the check-out counter in a grocery store, where customers arrive for service and get into a line (the queue). The clerk handles each customer on a first-come-first-serve basis. The time per customer varies depending on the amount of groceries, the amount of fumbling, check preparation, etc. The computer in MEDLINE functions in this same manner, and it was originally anticipated, based on the AIM-TWX experience, that each user would submit a request or input every 2 minutes, each request would take 17.5 disk accesses and 1.75 seconds of processing time on the IBM 370/155 computer or 3.6 seconds on the IBM 360/50 computer. Based on these values, performance curves relating average response time to average numbers of users were developed, Figure 1.

These curves are noteworthy for one salient characteristic: they have very sharp knees, that is, performance is very good up to a point and then it gets very bad very fast. For the IBM 360/50, this was expected at between 20 and 25 simultaneous users; on the IBM 370/155, between 40 and 45 simultaneous users. These knees occur for the same reason they do in grocery stores; i.e., if customers arrive at a rate faster than the clerk can check them out, lines begin to get long.

Actual experience with MEDLINE has not fitted these original projections. Specifically, user requests have been arriving at a rate equivalent to one every 45 seconds, or 2½ times the rate anticipated based on the AIM-TWX experience. This increased rate can be attributed to two factors: first, the rapid response rate of MEDLINE and the fact that the majority of present users are using terminals which operate at 30 characters per second instead of 10 characters per second as had been the case on AIM-TWX; second, the average number of disk accesses is double the prior experience, 35 per input. The latter increase reflects an increase in search complexity. These changes in user behavior probably mean that the IBM 370/155 will perform in a manner midway between that previously predicted for the IBM 360/50 and that predicted for the 370/155. Efforts are underway to improve this performance.

Actual performance measurement is, of course, necessary to check the validity of any such model. Figure 2 shows the actual distribution of simultaneous users on the system on Wednesday, May 10, 1972, Wednesday being the day when MEDLINE is operational from 10:00 a.m.-9:00 p.m. The average number of simultaneous users over the whole day was 12.4; the average over the normal service day, 10:00 a.m.-4:00 p.m. was 14.2; and the average during the extended hours 4:00 p.m.-9:00 p.m. was 10.4.

The following table shows the distribution of response times for the same day. The average response time was 2.81 seconds for the over 7000 user interactions on this day.

TABLE I
MEDLINE RESPONSE TIME
(May 10, 1972)

Time Interval (Seconds)	Per Cent of Responses
0 - 5	93.9
6 - 10	4.3
11 - 15	1.0
16 - 20	.3
Greater	.5

Average Response 2.81 seconds

Figure 3 shows the response time curve for the system which fits this actual performance.

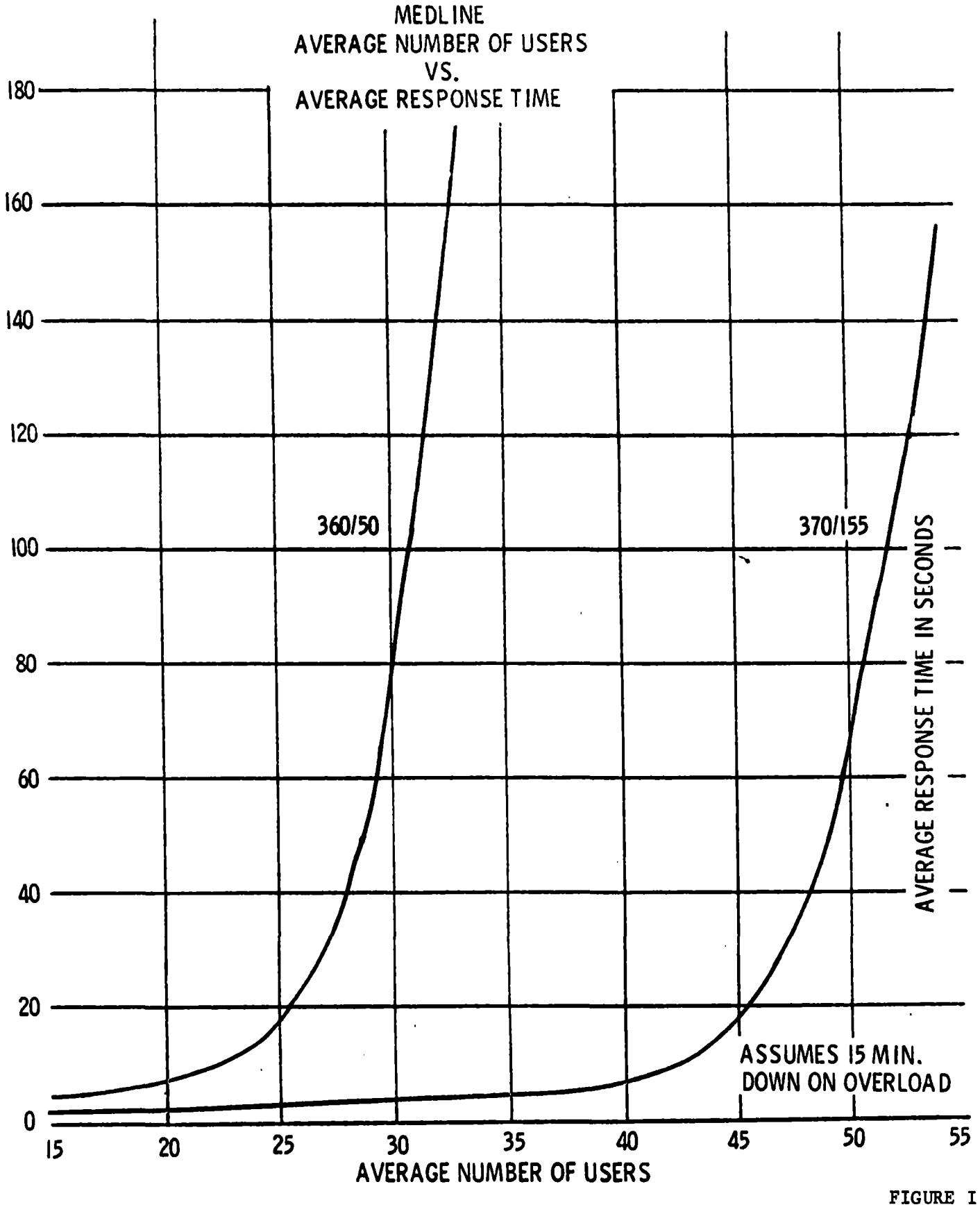
MEDLINE
AVERAGE NUMBER OF USERS
VS.
AVERAGE RESPONSE TIME
180
160
140
120
100
80
60
40
20
0
360/50
370/155
AVERAGE RESPONSE TIME IN SECONDS
ASSUMES 15 MIN.
DOWN ON OVERLOAD
15
20
25
30
35
40
45
50
55
AVERAGE NUMBER OF USERS

FIGURE I

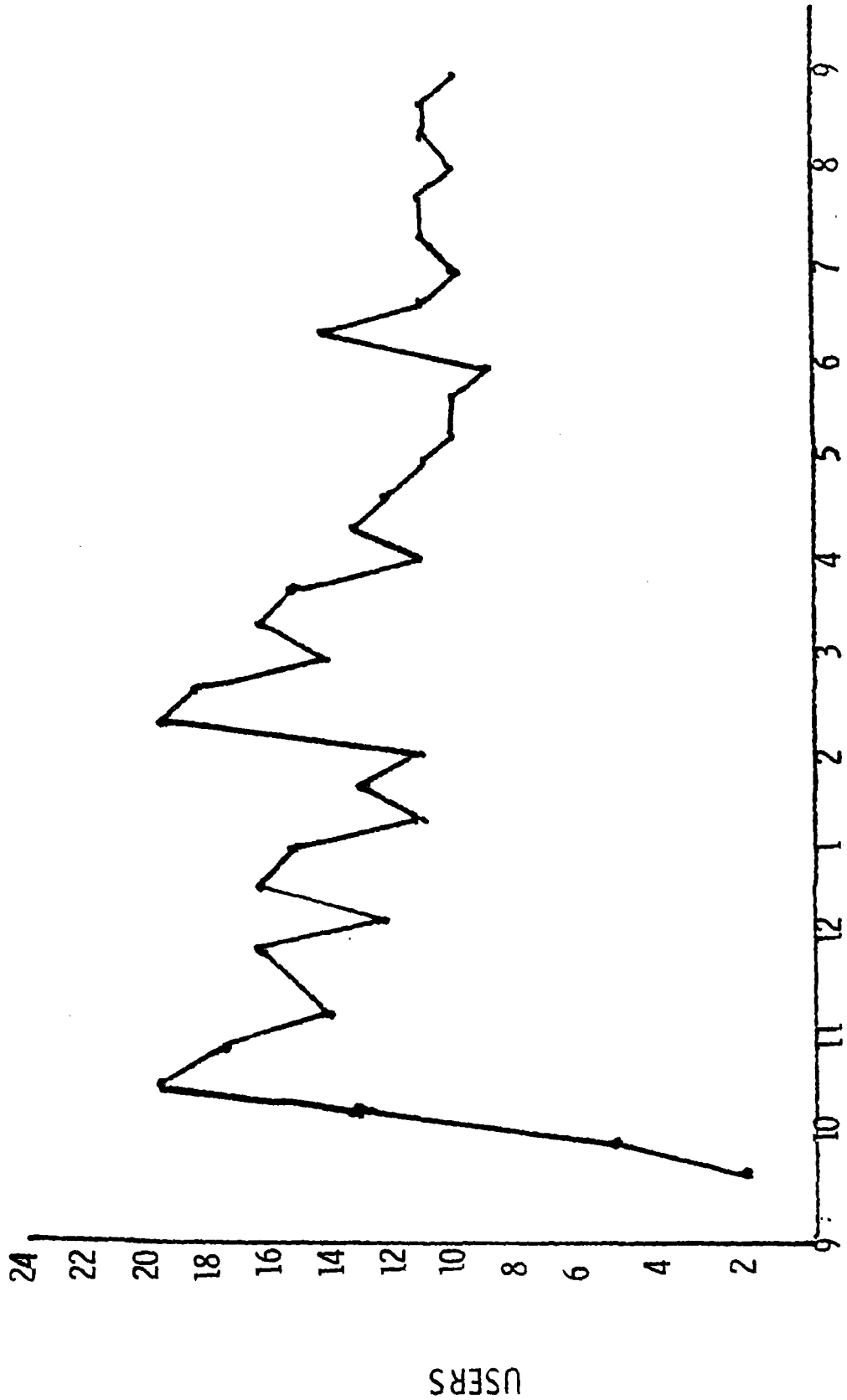
SIMULTANEOUS USERS
MAY 10, 1972
TIME
USERS
24
22
20
18
16
14
12
10
8
6
4
2
9
10
11
12
1
2
3
4
5
6
7
8
9

FIGURE II

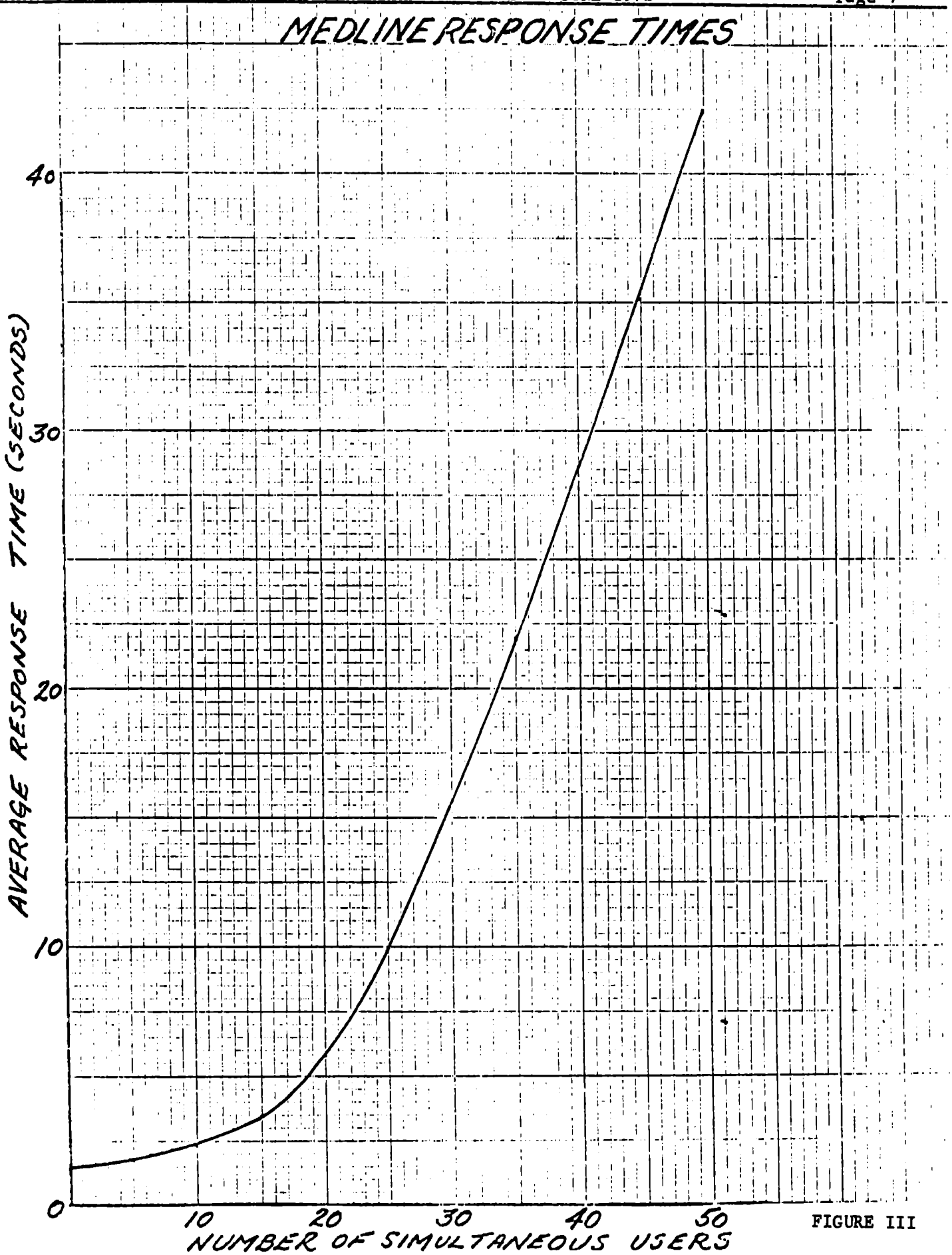
MEDLINE RESPONSE TIMES
AVERAGE RESPONSE TIME (SECONDS)
0
10
20
30
40
10
20
30
40
50
NUMBER OF SIMULTANEOUS USERS

FIGURE III

MEDLINE COMMUNICATIONS NETWORK

BACKGROUND

In late February 1971, when a decision was made to implement the ELHILL bibliographic information retrieval programs on the National Library of Medicine's computer, the Lister Hill Center staff, with the assistance of the National Bureau of Standards, began an investigation of possible backbone communication networks which might offer the remote users of the NLM system an opportunity to lower their individual communications costs. Based on the experience of the AIM-TWX pilot project, there was a concern that unless the communications costs of the users could be reduced, the usage of any centralized retrieval system would be severely limited.

As a result of this investigation and a subsequent request for proposals, the NLM has negotiated contracts with the Western Union Corporation and TYMSHARE Corporation for ADP/Telecommunications services which will constitute a backbone communications network for MEDLINE users.

The NLM implemented a two-phased approach toward development of this network.

THE PHASE I NETWORK

The Phase I network which went into operation in mid-December 1971 consisted mainly of Western Union Datacom service supplemented by leased phone lines from the American Telephone and Telegraph Company. The initial network provided local telephone access to the NLM computer for all Regional Medical Libraries and MEDLARS Centers. For these users a 300-Baud channel was provided in each city in order to permit them to use their 30-character per second terminals. Other MEDLINE users with teletype compatible terminals (i.e., 10-character per second ASCII) were able to access the NLM computer by calling any one of the following cities: Albany, New York; Cincinnati, Ohio; Atlanta, Georgia; Denver, Colorado; Dallas, Texas; Sacramento, California; or Bethesda, Maryland. TWX terminals with an Alternate Use Arrangement are also able to access the network through the above cities. Sacramento and Cincinnati each had one 300-Baud channel available for non-RML and non-MEDLARS Centers users. Users with IBM 2741 compatible terminals had to access the NLM computer by placing a long distance call to Bethesda.

PHASE II NETWORK

The second phase of the MEDLINE network - which went into operation in February 1972 - consists primarily of a backbone network supplied by TYMSHARE Corporation and supplemented by Western Union Datacom and A T & T leased lines. The Western Union and A T & T segments of the Phase I network were retained to supplement the geographic coverage of the TYMSHARE network and provide a backup in the event of its failure.

PHASE II NETWORK (cont.)

User access to the TYMSHARE segment of the network is possible through each of the following cities: Seattle, Washington; Oakland, San Francisco, Los Altos, Palo Alto, Cupertino, Oxnard, Inglewood, Newport Beach, and San Diego, California; Dallas and Houston, Texas; Chicago, Illinois; Mishiwaka, Indiana; Jackson and Livonia, Michigan; Syracuse, Buffalo, Rochester, New York City, New York; Boston, Massachusetts; Hartford and Darien, Connecticut; Philadelphia, Pennsylvania; Englewood Cliffs, New Jersey; and Arlington, Virginia. A limited amount of local access to the TYMSHARE network is also available in Portland, Oregon; St. Louis, Missouri; Cleveland, Ohio; Sacramento, California; and Milwaukee, Wisconsin.

The TYMSHARE segment of the network supports the following types of terminals: Teletype (TTY) and Teletype-compatible terminals (10, 15, 30-characters per second), IBM 2741 (EBCDIC or Correspondence code - telephone numbers differ for these two codes) terminals, and any other terminals compatible with these types.

One advantage of the TYMSHARE segment of the MEDLINE network is that users will be able to access other computers on the network by dialing the same phone number as that used for MEDLINE, and, in fact, the AIM-TWX service was placed on the network in April of this year.

Since the TYMSHARE network has demonstrated its reliability, duplicating Western Union cities have now been dropped, i.e., Dallas, Sacramento, and Albany. The NLM may change other nodes in the network where usage is low or if economy so dictates.

DEMAND SEARCH PROCESSING ON THE IBM 370
ERRATA AND CHANGES

The elements cited as K and P in the LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN for February are reversed. P is the SIPP (Search Input Processing Program) element symbol for exploded T, and K is the element symbol for exploded Z.

Unfortunately, the distinction between P and K is academic, since the 370 programs at present, like the 7094 programs, will not accept either exploded T or exploded Z; they are treated as C elements, and both IM and NIM terms are retrieved.

The AND NOT (*-) strategy is not working properly in the 370 programs. Whenever the negated element is a sum containing exploded and unexploded elements, part of the negation is properly treated as an AND NOT, and the other part is treated positively as an OR. Searchers are requested to flag searches with AND NOT strategies so they can be processed on the 7094. The retrieval from searches already submitted with the AND NOT strategy should be examined carefully.

It is no longer necessary to flag searches containing an F1 for Review. The preprocessor program has been modified so that F1 is automatically converted to Z99. Z99, of course, may no longer be used as a search element.

CANADIAN MEDLARS SERVICE

Ann Nevill
Canadian MEDLARS Center

At the annual meeting of the Canadian Library Association in Hamilton, Ontario, June 1970, the National Librarian of Canada, Dr. Guy Sylvestre, announced that the National Science Library had been given the mandate to establish the Canadian MEDLARS Centre. An agreement between the U. S. National Library of Medicine (NLM) and the Canadian National Science Library (NSL) was accordingly signed in August, 1970, and the Canadian MEDLARS Service became a part of the NSL's Health Sciences Resource Centre.

MEDLARS Search requests are formulated and keypunched at the NSL in Ottawa and then sent by airmail to be processed in the United States. Printouts are returned to Ottawa either by airmail or REA express. Turnaround time is usually about three weeks, a significant portion of which is delay in Canadian Customs. To begin with, searches were processed at Ohio State University in Columbus, and since February 1971 they have been run at the Common Research Computer Facility in Houston, Texas.

Canadian users have been alerted to MEDLARS services in a number of Canadian publications. In addition, in 1970-71 MEDLARS seminars were held in various parts of Canada using the slides produced by NLM. Visits were made to many medical schools, including Memorial University in Newfoundland, Dalhousie (N.S.), Laval and McGill (P.Q.), University of Ottawa, Queen's University, University of Toronto, and University of Western Ontario (Ont.), University of Manitoba, University of Saskatchewan in Saskatoon, University of Calgary, University of Alberta in Edmonton, and University of British Columbia.

The Tape Services Branch of the NSL conducts monthly seminars for librarians and other users on the computerized data bases offered by the Library. Thus, a network of search editors has been established across the country, and these search editors have been made aware of the availability of MEDLARS services.

From August 1970 through February 1971 MEDLARS services were offered free of charge. During this period only retrospective searches were processed, and requests built up from 28 in Aug. - Sept. to 151 in February. Throughout this period search requests averaged 13 per week.

In March 1971 a scale of charges for searches was drawn up. This brought MEDLARS in line with the other data bases being offered by the Library. In order to further integrate the MEDLARS service with the other tapes, it was moved administratively from the Health Sciences Resource Centre to Tape Services. Charges were set at $30.00 per demand search (back to Jan. 1969), $30.00 per back file search (Jan. 1964 - Dec. 1968), and $60.00 per year for MEDLARS current awareness service. Individual descriptions of the service were also sent at this time to those medically - and biologically - oriented scientists already subscribing to NSL tape services who might be interested in adding or changing to the MEDLARS current awareness service.

Charging for MEDLARS has given rise to several problems, some anticipated and others not. Librarians in the medical schools and large hospitals were informed that charges would be instigated about six weeks beforehand. In retrospect, giving this much warning was probably a mistake. The Centre was deluged by requests from users anxious to get their searches done for nothing. In consequence, requests were often ill-conceived and hurriedly prepared. Much time was spent in telephoning these users in attempts to clarify their requests.

Payment in advance is not insisted upon. After the search is formulated, billing details are sent to Financial Services of the National Research Council, who invoices the user. When charging was introduced it was necessary during the first few weeks to call most requesters to assure that they were aware of the fee. The scale of charges has now been included on the request form but many of the original forms which make no mention of charges are still around. In the few instances where fee collection has been difficult and the searcher has had to make a follow-up call, the reason given for delay in payment has been difficulty in obtaining grant money rather than dissatisfaction with results.

When charges are made, the searcher cannot be as autocratic as when searches are free. Gentle attempts may be made to dissuade the user from requesting what is easily obtained by scanning the printed Index Medicus, but if he absolutely insists on spending his hard-won grant money there is little the searcher can do but what he asks. The same situation may arise with requests for demand and back-file searches to be formulated at the same time. If the user insists, it is done, even though it is more efficient to see the results of the demand formulation before doing the back-file search.

The number of retrospective searches requested during the 7 months they were free and those received during the first 12 months of charging have been compared. During the free period an average of 13 requests were received per week, while this number decreased to 4 during the first year of paid operations.

Evaluation forms were sent out with each MEDLARS printout. Of those sent out during the free period, 35% were returned. Relevance reported ranged from 2% to 100%, with an average of 64.1%. During the 12 months of paid service, 16% of the evaluation forms were returned, with relevance ranging from 3% to 100%, averaging 66.7%. Recall is a more difficult figure for the user to estimate, but it was judged as an average of 90.2% for the free period and 82.2% for the paid period.

When the MEDLARS current awareness service was introduced in March 1971, notifications were sent to medically or biologically oriented subscribers to other data bases, but they aroused very little response. The ISI (Institute for Scientific Information) tapes cover a broad range of scientific subject areas, and include about one-third of the journals indexed in Index Medicus, representing the core literature in biomedicine. Input for these weekly tapes comprises author(s), author address, title, source, language, and bibliographic citations. Since this input can be accomplished with less delay than indexing with a controlled vocabulary, references will appear sooner on these tapes than

in MEDLARS. In addition, the author address enables the user to write for reprints. These are the two factors cited most frequently as reasons for preferring ISI to MEDLARS. In a current awareness service the user is apparently more concerned with currency than in-depth coverage. By the end of February 1972, the MEDLARS current awareness service had been available for one year. Of the 95 medical and 11 psychological profiles in the CAN/SDI system at that time, only 40 were running on MEDLARS.

The Canadian MEDLARS Service has now been operating for 20 months. Response has, on the whole, been disappointing. Several factors may account for this. The experimental period during which searches were offered free of charge was brief (7 months), and although attempts have been made to publicize the service, Canada is a large country, and many potential users have probably not been alerted.

Another factor is that the introduction of charges has coincided with a general decrease in research funding throughout the country. Graduate students made use of the service while it was free, but there have been very few student requests since charging began. The current rate of four requests per week has been fairly stable for several months and it is doubtful whether it will greatly increase in the future, under the present circumstances.

MEDLINE TRAINEES AT UCLA, MAY 8, 1972

University of California Biomedical Library, Los Angeles held its second MEDLINE Training class May 8 - 23, 1972. The following people attended:

Mary Elsie Caruso	Letterman General Hospital Medical Library San Francisco, California
Fred Heidenreich	University of Arizona Medical Center Library Tucson, Arizona
Lydia Momotuk	University of California The Library San Francisco, California
Faith Murphy	University of California, San Diego Biomedical Library La Jolla, California
Betty Robinson	University of California, Davis Health Sciences Library Davis, California
Mary Beth Wolfe	University of Southern California Norris Medical Library Los Angeles, California

MEDLINE TRAINEES AT NLM, MAY 22, 1972

The sixth NLM MEDLINE Training Class was held May 22 - June 9, 1972. The following people attended:

Mary Calkins	Environmental Protection Agency National Environmental Research Center Cincinnati, Ohio
Ernestine Gendleman	Naval Medical Research Institute Library Bethesda, Maryland
Jeanne Holcomb	Veterans Administration Center Medical Library Wood, Wisconsin
Lydia Holian	Cleveland Health Sciences Library Cleveland, Ohio
Jean Kennedy	University of Maryland Health Sciences Library Baltimore, Maryland
Robbie Kolman	University of Connecticut Health Center Library Hartford, Connecticut
John Lloyd	U. S. Government Washington, D.C.
Doris Lowe	Cornell University Medical College Library New York, New York
Carolyn Reid	University of Missouri, Kansas City Kansas City Medical Library Kansas City, Missouri
Heather Rosenwinkel	University of Oregon Medical School Library Portland, Oregon
Marilyn Sullivan	Medical College of Wisconsin Library Milwaukee, Wisconsin
Anne Swedenberg	University of Louisville Health Sciences Library Louisville, Kentucky

Patricia Yenney — Alaska Health Sciences Information Center, Anchorage, Alaska

Margaret Young — Tufts University, Medical Dental Library, Boston, Massachusetts

UPDATES TO MEDLINE JOURNALS

Please add the following journals to your lists: MEDLINE JOURNALS and MEDLINE JOURNALS BY SUBJECT (both dated April 1, 1972).

4CY An Fac Quim Farm (Santiago)
Subjects: Chemistry, Pharmacy

CMW Cancer Chemother Rep Suppl
Subjects: Neoplasms, Pharmacology

FQF Ginecol Obstet (Lima)
Subject: Obstetrics and Gynecology

G2J Health Serv Rep
Subject: Public Health

IAZ J Gynecol Obstet Biol Reprod (Paris)
Subjects: Obstetrics and Gynecology, Reproduction

KWE Klin Paediatr
Subject: Pediatrics

M58 Med Microbiol Immunol (Berl)
Subjects: Microbiology, Immunology

UD1 Scand J Rheumatol
Subject: Rheumatism

Please delete the following journal from both lists.

A6W Biowissenschaften
Subjects: Biology, General Medicine

PROCEDURE USED TO ESTIMATE TOTAL MEDLINE CONNECT TIMES

Davis B. McCarn, Associate Director
Science Communications and
Computer Engineering Services

There has been substantial difficulty in collecting connect times on the MEDLINE system. This difficulty has arisen from the fact that users can be disconnected by the communication system without any indication to the computer that this has happened. If such a user then logs into MEDLINE again, the system knows he has done this but it does not know how long he was off. The accounting data summarizing terminal connect time therefore only reflects time covered by the last LOGIN to a legitimate "GOOD-BYE" message, the system logoff.

In order to estimate the actual connect time, a procedure has been developed which depends on the total CPU time used for a given day. A detailed analysis of the use of MEDLINE was conducted for three days. The results are shown in the following table:

Day	ELHILL CPU TIME (Minutes)	Service Time (Hours)	Aver. No. of Users	CPU Min./ Connect Hr.
May 10	31.65	11	12.4	.2320
May 23	16.13	4	14.5	.2474
June 1	28.42	7	14.2	.2482

Based on these figures, the average CPU time per connect hour is .2425 minutes or 14.6 seconds. The range is within 5% of this value.

To derive daily and monthly connect times, an entire file of information on CPU times and operating times was input to a TYMSHARE file. In a few cases where ELHILL CPU time was unavailable, a factor was applied to the CPU time for the message control program to provide an estimate. The factor derived above was then applied to estimate the total connect time for the day. This connect time was then divided by the service time to derive average number of users for the day.

These estimates are probably high for some days. In particular, on the days analyzed, the system had incorporated two corrections: first, a limit had been imposed on the size of an explosion allowed by the system; second, the handling of date ranging, i.e., limiting the retrieval to a range of publication years, had been corrected. The first of these changes probably does not greatly affect the estimates. The second, however, probably accounts for the very high estimates in March and April where "ENGLISH AND 1972 THRU 1972" was used several times and consumed inordinate amounts of CPU time.

In spite of these sources of uncertainty, the resulting estimates are probably reasonably reliable, but work is underway to derive more precise connect time

figures. The following shows the results of these present computations for a 5-month period:

Month	CPU Time (Minutes)	Service Time (Hours)	Connect Time (Hours)	Aver. Daily No. of Users
Jan	75.45	51.04	311.1	6.1
Feb	187.62	90.77	773.7	8.5
Mar	446.90	168.88	1842.9	10.9
Apr	537.43	195.96	2216.2	11.3
May	406.86	156.37	1677.8	10.7

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
Barbara Greehey
MEDLARS Management Section, NLM

UPDATES: A new file has been added to the TYMSHARE News files which enables the user to see a list of the News file names, and the date on which each was updated. By checking this file daily, the user will only have to access files that have a date change. To access this file, after logging into TYMSHARE, the user enters TYPE UPDATES. The DOWN file does not appear in this list. If you are having difficulty accessing MEDLINE and you think the system may be down, enter TYPE DOWN for information about the status of MEDLINE.

ESCAPE KEY: After using the Escape (ESC) Key while in the TYMSHARE News files, if you are prompted with a period (.), enter QUIT and you will again be prompted with the dash (-). You may then access other of the News files or log into MEDLINE. (See May Technical Bulletin, p. 4, for instructions on using the Escape Key).

ENTRY DATES: After logging into the TYMSHARE News files you may receive a list of entry dates and the number of citations input into the MEDLARS data base each month by typing COM ENTRYDATES. Note that these are the citations for the entire MEDLARS data base and not the count for the MEDLINE file. The citation count for MEDLINE and AIM-TWX will be added later.

OFF-LINE PRINTS: Several printouts have been returned to MEDLARS Management Section because of insufficient address. Please be sure to provide complete mailing information.

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 39 JULY 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

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Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN is issued monthly by the Office of the Associate Director for Library Operations.

SAMPLE SEARCH

A sample MEDLINE search with explanations is attached as the last page of this issue of the Technical Bulletin. It was prepared by MEDLARS Management Section as a handout for visitors to the National Library of Medicine.

In this sample, MEDLINE is accessed by dialing NLM directly. In the future a sample will be printed using Tymshare access.

This sample search may be reproduced for use at your particular institution.

CARD PRODUCTION CONTRACT AWARD

Dan Tonkery
Network Management Staff, NLM

Xerox Reproduction Center has been awarded a one year contract to reproduce NLM catalog cards. Beginning July 1, 1972, the contract will enable medical libraries to receive NLM cards for any entry listed in NLM's Current Catalog and Current Catalog Proof Sheets. The card service offered by Xerox supersedes the card service agreement with Bro Dart. This new service will enable any library to request NLM cards by making a copy of the page from the catalog where the entry is listed, circling the entries desired and sending these copies to the Xerox Reproduction Center. The entries circled will then be typed onto standard catalog cards, i.e. only the unit record or main entry card would be typed. The library will receive ten copies of the unit record for each citation ordered. The actual unit record will not have NLM call numbers in the upper left hand corner nor will subject headings or added entries be over-printed. The cost of this card service is $1.00 per set with a minimum of $15.00 per order. For additional information or specific questions, please contact:

Mr. Robert Naughton
Xerox Reproduction Center
Catalog Card Reproduction Section
5185 MacArthur Boulevard, N.W.
Washington, D.C. 20016

ESTIMATING MEDLINE SEARCHES

Davis B. McCarn, Associate Director
Science Communications and
Computer Engineering Services

In order to derive estimates of the total number of searches being run on MEDLINE, two procedures have been used. The first uses the reported number of searches from the MEDLARS Centers (the Centers report these routinely) other than NLM to compute a ratio of total searches to off-line searches. This ratio can then be applied to the total number of off-line searches to estimate total searches run on MEDLINE. These calculations are as follows for June:

Total searches in MEDLARS Centers	=	1,445
Off-line searches in MEDLARS Centers	=	508
Ratio searches/Off-line searches	=	2.844
Total off-line searches outside NLM	=	2,145
Estimated total searches	=	6,191

Annual rate = 74,300 searches/year

The second approach used the ratio of the number of searches in the MEDLARS Centers to the connect time for these Centers and then applied this factor against total connect time to estimate total searches. These calculations are as follows:

Total searches in MEDLARS Centers	=	1,445
Total connect time in MEDLARS Centers	=	265 hours
Hours/Search	=	.1834 (= 11 minutes)
Total connect time all users	=	1,341 hours
Total searches	=	7,312

Annual rate = 87,700 searches/year

These estimates are in reasonable agreement. It might be assumed that the MEDLARS Centers may rely more heavily on off-line prints than the rest of the users and the latter estimate may be closer, but, at any rate, it seems safe to say that MEDLINE is providing search services at a rate of over 70,000 per year.

The reason these estimating procedures are required is that correct counts of searches have not yet been possible based on the use of the @ sign. In June,4130 searches were identified by users through the input of the @ signs, but clearly this is well short of the searches actually done. In order to assess the use of the @ to identify searches the totals for each institution were accumulated and then the number of searches per hour of terminal connect time calculated. The following table shows these calculations. In this table JUN@ is the number of @ signs entered (searches), JUNHR is the number of terminal hours used from May 26 - June 29, and RATIO is the number of searches per hour based on these values. It is hoped that more regular use of the @ in July will provide better data on the actual use of the service.

CODE	USER	JUN@	JUNHR	RAT
AAF	JOINT MED LIB USA USAF..OFF SURG GEN	14	4.7	2.979
ALA	U ALA..LISTER HILL CTR HEALTH SCI	24	10.4	2.308
ALK	ALASKA HEALTH SCI INFO CTR	0	.2	.000
AMD	NIH..NIAMD	11	5.4	2.037
BOW	BOWMAN GRAY SCH MED..LIB	52	7.4	7.027
CAN	NATL RES COUNCIL OF CANADA..NATL SCI LIB	23	5.2	4.423
CDA	U CALIF DAVIS..HEALTH SCI LIB	27	8.9	3.034
CES	NATL LIB MED..OCES	0	1.4	.000
CIN	U CINCINNATI..MED CTR LIB	84	18.3	4.590
CLA	U CALIF L.A...BIOMED LIB PAC SW RML	132	38.2	3.455
CLE	CASE WEST RES U..CLEVELAND HEALTH SCI LIB	0	2.3	.000
CLL	LOMA LINDA U..V RADCLIFF MEM LIB	0	4.3	.000
COL	U COLO..DENISON MEM LIB	59	23.4	2.521
CON	U CONN..L M STOWE LIB	28	4.4	6.364
COR	CORNELL U MED COLL..LIB	6	3.0	2.000
CPP	COL PHYSICIANS PHILA..LIB	121	31.0	3.903
CSD	U CALIF SAN DIEGO..BIOMED LIB	27	11.8	2.288
CSF	U CALIF S.F...LIB	38	15.4	2.468
DAR	DARTMOUTH COL..DANA BIOMED LIB	1	7.1	.141
DEM	DEMONSTRATION USE	5	33.4	.150
DUK	DUKE U SCH MED..MED CTR LIB	22	4.6	4.783
EMU	EMORY U..A W CALHOUN MED LIB	47	9.9	4.747
EPC	ENVIRONMENT PROTECT AG CINCINNATI	19	15.5	1.2[illegible]
FLO	U FLA..J H MILLER HEALTH CTR LIB	32	6.2	5.1
GTU	GEORGETOWN U MED CTR..J V DAHLGREN MEM LIB	67	45.0	1.4[illegible]
GWU	GEORGE WASHINGTON U HOSP..HOSP BR LIB	77	30.6	2.516
HER	PENNA STATE U..HERSHEY MED CTR LIB	39	10.6	3.679
HMS	HARVARD U..F COUNTWAY LIB	14	10.9	1.284
IND	IND U..SCH MED LIB	38	4.8	7.917
IOW	U IOWA..MED LIB	37	10.3	3.592
JCL	JOHN CRERAR LIB	36	21.6	1.667
JHU	JOHNS HOPKINS U..WELCH MED LIB	1	12.7	.079
KAN	U KANS..CLENDENING MED LIB	39	6.5	6.000
KEN	U KY..MED CTR LIB	15	2.1	7.143
LGH	LETTERMAN GEN HOSP..MED LIB	37	3.9	9.487
LHC	NATL LIB MED..LHNCBC	0	.9	.000
MAR	NATL LIB MED..MARML RM 152	143	57.5	2.487
MAY	MAYO FOUND..MAYO CLINIC LIB	11	2.0	5.500
MCO	U MO COLUMBIA..MED LIB	33	6.2	5.323
MDB	U MARYLAND..HEALTH SCI LIB	14	10.5	1.333
MGT	NATL LIB MED..MANAGEMENT	2	3.6	.556
MHI	HEALTH SERV MENTAL HEALTH ADM..NIMH LIB	0	.2	.000
MIA	U MIAMI..L CALDER MEM LIB	5	2.9	1.724
MIC	U MICH..MED CTR LIB	80	17.8	4.494
MIN	U MINN..BIOMED LIB	109	23.1	4.719
MKC	U MO KANSAS CITY..SCH MED LIB	0	1.1	.000
MMS	NATL LIB MED..MMS	46	21.0	2.190
MSH	NATL LIB MED..MESH	15	13.5	1.1[illegible]
MSU	MICH STATE U..SCI LIB	21	11.5	1.8
NCA	U NC..HEALTH SCI LIB	7	2.7	2.593
NCI	NIH..NATL CANCER INST	17	8.4	2.024
NEB	U NEBR..MIDCONTINENTAL RML PROG	61	19.4	3.144

DE	USER	JUNG	JUNHR	RATIO
NEV	U NEV RENO..LIFE HEALTH SCI LIB	27	4.4	6.136
NIH	NIH..LIB	27	25.7	1.051
NJN	COL MED DENT NJ..LIB	348	47.5	7.326
NLM	NATL LIB MED	50	53.3	.938
NMC	NATL NAVAL MED CTR..STITT LIB AND RESEARCH INST	73	18.6	3.925
NYA	NY ACAD MED..NY NO NJ RML	210	22.0	9.545
OHT	MED COL OHIO TOLEDO..LIB	30	5.0	6.000
OSU	OHIO STATE U COL MED..HEALTH CTR LIB	90	16.0	5.625
PIT	U PITTSBURGH..FALK LIB	32	22.9	1.397
PMA	PHARMACEUTICAL MFR ASSN	3	3.5	.857
REF	NATL LIB MED..RSD	83	63.2	1.313
SAM	SYSTEMS DEVELOPMENT CORP	0	5.6	.000
SCA	MED U SC..LIB	18	4.5	4.000
SOC	U SO CALIF SCH MED..NORRIS MED LIB	9	23.2	.388
SPA	SPARKS REG MED CTR..HEALTH SCI LIB	0	1.5	.000
STA	STANFORD U MED CTR..LANE MED LIB	101	26.8	3.769
TEN	U TENN..MED UNITS LIB	22	3.4	6.471
TEX	TEXAS MED CTR HOUSTON..J H JONES LIB	252	36.3	6.942
TGA	U TEXAS MED BR GALVESTON..MOODY MED LIB	5	4.6	1.087
TRN	TRAINING	195	78.5	2.484
TRY	TRIAL USE	0	3.3	.000
TSA	U TEXAS SAN ANTONIO..MED SCH LIB	29	6.8	4.265
TST	TEST	0	5.0	.000
SW	U TEXAS DALLAS..MED SCH LIB	143	18.2	7.857
JF	TUFTS U..MED DENT LIB	3	2.7	1.111
USG	U S GOVT	0	.2	.000
UTA	U UTAH..ECCLES MED SCI LIB	16	6.4	2.500
VAC	V A CTRL OFF 810 VERMONT AVE NW DC	15	10.8	1.389
VAM	V A HOSP WOOD WISC	7	3.8	1.842
VAN	VANDERBILT U..SCH MED LIB	2	.4	5.000
VAS	V A HOSP SEPULVEDA CALIF..MED LIB	5	1.9	2.632
VAW	V A HOSP DC..LIB	30	9.6	3.125
VIR	U VA..MED SCH LIB	81	16.1	5.031
WAS	U WASHINGTON..PAC NW REG HEALTH SCI LIB	157	29.5	5.322
WHC	WASHINGTON HOSPITAL CTR..MED LIB	9	4.8	1.875
WIM	MED COLL WIS..MIDDLETON MED LIB	0	.9	.000
WIS	U WISC..MIDDLETON MED LIB	52	18.7	2.781
WRR	WALTER REED GEN HOSP WRAIR..LIB	1	21.8	.046
WSL	WASHINGTON U..SCH MED LIB	170	40.0	3.826
WSU	WAYNE STATE U..SHIFFMAN MED LIB	19	16.3	1.166
WVA	WVA U..MED CTR LIB	0	5.4	.000
YAL	YALE U..MED LIB	38	12.2	3.115

TYMSHARE NEWS FILES

Leonard J. Bahlman
MEDLARS Management Section, NLM

The method for accessing many of the Tymshare News files has been changed in order to conserve computer storage. Most of the files are now stored in one location and are brought forth on demand rather than stored in multiple locations as before. Many of the files formerly accessed by entering the word TYPE followed by the file name are now accessed by entering the word COM followed by the file name.

After a hyphen, you may enter COM ACCESS for instructions on accessing any of the News files and for a brief description of the content of each of the files (see example below).

-COM ACCESS

THE TYMSHARE MEDLINE NEWS FILES MAY BE ACCESSED BY LOGGING IN UNDER NLM4, NLM4A, NLM4B, NLM4C, NLM4D, OR NLM4E. IF YOU GET THE MESSAGE 'ALREADY ENTERED' AFTER ENTERING ONE CODE, TRY ANOTHER. WHEN THE HYPHEN APPEARS YOU MAY ENTER ANY ONE OF THE FOLLOWING FOR ADDITIONAL INFORMATION ABOUT THE SYSTEM:

COM ACCESS	*FOR INSTRUCTIONS ON ACCESSING OTHER NEWS FILES.
COM AIM-TWX	*FOR NEWS SPECIFIC TO AIM-TWX.
COM DATABASE	*FOR THE STATUS OF THE MEDLINE DATA BASE.
COM DEMONSTRATION	*FOR A "CANNED DEMONSTRATION". IT IS SUGGESTED THAT YOU OPERATE AT 10 CHARACTERS PER SECOND FOR THIS DEMO.
COM ELHILL	*FOR NEW OR CHANGED CAPABILITIES IN THE SEARCH PROGRAM.
COM ENTRYDATES	*FOR A LIST OF ENTRY DATES OF CITATIONS INPUT INTO THE MEDLARS, MEDLINE, AND AIM-TWX DATA BASES.
COM HOURS	*FOR MEDLINE SERVICE HOURS.
COM NETWORK	*FOR SPECIAL NEWS ABOUT THE NETWORK.
COM PHONES	*FOR A LIST OF TYMSHARE PHONE NUMBERS.
COM TEST	*FOR HOURS THAT THE SYSTEM IS BEING TESTED.
COM UPDATES	*FOR A LIST OF DATES OF THE MOST RECENT CHANGES IN THE MEDLINE NEWS FILES. THIS SAVES CHECKING EACH FILE DAILY.
COM USERS	*FOR A LIST OF MEDLINE USERS.
TYPE DOWN	*FOR THE OPERATING STATUS OF THE SYSTEM.
TYPE NEWS	*FOR SPECIAL NOTICES (WILL APPEAR AUTOMATICALLY AFTER LOGIN TO NEWS FILES).

To interrupt the printout of any of these files, press the Escape (ESC) key. If prompted with a period (.), type the word QUIT and the hyphen will then appear.

Users logging into the Tymshare News files will now automatically receive current news of the system. If you wish to interrupt the printout of this news, press the Escape (ESC) key. You will be prompted with a hyphen and you may then access any of the News files.

You may still enter COM UPDATES for a list of dates on which the files were last changed. This saves accessing each file daily. UPDATES does not include dates for changes in NEWS since users will now automatically receive the current news upon logging in. Neither is DOWN included in UPDATES. If you believe the system is down or if you receive the message SYSTEM UNAVAILABLE, enter TYPE DOWN for the status of the system.

Following is the current list of Tymshare telephone numbers available for accessing MEDLINE and AIM-TWX, which may be obtained by entering COM PHONES after receiving the hyphen.

CITY	STATE	PHONE NO.	CITY	STATE	PHONE NO.
INGLEWOOD	CAL	213-673-5185	BOSTON	MASS	617-731-4300
LOS ANGELES	CAL	213-687-9900	BALTIMORE	MD	301-760-5060
LOS ANGELES	CAL	213-687-9930	DETROIT	MICH	313-522-6380
MOUNTAIN VIEW	CAL	415-961-9330	JACKSON	MICH	517-787-1044
NEWPORT BEACH	CAL	714-540-3560	ST. LOUIS	MO	314-968-5140
[illegible]KLAND	CAL	415-465-7000	ENGLEWOOD CLIFF	NJ	201-894-8250
[illegible]WARD	CAL	805-487-0484	BUFFALO	NY	716-856-0510
PALO ALTO	CAL	415-326-7001	BUFFALO	NY	716-856-8750
RIVERSIDE	CAL	714-687-1881	NEW YORK CITY	NY	212-551-9322
SACRAMENTO	CAL	916-441-5450	NEW YORK CITY	NY	212-750-9433
SAN DIEGO	CAL	714-291-8700	ROCHESTER	NY	716-461-1410
SAN FRANCISCO	CAL	415-468-4400	SYRACUSE	NY	315-437-7111
SAN JOSE	CAL	408-257-9050	CLEVELAND	OHIO	216-861-0828
DENVER	COL	303-399-7471	PORTLAND	ORE	503-224-0750
DARIEN	CONN	203-655-8931	PHILADELPHIA	PENN	215-687-6430
HARTFORD	CONN	203-528-4811	DALLAS	TEX	214-638-5800
WASHINGTON DC	DC	703-920-7660	FORT WORTH	TEX	214-263-2419
TAMPA	FLA	813-877-6141	HOUSTON	TEX	713-785-4411
CHICAGO	ILL	312-782-2303	SAN ANTONIO	TEX	512-222-9571
SOUTH BEND	IND	219-259-9941	SEATTLE	WASH	206-622-7930
BATON ROUGE	LA	504-927-6400	MILWAUKEE	WIS	414-224-3092
NEW ORLEANS	LA	504-834-7100			
NEW ORLEANS	LA	504-834-7111			

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
Barbara Greehey
MEDLARS Management Section, NLM

@ SYMBOL PROMPT

After entering the STOP command, the user is now prompted with the question, BEFORE STOPPING, HAVE YOU ENTERED AN AT SIGN (@) FOR EACH INTELLECTUAL SEARCH? (YES/NO). If you have entered @ after each completed search, type YES and you will receive the GOOD-BYE message. If you have not, you may enter NO and you will be prompted with the last search statement number and the USER cue. Another alternative is also available. If you have not entered the @ symbols, enter @ and a carriage return for each completed search instead of answering YES or NO. If you have used this alternative, after entering all of your @ symbols, type YES after a USER cue. The GOOD-BYE message will then be received. This bypasses typing "STOP" again and receiving the reminder message a second time.

TREE COMMAND

The MeSH classification numbers now appear next to the MeSH headings as part of a TREE command display. Thus when a term is "treed" before being exploded, the MESHNO command would not be necessary. In other cases, the MESHNO command would still be used.

NUMBER OF USERS

There is a new command in MEDLINE, "USERS", which enables you to see how many users are logged into MEDLINE at the moment of your query. Form of entry: "USERS" (in quotes).

ENTRY ERRORS

When having citations printed, you may receive the message ENTRY XXXXX (number) CONTAINS AN ERROR AND CANNOT BE PRINTED. We are requesting users to forward these entry numbers to the Head, MEDLARS Management Section via telephone, letter, the COMMENT command or Tymshare "Mail" so that they may be corrected.

"DEAR ON-LINE"

Readers are requested to send in questions concerning MEDLINE. Questions will be reviewed by MMS and if they are considered of interest to other users, they will be published in the Technical Bulletin. You may request that your questions be published anonymously.

MEDLINE TRAINEES AT NLM, JULY 10, 1972

The seventh NLM MEDLINE Training Class was held July 10 - July 28, 1972. The following people attended:

Shirley Branden	Creighton University Health Sciences Library Omaha, Nebraska
Nancy Demartini	Boston University School of Medicine Library Boston, Massachusetts
Sue Durling	State University of New York Central Office Computer Center Albany, New York
Mary Lee Gosney	Veterans Administration Hospital Library Erie, Pennsylvania
Gloria Grant	Technical Services Division National Library of Medicine Bethesda, Maryland
Sara Hill	St. Luke's Hospital Library Kansas City, Missouri
Beverly Marsden	University of Massachusetts Medical School Library Worcester, Massachusetts
Margaret Meyn	Sacred Heart General Hospital Doctors' Library Eugene, Oregon
Kathy Miller	Oak Ridge National Laboratory Toxicology Information Response Center Oak Ridge, Tennessee
Allen Sprow	Veterans Administration Central Office Library Washington, D.C.
Salvadore Waller	U.S. Health Services and Mental Health Administration Library Rockville, Maryland
Ruth Wender	University of Oklahoma Health Sciences Center Library Oklahoma City, Oklahoma

MEDLINE TRAINEES AT UCLA, JULY 17, 1972

University of California Biomedical Library, Los Angeles held its third MEDLINE Training Class July 17 - August 1, 1972. The following people attended:

Marilyn Jensen	University of California, L.A. Biomedical Library (PSRMLS) Los Angeles, California
Winifred Kistler	University of California, Davis Health Sciences Library Davis, California
Patricia Pepin	Letterman General Hospital Medical Library San Francisco, California
Robin Rand	University of California, L.A. Biomedical Library Los Angeles, California
Debbie Rogers	University of California, Irvine Medical Sciences Library Irvine, California
Anita Tschida	University of Arizona Medical Center Library Tucson, Arizona

UPDATES TO MEDLINE JOURNALS

Please add the following titles to your lists MEDLINE JOURNALS and MEDLINE JOURNALS BY SUBJECT (both dated April 1).

610 Annu Rev Physiol
Subject: Physiology

9H9 Aust NZ J Med
Subject: General Medicine

9KL Behav Biol
Subject: Biology, Psychology

B7G BTTA Rev
Subject: Tuberculosis

EHO Environ Health Perspect
Subject: Environmental Health

F5J Fortschr Geburtshilfe Gynaekol
Subject: Obstetrics and Gynecology

R67 Res Exp Med (Berl)
Subject: Experimental Medicine

NATIONAL LIBRARY OF MEDICINE

Bethesda, Maryland 20014

MEDLINE

Sample User/System Dialogue

EXPLANATIONS	***DIALOGUE***
1. User turns terminal ON.	(Requester will enter all Commands or Search Statements after the cue USER: System will respond after the cue PROG:)
2. User dials appropriate telephone number to access the system. Upon receiving "high-pitched" tone, connects receiver to terminal.	
3. System responds with the cue USER: The User will enter the login data assigned by NLM.	USER: /login medxxx01
4. System responds with "Hello" greeting and asks if user is new or experienced.	THIS TERMINAL IS CONNECTED TO THE MEDLINE RETRIEVAL FILE SET HELLO FROM ELHILL II. DO YOU WISH THE NEW-USER OR EXPERIENCED USER FORMAT? TYPE N OR E AND STRIKE THE CARRIAGE RETURN KEY.
5. New users may specify n (for new) and receive tutorial information and detailed system information.	USER: n PROG: TYPE ONLY AFTER THE CUE 'USER', WAIT AFTER THE CUE 'PROG', ENTER SEARCH STATEMENTS UNPUNCTUATED, ENCLOSE COMMANDS IN QUOTE MARKS, TYPE ANSWERS UNPUNCTUATED. INSERT ALL THREE MESSAGES BY STRIKING CARRIAGE RETURN KEY (CR). IF IN TROUBLE AT ANY TIME TYPE "HELP". DO YOU WISH A FURTHER SUMMARY OF OPERATING FEATURES? TYPE YES OR NO AND CARRIAGE RETURN.
(User may terminate tutorial information by typing no after receiving the cue USER:)	USER: no SS 1 /C?---SEARCH STATEMENT 1 or COMMAND? USER:
6. User enters Search Statement.	smoking and lung neoplasms

7. System responds with the number of citations meeting Search Statement requirements.

```
PROG:

PSTG---NUMBER POSTINGS (173)
```

8. User enters a "print" command to print one complete citation. (all commands must be typed in quotes)

("print 1 full indented" asks the system to print the entire unit record for one citation without abbreviations for category names)

```
SS  2 /C?---SEARCH STATEMENT 2 OR COMMAND?

USER:

"print 1 full indented"

PROG:

AUTHOR                KEMP R
TITLE                 PATIENTS AND CIGARETTES
SOURCE                PRACTITIONER 207 215-20 AUG 71
LANGUAGE              ENGLISH
ACCESSION NUMBER      6066752
PUBLICATION YEAR      1971
ENTRY DATE            711026
MAIN HEADING          LUNG NEOPLASMS/ETIOLOGY
MAIN HEADING          *SMOKING
JOURNAL CODE            PHQ
```

9. User enters the @ symbol to indicate he has completed a search.

```
SS  2 /C?---SEARCH STATEMENT  2 OR COMMAND?

USER:

@
```

10. User has finished searching and logs-off by typing the command "stop" (in quotes).

(system reminds User to enter @ symbols)

```
USER:

"STOP"

PROG:
BEFORE STOPPING, HAVE YOU ENTERED AN AT SIGN (@)
FOR EACH INTELLECTUAL SEARCH?  (YES/NO)
```

11. User has entered @ symbol and types yes.

```
USER:

YES

PROG:
```

12. System acknowledges log-out

```
GOOD-BYE!

USER:
```

NOTE: After the cue USER: the requester may enter "explain commands" (in quotes) to see a list of all commands available in MEDLINE. By entering "explain explain" (in quotes) the User will receive a list of all items in the system that may be "explained".

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 40 AUGUST 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . .Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

MEDLINE OFF-LINE PRINTS

Several off-line prints have been returned to MEDLARS Management Section because of incomplete street addresses or addresses too long for the window envelopes. Please enter the street address which your post office will recognize and limit the length of each line to approximately four inches. If your street address is too long, you may enter the name of your institution next to your name instead of your phone number.

LITERATURE SEARCH SUGGESTIONS

Geri Nowak
MEDLARS Management Section, NLM

MEDLARS Management Section is requesting topics for Literature Searches. A candidate for a L.S. may be a subject frequently demanded at one's library or a topic that you think would be of general interest to the users of MEDLARS.

The data base covered for a Literature Search is the entire MEDLARS file from January 1969 through the current month. Each suggested topic should be accompanied by a search strategy.

One can also request that a particular existing L.S. be updated. You do not have to submit search strategies for these updates. The search strategies are on file at NLM and you can use the MEDLINE COMMENT command for submitting these suggestions.

All suggestions will be considered. The processing and editing of the searches will be done at NLM. However, all trained MEDLARS/MEDLINE analysts wishing to actively participate in the editing process of his or her original suggestion are welcome to work with MMS personnel via the mails.

MICHIGAN MEDLARS CENTER
SUMMARY OF SEARCH ACTIVITIES 1966-72

Geri Nowak
MEDLARS Management Section, NLM

(This article is based on information from the MEDLARS CUMULATIVE REPORT 1966-1972 submitted by Lorraine G. Hirschfeld to NLM.)

The contract between the National Library of Medicine and the University of Michigan which established the Midwest Regional MEDLARS Center in Ann Arbor, Michigan in April 1966 was terminated at the end of April 1972. This Center implemented MEDLARS Demand Search service in December 1967. The MEDLARS staff (see Staff History below) publicized the availability of the Demand Search service by conducting MEDLARS Orientation Programs for interested health professionals, and by initiating periodic announcements to the University of Michigan faculty and students. Not all of the public relations work was done by the staff, for frequently patrons advertised their satisfaction with the service by sending referrals.

During its years of operation, the Michigan MEDLARS Center formulated and released 4,823 Demand Searches. The bulk of the searches originated from the University of Michigan (60 per cent) and other universities and colleges in the state (24 per cent). Other Michigan institutions, e.g., hospitals, requested 14 per cent of the searches, while out of state requests totaled 2 per cent. The figures below show the year to year increase in the number of searches released. The drop in requests for the period 1971 - April 1972 reflects the search quota that was placed on the Center by NLM in anticipation of the shift from MEDLARS batch processing to MEDLINE.

Year	Released	Received	Rejected
1967-68	343	No data available	
1968-69	1,071	1,154	53
1969-70	1,233	1,224	19
1970-71	1,387	1,409	53
1971-Apr.72	789	874	63
Total	4,823	4,661+	188+

Searches were processed at Ohio State University until September 1971 when the Texas Medical Center took over. Average thruput time based on figures for 1969-71 was:

Per cent Searches released	Days
45.5	5-15
75.0	5-20
93.8	5-30

Recurring Demand Search service was started in 1970. At the end of April 1972, the Center was releasing 140 RDSs. This service is at present being continued by NLM.

MEDLARS users may still request computer-produced searches. These are currently formulated on MEDLINE at the Reference and Interlibrary Loan Section of the University of Michigan Medical Center Library.

Staff History

University of Michigan MEDLARS Center - 1966-72

PROJECT DIRECTORS

David K. Maxfield	April 1966 - September 30, 1966 January 1, 1969 - April 30, 1972
Robert E. Burton	October 1, 1966 - September 30, 1967
Donald D. Dennis	October 1, 1967 - December 31, 1968

CENTER HEADS

Donald D. Dennis	October 1, 1967 - December 31, 1968
Robert E. Lawrence	January 1, 1969 - August 30, 1971
Lorraine G. Hirschfeld	September 1, 1971 - April 30, 1972

SEARCHERS

Linn Kelner	April 10, 1967 - September 31, 1968
Barbara Kelner (Indexer)	April 10, 1967 - September 31, 1968
Robert E. Lawrence	June 1, 1967 - August 31, 1971
Ann D. Nevill (Indexer ½ time)	February 1, 1968 - August 31, 1969
Lorraine G. Hirschfeld	February 1, 1969 - April 30, 1972

MEDLINE JOURNALS
ERRATUM

The Journal Title Code for Environ Health Perspect has been changed from EHØ to EIØ.

CATALOGING IN PUBLICATION (CIP) PROGRESS REPORT

Dan Tonkery
Network Management Staff, NLM

On June 1, 1972 after an experimental period, the National Library of Medicine joined the Library of Congress in the Cataloging in Publication (CIP) Program. CIP is designed to provide professional cataloging data to publishers so that the data can be printed in the book; thus CIP should reduce the cataloging costs and speed the delivery of books to readers.

After two months of operation, NLM has cataloged over 100 titles. Many of the titles are from major biomedical publishers, e.g. J.B. Lippincott, Grune & Stratton, University Park Press, etc. Several of the other titles that have been cataloged are from publishers whose titles escape regular acquisitions procedures, i.e. blanket orders, searching bibliographies; thus these titles are an added benefit to the library community.

When NLM joined the CIP Program, there were twelve publishers of medical related material already participating in the Program. During the last week of July, NLM contacted approximately thirty major biomedical publishers by letter. Out of this number, ten publishers have responded and expressed interest in joining CIP.

During the Fall staff members from NLM and LC will be visiting biomedical publishers who have expressed a serious interest in joining the CIP Program. These visits will be used to inform publishers of CIP routines, to institute the CIP workflow in the publishing house, and to establish a working relationship between the production, editorial, and other staff members of the publishing house.

Title and Imprint	Date Galley Pack Received	Cataloging Available in Semiweekly Proof Sheets	Date Book Received
Emergency room care. New York, Grune & Stratton, 1972.	3/14/72	#22 (3/15/72)	7/17/72
Functional anatomy and histology of the lung. Baltimore, University Park Press [c1972]	3/14/72	#22 (3/15/72)	7/7/72
Radionuclides in nephrology. New York, Grune & Stratton, 1972.	3/14/72	#25 (3/27/72)	7/28/72
Syntax, speech, and hearing. New York, Grune & Stratton, 1972.	3/14/72	#22 (3/15/72)	8/9/72

Cataloging data is available in NLM's Current Catalog Proof Sheets and in the book itself for the titles cataloged through the CIP Program. Cataloging data is available four to six months before a title is published and received by libraries. In the Current Catalog Proof Sheets, CIP titles are being boxed to aid in identification.

List of Titles Cataloged in the CIP Program

1. Acridines. New York, Wiley [c1972] Semiweekly 53

2. Allergic diseases: diagnosis and management. Philadelphia, Lippincott [c1972] Semiweekly 44

3. Analyses of satisfaction. New York, MSS Information Corp. [c1972] Semiweekly 56

4. Atlas of colposcopy. Baltimore, University Park Press [c1972] Semiweekly 64

5. Backward child and his mother; a psychoanalytic study. New York, Pantheon Books [c1972] Semiweekly 62

6. Basic medical statistics. [New York, Grune & Stratton, c1972] Semiweekly 60

7. Basic readings in epidemiology. New York, MSS Information Corp. [c1972] Semiweekly 56

8. Behavior and illness. Englewood Cliffs, N.J., Prentice-Hall [c1972] Semiweekly 54

9. Behavior modification in child, school, and family mental health ... Champaign, Ill., Research Press Co. [c1972] Semiweekly 64

10. Biological psychiatry: a textbook. New York, Wiley-Interscience [c1972] Semiweekly 49

11. Body language and the social order. Englewood Cliffs, N.J., Prentice-Hall [c1972] Semiweekly 63

12. Bonds of pluralism: the form and substance of urban social networks. New York, Wiley-Interscience [c1973] Semiweekly 59

13. Characterization of erythrocyte- reactive factors of Panulirus Argus: a contribution to immunophylogeny. New York, MSS Information Corp. [c1972] Semiweekly 54

14. Coccidia: Eimeria, Isospora, Toxoplasma, and related genera. Baltimore, University Park Press, [c1972] Semiweekly 64

15. Comparative research methods. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 61

16. Complete guide to prevention and treatment of athletic injuries. West Nyack, N.Y., Parker [c1972] Semiweekly 44

17. Contemporary readings in biology. New York, MSS Information Corp. [c1972] Semiweekly 56

18. Continuing nursing education. New York, McGraw-Hill [c1973] Semiweekly 45

19. Critical variables in differentiation. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 54

20. Design and analysis: an experimenter's handbook. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 54

21. Discovering man in psychology. St. Louis, McGraw-Hill [c1973] Semiweekly 64

22. Drugs in perspective; a fact book on drug use and misuse. Washington, Smithsonian Institution Press, 1972. Semiweekly 62

23. Dynamic aspects of brain scanning. Baltimore, University Park Press [c1972] Semiweekly 64

24. Ecology and the market place. New York, MSS Information Corp. [c1972] Semiweekly 56

25. Electrochemistry. London, Butterworth; Baltimore, University Park Press [1972] Semiweekly 49

26. Emergency room care. New York, Grune & Stratton, 1972. Semiweekly 22

27. Endocrines and ageing. New York, MSS Information Corp. [c1972] Semiweekly 59

28. Essentials of physiological psychology. New York, Wiley [c1972] Semiweekly 22

29. Experimental control of mitosis. New York, MSS Information Corp. [c1972] Semiweekly 61

30. Evaluation of social intervention. San Francisco, Jossey-Bass, 1972. Semiweekly 57

31. Exceptional children: an overview. New York, MSS Information Corp. [c1972] Semiweekly 56

32. Fifty years in neurology and psychiatry. [New York, Intercontinental Medical Book Corp., 1972] Semiweekly 53

33. Forty-five lessons in surgical terminology for the medical transcriber [c1972] Semiweekly 19

34. Foundations of experimental psychology. New York, MSS Information Corp. [1972] Semiweekly 64

35. Foundations of pediatric nursing. Philadelphia, Lippincott [1973] Semiweekly 54

36. Functional anatomy and histology of the lung. Baltimore, University Park Press [c1972] Semiweekly 22

37. Fundamental statistics in psychology and education. St. Louis, McGraw-Hill [c1973] Semiweekly 61

38. Genetics: questions and problems. New York, McGraw-Hill [c1973] Semiweekly 60

39. Genic psychology: method and theory. New York, MSS Information Corp. [c1972] Semiweekly 56

40. Good life, sexually speaking. Englewood Cliffs, N.J., Prentice-Hall [c1972] Semiweekly 62

41. Healing beyond medicine. West Nyack, N.Y., Parker [c1972] Semiweekly 57

42. Hospitals, clinics, and health centers. Westport, Conn., Greenwood Press [1972, c1960] Semiweekly 57

43. How ought science be taught? New York, MSS Information Corp., [c1972] Semiweekly 56

44. How to win in the youth game; the magic of plastic surgery. Englewood Cliffs, N.J., Prentice-Hall. Semiweekly 44

45. Human communication: a unified view. New York, McGraw-Hill [c1972] Semiweekly 45

46. Human nature: theories, conjectures, and descriptions. Metuchen, N.J., Scarecrow Press, 1972. Semiweekly 45

47. Humanistic psychology and the research tradition: their several virtues. New York, Wiley [1973, c1972] Semiweekly 57

48. Insect ecology and population management: readings in theory, technique, and strategy. New York, MSS Information Corp. [c1972] Semiweekly 56

49. Intelligence in action; physical activities for enhancing intellectual abilities. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 64

50. Introductions into sociological orientations. New York, Wiley [c1972] Semiweekly 63

51. Introduction to bacteria and their ecobiology. Baltimore, University Press [c1972] Semiweekly 42

52. Issues in human services; supervision and staff development. [San Francisco, Jossey-Bass, c1972] Semiweekly 57

53. Licit and illicit drugs; the Consumers Union report on narcotics ... Boston, Little, Brown [c1972] Semiweekly 58

54. Magic of herbs in daily living. West Nyack, N.Y., Parker [c1972] Semiweekly 60

55. Man in ecological perspective. New York, MSS Information Corp. [c1972] Semiweekly 56

56. Manual of histopathological staining methods. New York, Wiley-Interscience [c1972] Semiweekly 54

57. Mediators of the allergic state: recent investigations. New York, MSS Information Corp. [c1972] Semiweekly 58

58. Meiotic process: pairing, recombination, and chromosome movement. New York, MSS Information Corp. [c1972] Semiweekly 54

59. Methadone: experiences and issues. New York, Behavioral Publications, 1972. Semiweekly 54

60. Molecular structure and properties. London, Butterworth; Baltimore, University Park Press [1972] Semiweekly 47

61. Natural history of man. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 58

62. Nursing of adults. Philadelphia, Lippincott [c1972] Semiweekly 25

63. Nutrition and development. New York, Wiley-Interscience [c1972] Semiweekly 45

64. Of time, tides, and inner clocks; taking advantage of the natural rhythms of life. Harrisburg, Pa., Stackpole Books [1972] Semiweekly 54

65. People's handbook of medical care. New York, Random House [c1972] Semiweekly 43

66. Peripheral vascular diseases: diagnosis and management. Philadelphia, Lippincott [c1972] Semiweekly 44

67. Preimplantation mammalian embryos in vitro: recent studies, papers. New York, MSS Information Corp. [c1972]- Semiweekly 59

68. Preparative organic chemistry. New York, Wiley [c1972] Semiweekly 59

69. Principles of plasma physics. New York, McGraw-Hill [c1973] Semiweekly 50

70. Psychology: a social approach. New York, McGraw-Hill [c1973] Semiweekly 64

71. Psychology applied to life and work. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 61

72. Psychology in the service of man. New York, Wiley [c1973] Semiweekly 60

73. Psychopathology: contributions from the social, behavioral, and biological sciences. New York, Wiley-Interscience [c1972] Semiweekly 47

74. Radionuclides in nephrology. New York, Grune & Stratton, 1972. Semiweekly 25

75. Reaction mechanisms in organic analytical chemistry. New York, Wiley-Interscience [c1972] Semiweekly 53

76. Readings for the psychology of the exceptional child; emphasis on learning disabilities. New York, MSS Information Corp. [c1972] Semiweekly 56

77. Readings in behavior therapies. New York, MSS Information Corp. [c1972] Semiweekly 56

78. Readings in controversial issues in education of the mentally retarded. New York, MSS Information Corp. [c1972] Semiweekly 56

79. Readings on ecological systems: their function and relation to man. New York, MSS Information Corp. [c1972] Semiweekly 56

80. Recent readings in reinforcement and satisfaction. New York, MSS Information Corp. [c1972] Semiweekly 56

81. Reference group theory and delinquency. New York, Behavioral Publications, 1972. Semiweekly 54

82. Research methods in marine biology. Seattle, Univ. of Washington Press [1972] Semiweekly 54

83. Rorschach technique with children and adolescents. [New York, Grune & Stratton, c1972] Semiweekly 64

84. Sleep, our unknown life. Nashville, Nelson [c1972] Semiweekly 53

85. Social conflict and social movements. Englewood Cliffs, N.J., Prentice-Hall [c1973] Semiweekly 57

86. Statistical principles in health care information. Baltimore, University Park Press [c1972] Semiweekly 46

87. Sun is my enemy; one woman's victory over lupus, the disease that kills. Englewood Cliffs, N.J., Prentice-Hall [c1972] Semiweekly 60

88. Surface chemistry and colloids. [London, Butterworth; Baltimore, University Park Press, 1972] Semiweekly 47

89. Surgeon's world. New York, Random House [c1972] Semiweekly 62

90. Surgery of the shoulder. Philadelphia, Lippincott [c1972] Semiweekly 56

91. Syntax, speech, and hearing; applied linguistics for teachers of children with language and hearing disabilities. New York, Grune & Stratton, 1972. Semiweekly 22

92. Techniques and problems of theory construction in sociology. New York, Wiley-Interscience [c1972] Semiweekly 57

93. Theories of personality; primary sources and research. New York, Wiley [c1973] Semiweekly 61

94. Thermochemistry and thermodynamics. London, Butterworth; Baltimore, University Park Press [1972] Semiweekly 47

95. Transplantation genetics of primates. New York, Grune & Stratton [1972] Semiweekly 22

96. Twelve therapists [how they live and actualize themselves] San Francisco, Jossey-Bass, 1972. Semiweekly 57

97. Ultrastructure of bone and joint diseases. Tokyo, Igaku Shoin; New York, Grune & Stratton [c1971] Semiweekly 23

98. Values in modern medicine. [Madison] Univ. of Wisconsin Press [c1972] Semiweekly 62

99. When reason fails; psychotherapy in America. Philadelphia, Smith [c1972] Semiweekly 49

100. Your heart; complete information for the family. Philadelphia, Lippincott [c1972] Semiweekly 11

JULY 1972 MEDLINE STATISTICS

Leonard J. Bahlman
MEDLARS Management Section, NLM

The following report indicates, left to right, the number of off-line prints requested, the number of @ symbols entered to denote completed searches, and the connect hours for the July reporting period. Please remember to enter an @ symbol for each completed search so that the statistics will reflect an accurate use of the system. For example, in some instances at present, the number of off-line prints exceeds the number of @ symbols entered.

MEDLINE INSTITUTION	JULY		
	OFF LINE	@	HRS.
ALASKA HEALTH SCI INFO CTR	000	000	000000
BOSTON U SCH MED..MED LIB	000	2	2.8
BOWMAN GRAY SCH MED..LIB	30	51	5.3
CASE WEST RES U..CLEVELAND HEALTH SCI LIB	000	000	000000
COL MED DENT NJ..LIB	255	156	17.3
COL PHYSICIANS PHILA..LIB	3	34	9.2
CORNELL U MED COLL..LIB	15	55	5.9
CREIGHTON U..HEALTH SCI LIB	000	000	000000
DARTMOUTH COL..DANA BIOMED LIB	6	13	6.
DUKE U SCH MED..MED CTR LIB	18	32	7.
EMORY U..A W CALHOUN MED LIB	12	67	10.0
ENVIRONMENT PROTECT AG 401 M ST SW DC	000	000	000000
ENVIRONMENT PROTECT AG CINCINNATI	42	98	15.3
GEORGE WASHINGTON U HOSP..HOSP BR LIB	4	85	27.4
GEORGETOWN U MED CTR..J V DAHLGREN MEM LIB	7	82	24.6
HARVARD U..F COUNTWAY LIB	17	27	5.7
HEALTH SERV MENTAL HEALTH ADM..NIMH LIB	000	000	1.6
IND U..SCH MED LIB	12	54	11.8
JOHN CRERAR LIB	10	35	22.5
JOHNS HOPKINS U..WELCH MED LIB	000	26	10.9
JOINT MED LIB USA USAF..OFF SURG GEN	1	34	8.5
LETTERMAN GEN HOSP..MED LIB	16	42	5.0
LOMA LINDA U..V RADCLIFF MEM LIB	1	000	000000
LOUISANA STATE U..SCH MED LIB	000	000	000000
MAYO FOUND..MAYO CLINIC LIB	5	17	3.2
MED COL OHIO TOLEDO..LIB	5	23	3.6
MED COLL WIS..MIDDLETON MED LIB	000	000	000000
MED U SC..LIB	3	23	4.9
MICH STATE U..SCI LIB	20	31	11.0
NATL LIB MED	36	69	37.2
NATL LIB MED..MARML RM 152	108	126	42.8
NATL LIB MED..RSD	33	131	82.4
NATL NAVAL MED CTR..STITT LIB AND RESEARCH INST	26	114	17.5
NATL RES COUNCIL OF CANADA..NATL SCI LIB	3	23	5
NIH..LIB	77	81	33
NIH..NATL CANCER INST	10	22	5.9
NIH..NIAMD	5	17	2.9
NY ACAD MED..NY NO NJ RML	75	104	1

MEDLINE INSTITUTION	JULY		
	OFF LINE	@	HRS.
OHIO STATE U COL MED..HEALTH CTR LIB	1	100	12.4
PENNA STATE U..HERSHEY MED CTR LIB	8	44	11.7
PHARMACEUTICAL MFR ASSN	8	9	5.4
SACRED HEART GEN HOSP..MED CTR DOCTORS LIB	000	000	000000
SPARKS REG MED CTR..HEALTH SCI LIB	000	3	.5
ST LUKES HOSPITAL..LIB	000	000	000000
STANFORD U MED CTR..LANE MED LIB	41	94	17.8
SUNY ALBANY..CENT OFF COMPUTER CTR	000	000	000000
TEXAS MED CTR HOUSTON..J H JONES LIB	93	209	35.7
TOXICOLOGY INF RESPONSE CTR	000	000	000000
TUFTS U..MED DENT LIB	000	55	7.9
U ALA..LISTER HILL CTR HEALTH SCI	11	155	16.2
U ARIZ..MED CTR LIB	11	15	3.3
U CALIF DAVIS..HEALTH SCI LIB	16	27	5.5
U CALIF IRVINE..MED SCI LIB	000	000	.1
U CALIF L.A...BIOMED LIB PAC SW RML	94	210	48.4
U CALIF S.F...LIB	84	80	28.7
U CALIF SAN DIEGO..BIOMED LIB	52	40	15.7
U CINCINNATI..MED CTR LIB	79	117	25.4
U COLO..DENISON MEM LIB	29	120	28.1
U CONN..L M STOWE LIB	19	46	6.6
U FLA..J H MILLER HEALTH CTR LIB	14	26	3.3
U IOWA..MED LIB	32	36	5.9
U KANS..CLENDENING MED LIB	4	45	5.5
U KY..MED CTR LIB	5	5	1.1
U LOUISVILLE..KORNHAUSER HEALTH SCI LIB	17	48	7.9
U MARYLAND..HEALTH SCI LIB	27	29	13.7
U MASS..MED SCH LIB	000	000	000000
U MIAMI..L CALDER MEM LIB	9	29	5.3
U MICH..MED CTR LIB	18	36	10.4
U MINN..BIOMED LIB	50	97	19.6
U MO COLUMBIA..MED LIB	33	56	9.5
U MO KANSAS CITY..SCH MED LIB	2	35	5.8
U NC..HEALTH SCI LIB	12	10	2.0
U NEBR..MIDCONTINENTAL RML PROG	16	76	17.3
U NEV RENO..LIFE HEALTH SCI LIB	000	20	1.4
U NM..LIB MED SCI	8	25	7.8
U OKLA..HEALTH SCI CTR LIB	000	000	000000
U OREGON..MED SCH LIB	000	000	000000
U PITTSBURGH..FALK LIB	22	50	11.3
U S GOVT	000	5	2.1
U SO CALIF SCH MED..NORRIS MED LIB	67	50	20.1
U TENN..MED UNITS LIB	2	12	1.2
U TEXAS DALLAS..MED SCH LIB	19	82	12.5
U TEXAS MED BR GALVESTON..MOODY MED LIB	20	83	22.6
U TEXAS SAN ANTONIO..MED SCH LIB	7	47	14.6
U UTAH..ECCLES MED SCI LIB	29	39	13.1
U VA..MED SCH LIB	40	119	20.8
U WASHINGTON..PAC NW REG HEALTH SCI LIB	19	126	23.5
U WISC..MIDDLETON MED LIB	24	77	18.6

MEDLINE INSTITUTION	JULY OFF LINE	@	HRS.
V A CTRL OFF 810 VERMONT AVE NW DC	3	30	12.0
V A HOSP DC..LIB	000	61	8.9
V A HOSP ERIE PA..LIB	000	000	000000
V A HOSP SEPULVEDA CALIF..MED LIB	5	26	4.4
V A HOSP WOOD WISC	2	32	8.5
VANDERBILT U..SCH MED LIB	1	4	.6
WALTER REED GEN HOSP WRAIR..LIB	17	107	27.5
WASHINGTON HOSPITAL CTR..MED LIB	000	16	4.1
WASHINGTON U..SCH MED LIB	100	123	46.5
WAYNE STATE U..SHIFFMAN MED LIB	42	43	22.7
WVA U..MED CTR LIB	17	16	9.2
YALE U..MED LIB	35	36	11.5

Totals: Off-Line Prints - 2119
@ Symbols - 4749
Connect Hours - 1164.6

MEDLINE SAMPLE SEARCH

Barbara Greehey
MEDLARS Management Section, NLM

The following sample search has been prepared as a handout to demonstrate the operation of MEDLINE. The search proceeds making use of the various commands and search capabilities.

Since logging in varies with the type of terminal and the communications network used, the interaction begins after the login procedure. If you wish to distribute this sample to users, you might add your method of logging in and the MEDLINE program greeting as the first page.

Bethesda, Maryland 20014

M E D L I N E

SAMPLE USER/SYSTEM DIALOGUE

INTRODUCTION: The user and the program interact alternately. The user communicates with the program only after receiving the cue USER:. The program communicates with the user after the cue PROG:. The user may type in only three types of messages:

(1) Search statements - searchable items such as terms from Medical Subject Headings, authors, etc.
(2) Commands - instructions to the program requesting operations other than searching such as printing citations and vocabulary browsing. Commands must always be entered in quotes.
(3) Replies to program questions - answers are usually a yes, a no or a number.

REQUEST: INSECTICIDES AS WATER POLLUTANTS

DIALOGUE	EXPLANATION
SS 1/C?---SEARCH STATEMENT 1 OR COMMAND? - -	SS X/C? followed by USER: is the signal to the user to type in a search statement or a command.
USER: INSECTICIDES AND WATER POLLUTION (CR) PROG:	
PSTG---NUMBER POSTINGS (19) - - - - - - - - - - - - SS 2/C?---SEARCH STATEMENT 2 OR COMMAND?	PSTG = the number of journal articles meeting the user's request. In this example, 19 articles discussed both insecticides and water pollution.
USER: INSECTICIDES (CR) -	(CR) = Carriage return The Carriage return/Return key must be pressed at the end of each line of input.
PROG: PSTG---NUMBER POSTINGS (640) SS 3/C?---SEARCH STATEMENT 3 OR COMMAND?	
USER: WATER POLLUTION - (CR) - - - - - - - - - - - - - - - - -	Terms from the controlled vocabulary, Medical Subject Headings, as well as other searchable items, are entered alone or coordinated by AND, OR, AND NOT.
PROG: PSTG---NUMBER POSTINGS (457) SS 4/C?---SEARCH STATEMENT 4 OR COMMAND?	

DIALOGUE	EXPLANATION
USER: 2 AND 3 (CR) - PROG:	Previous search statement numbers may also be combined.
PSTG---NUMBER POSTINGS (19) SS 5/C?---SEARCH STATEMENT 5 OR COMMAND?	
USER: "PRINT" (CR) - PROG:	Commands are always entered in quotes. To see a display of the citations, the PRINT command is used. The user has many PRINT options from which to choose. This standard one displays author, title and source for 5 citations.
AU- GREVE PA TI - CHEMICAL WASTES IN THE SEA: NEW FORMS OF MARINE POLLUTION. SO- SCIENCE 173 1021-2 SEP 71	
AU- BENSON WW AU- MARR TA AU- GABICA J TI - AN APPARENT CASE OF PESTICIDE POISONING. SO- PUBLIC HEALTH REP 85 600-2 JUL 70	
SS 5/C?---SEARCH STATEMENT 5 OR COMMAND? USER: "PRINT TRIAL 1 SKIP 1" (CR) - - - - - - - - - - - - - - PROG:	TRIAL is another PRINT option which requests titles and main headings. SKIP makes it possible to display a particular citation(s). In this case, 1 citation is skipped and 1 is printed.
TI - AN APPARENT CASE OF PESTICIDE POISONING. MH- CHROMATOGRAPHY, GAS MH- HEMODIALYSIS MH- HUMAN MH- INSECTICIDES/ANALYSIS MH- *INSECTICIDES/POISONING MH- MALE MH- MIDDLE AGE MH- PHOSPHORIC ACIDS/ANALYSIS MH- *PHOSPHORIC ACIDS/POISONING MH- POISONING/DIAGNOSIS MH- POISONING/ETIOLOGY MH- WATER POLLUTION MH- WATER SUPPLY - - - - - - - - - - - - - - - - -	Viewing main headings is a valuable way to pick up other relevant terms, in this case WATER SUPPLY.

DIALOGUE

EXPLANATION

; 5/C?---SEARCH STATEMENT 5 OR COMMAND?
USER:

"NEIGHBOR WATER POLLUTION (MH)" - (CR) - - - - -
PROG:

POSTINGS	TERM
548	WATER MICROBIOLOGY
2	WATER MOVEMENTS
457	WATER POLLUTION
75	WATER POLLUTION, CHEMICAL
183	WATER POLLUTION, RADIOACTIVE

UP N OR DOWN N?

USER:
NO
PROG:

If additional references are desired, a number of commands are available which serve as vocabulary browsing aids and thus help in expanding a search. When the command NEIGHBOR is used, terms alphabetically arranged around the requested term (WATER POLLUTION in this example) are listed. In this way, other relevant terms are located. Any word or a root of a word may be NEIGHBORed, whether in Medical Subject Headings or not.

SS 5/C?---SEARCH STATEMENT 5 OR COMMAND?
USER:
WATER POLLUTION OR WATER SUPPLY OR - (CR) -
PROG:
NT 5---CONTINUE SS 5
USER:
WATER POLLUTION, CHEMICAL (CR)
PROG:

The coordinate OR searches for articles indexed for any one of the requested terms.

PSTG---NUMBER POSTINGS (727)
SS 6/C?---SEARCH STATEMENT 6 OR COMMAND?
USER:
"TREE INSECTICIDES" - (CR) - - - - - - - - - - - - - - -
PROG:

PESTICIDES D3.121
  INSECTICIDES D3.121.33
    ALDICARB D3.121.33.1
    ALDRIN D3.121.33.1
    ALLETHRIN D3.121.33.1
    AZINPHOSMETHYL D3.121.33.1
    BENZENE HEXACHLORIDE D3.121.33.1
    CARBOFURAN D3.121.33.1
    CHLORDAN D3.121.33.1
    . . . . . .

The TREE command is another vocabulary browsing aid. It causes a MeSH term to be displayed with its broader term and its specifics. MeSH tree numbers also appear. In the example, the MeSH term INSECTICIDES is displayed indented under the broader heading PESTICIDES. The specific types of insecticides found in the vocabulary are then shown indented under INSECTICIDES.

DIALOGUE

SS 6/C?---SEARCH STATEMENT 6 OR COMMAND?

USER:

EXPLODE D3.121.33 - (CR) - - - - - - - - - - - - - - -

PROG:

PSTG---NUMBER POSTINGS (2032)

SS 7/C?---SEARCH STATEMENT 7 OR COMMAND?

USER:

5 AND 6 - (CR) -

PROG:

PSTG---NUMBER POSTINGS (65)

SS 8/C?---SEARCH STATEMENT 8 OR COMMAND?

USER:

"PRINT FULL 1 INDENTED" - (CR) - - - - - - - - - - - -

PROG:

+AUTHOR- GREVE PA
TITLE- CHEMICAL WASTES IN THE SEA: NEW FORMS OF MARINE POLLUTION.
SOURCE- SCIENCE 173 1021-2 SEP 71
+LANGUAGE ENGLISH
ACCESSION NUMBER- 6162377
+PUBLICATION YEAR- 1971
+ENTRY DATE- 711212
+MAIN HEADING- ACETATES/ANALYSIS
+MAIN HEADING- ANIMAL EXPERIMENTS
+MAIN HEADING- BENZENE/ANALYSIS
+MAIN HEADING- CHLORAMINES/ANALYSIS
+MAIN HEADING- CHLORINE/ANALYSIS
+MAIN HEADING- ETHERS/ANALYSIS
+MAIN HEADING- FISHES/DRUG EFFECTS
+MAIN HEADING- *INSECTICIDES/ANALYSIS
+MAIN HEADING- INSECTICIDES/TOXICITY
+MAIN HEADING- MINERAL OIL/ANALYSIS
+MAIN HEADING- NETHERLANDS
+MAIN HEADING- SEAWATER/ANALYSIS

EXPLANATION

Many terms may be searche rapidly by using the EXPLODE function. EXPLODE causes all MeSH terms beginning with the requested MeSH tree number to be retrieved. In this case, INSECTICIDES and all its specific types are retrieved. The tree number for INSECTICIDES was obtained as part of the TREE command above. Note that the specific types of insecticides all have tree numbers beginning with D3.121.33.

The water terms are ANDed with the explosion of INSECTICIDES. By expanding the search, retrieval has increased from the original 19 articles to 65 articles.

PRINT FULL is another PRINT option and it causes all the information stored in the computer for a particular journal article(s) to be listed. In the example, 1 requests one citation and INDENTED requests an expanded format where the category names are spelled in full, e.g. AUTHOR.
Searchable items have been indicated with a + in this example.

DIALOGUE	EXPLANATION
+ AIN HEADING- *WATER POLLUTION/ ANALYSIS +MAIN HEADING- WATER POLLUTION, CHEMICAL/ANALYSIS +JOURNAL CODE- UJ7	Main headings preceded by an asterisk are the terms under which an article is found in Index Medicus. These terms reflect the main point of the article. In a search statement, a main heading may be preceded by an asterisk to retrieve only those articles where the requested heading is one of the major points of the article.
SS 8/C?---SEARCH STATEMENT 8 OR COMMAND? USER: GREVE PA -(CR)- PROG:	The same citation which has been searched above by subject is now searched by author.
PSTG---NUMBER POSTINGS (1)	
SS 9/C?---SEARCH STATEMENT 9 OR COMMAND? USER: "PRINT TI" -(CR)- PROG:	This PRINT option requests titles only.
TI- CHEMICAL WASTES IN THE SEA: NEW FORMS OF MARINE POLLUTION.	
SS 9/C?---SEARCH STATEMENT 9 OR COMMAND? USER: "DIAGRAM 7" -(CR)- PROG:	The DIAGRAM command provides a descriptive listing of an earlier search statement. This is especially useful when a search statement is composed of various combinations of preceding search statements. 7 = SEARCH STATEMENT 7
SEARCH FORMULATION BEGINNING AT SS 7: ((SS 5: WATER POLLUTION OR WATER SUPPLY OR WATER POLLUTION, CHEMICAL) AND (SS 6: ALL D3.121.33# (MESH CLASS)))	
SS 9/C?---SEARCH STATEMENT 9 OR COMMAND? USER: 7 AND LOUISIANA -(CR)- - - - - - - - - - - - - - - - - - PROG:	Geographics are in the MeSH vocabulary and may be searched.
PSTG---NUMBER POSTINGS (2)	
SS 10/C?---SEARCH STATEMENT 10 OR COMMAND? USER: 7 AND 1971 THRU 1972 -(CR)- - - - - - - - - - - - - - - -	Publication years may be searched.

DIALOGUE	EXPLANATION
PROG: PSTG---NUMBER POSTINGS (20) SS 11/C?---SEARCH STATEMENT 11 OR COMMAND? USER: 7 AND GERMAN - (CR) - PROG:	Language is a searchable item.
PSTG---NUMBER POSTINGS (3) SS 12/C?---SEARCH STATEMENT 12 OR COMMAND? USER: 7 AND REVIEW - (CR) - PROG:	The user may request review articles only.
PSTG---NUMBER POSTINGS (9) SS 13/C?---SEARCH STATEMENT 13 OR COMMAND? USER: @ (CR) - USER: "ERASEALL"- (CR) - PROG: SS 1/C?---SEARCH STATEMENT 1 OR COMMAND?	@ is entered by the user after each completed search. Search statement numbers have been increasing each time postings are retrieved, w numbers proceeding from 1 16. Previous search statement numbers may be erased after any USER cue.
USER: "STOP" - (CR) - PROG: BEFORE STOPPING, HAVE YOU ENTERED AN AT SIGN (@) FOR EACH INTELLECTUAL SEARCH? (YES/NO) - USER: YES - (CR) - PROG: GOOD-BYE! - USER: or PLEASE LOG IN:	Instead of erasing and beginning a new search, the user may wish to STOP. System reminds user to enter @ symbols. User has entered @ symbol and types YES. System acknowledges logout. Depending on the communications network used, the message USER or the message PLEASE LOG IN will be received. After USER, press the CR and you are then disconnected from the computer. After PLEASE LOG IN, you ma .mediately turn off the terminal.

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 41 SEPTEMBER 1972

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detached 10/24/72 GSB

U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

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of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . . . . Barbara Greehey and
Rose Marie Woodsmall
Regional Medical Libraries . . . Dan Tonkery
Technical Services . . . . . .Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

MEDLINE HOURS

The new MEDLINE hours of operation effective as of September 6, 1972 are as follows:

	(Eastern Time)
Mon, Tue, Fri	10:00am - 4:00pm
Wed, Thu	10:00am - 9:00pm
Saturdays	12 noon - 3:00pm

If you are planning a demonstration which does not fall within these hours, please notify MEDLARS Management Section and we will try to have MEDLINE available for your use.

TWX NETWORK + TYMSHARE NETWORK + MEDLINE = RAPID TRANSMISSION TO REMOTE PHYSICIANS

by Ann Van Camp, Search Analyst
Indiana University School of Medicine Library

The Indiana University School of Medicine Library is part of a statewide TWX network. Biomedical personnel throughout Indiana may use the resources of the Library by requesting either specific articles and books or bibliographic searches through 22 local public libraries, which then relay the requests to the School of Medicine Library by TWX.

Nearly all requests for bibliographic searches are processed on on-line computer terminals accessing either the MEDLINE system, AIM-TWX system, or the SUNY Biomedical Communication Network system.

The terminal which is utilized for MEDLINE searching is a Model 33 ASR TWX with alternate use arrangement and a tape punch/tape reader attachment. The alternate use arrangement allows the TWX to be used on both the TWX network and the phone network.

We recently received an emergency request for information on chemotherapy of ovarian teratoma from the Vigo County Public Library in Terra Haute, Indiana for a physician at their local hospital. They also requested that we TWX the citations back to them as soon as possible.

Our TWX terminal was ideally suited to this type of request. As the search was being processed on MEDLINE, the tape punch was turned on and a paper tape and printout were created simultaneously. Discarding the printout, we

used the paper tape to transmit the bibliography via TWX to the Vigo County Library. The entire transaction took less than thirty-five minutes, and the physician could then look at the journal articles in his own hospital library.

In order to make this type of service efficient on a routine basis, several things are essential. First, the MEDLINE Center would need to publicize to remote users that such a service was available for emergencies. Secondly, the requesting physician or hospital librarian should alert the public library that the required bibliography should be returned by TWX, so that they in turn could include this in the request for information. A reminder that MEDLINE may be reached by using the TWX network. This may be of interest to MEDLINE Centers that do not regularly use a TWX for accessing MEDLINE, but have this type of terminal for interlibrary loan service.

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
Barbara Greehey
MEDLARS Management Section, NLM

MESSAGES TO MMS

Reminder: Users have available the SEND MMS function in Tymshare and the COMMENT command in MEDLINE. You may use these to send data base errors, comments, and other messages to MEDLARS Management Section. These files are queried daily and those questions that require an answer are responded to as soon as possible; in the case of data base errors we will usually correct the problem but will not contact the user. For instructions on sending on-line messages to MEDLARS Management Section, see the following articles in previous issues of the Technical Bulletin:

Sending Mail Through Tymshare, Page 6, April 1972
To Comment About MEDLINE System, Page 6, January 1972

EVALUATIONS

During the week of September 18, MEDLINE Search Evaluation forms were enclosed with all off-line prints mailed from the National Library of Medicine. The analyses that will be performed on the returned forms will be presented to the Regional Medical Library Directors during their meeting at The National Library of Medicine in October 1972. The results of the survey may also be published in the Technical Bulletin at a later date. We would appreciate your cooperation in encouraging all requesters to return the completed forms to MEDLARS Management Section as soon as possible.

STATISTICAL SURVEY

MEDLARS Management Section has mailed a MEDLINE statistical reporting form to all MEDLINE Centers. This form should be completed after the close of business on September 28, 1972 and returned to MMS as soon as possible. The statistics gathered from

this survey will be presented to the Regional Medical Library Directors at their meeting at the National Library of Medicine in October.

TYMSHARE

The Tymshare Corporation has notified us that NLM will receive a 40 cent credit each time one of our users is accidentally disconnected while accessing MEDLINE or AIM-TWX through the Tymshare Network. If while searching or printing, you receive the message PLEASE LOG IN and you have to relogin, this constitutes a disconnect. If you experience the above, please record the following information and send it to MEDLARS Management Section, on a monthly basis, at the close of business on the

last Thursday of each month:

1. Date of Disconnect
2. Time of Disconnect
3. Your Terminal ID (e.g. MEDFRG23)

LITERATURE SEARCHES

Please address all requests for National Library of Medicine Literature Searches to:

Literature Search Program
Reference Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014

(Please do not send your requests on interlibrary loan forms).

MEDLARS ENTRYDATES

Since users may receive a monthly listing of the MEDLARS/MEDLINE/AIM-TWX entrydates and the number of citations input into each of the data bases by logging into the Tymshare News files and typing COM ENTRYDATES, MEDLARS Management Section will no longer be sending the special listing of this information to the U.S. MEDLARS or MEDLINE centers. This listing will still be sent to the foreign MEDLARS Centers.

TYMSHARE NEWS FILES

Several of the Tymshare News files may only be accessed by one user at a time. If, for example after entering COM PHONES, you receive the message FILE BUSY CANNOT OPEN (MMS)@PHONES and then a period (.), type the word quit, wait for a few minutes, and then enter your access command again. At present this applies only to COM PHONES and COM ENTRYDATES.

MEDLINE ORIENTATION AT THE UNIVERSITY OF NEBRASKA

Carolyn S. Green, Assistant Librarian
University of Nebraska Medical Center Library, Omaha

MEDLINE service has been available at the University of Nebraska Medical Center Library since January, 1972. It has met with enthusiastic acceptance, both from Medical Center personnel, and from health scientists elsewhere in Nebraska and South Dakota, whom we serve as headquarters for the decentralized Midcontinental Regional Medical Library Service (Regional requesters in other states receive MEDLINE service from resource libraries in their own states). Service has increased from 18 on-line searches (including AIM-TWX) in January to 76 in July. An average of about 35 per cent of the searches each month are for non-Medical Center requesters.

This activity has been generated by word-of-mouth publicity, announcements in the campus newsletter, and staff introductions to the system (searches suggested by a reference librarian, demonstrations during library tours, talks to faculty groups, etc.). Regional users were introduced to the system by seven MEDLINE-Interlibrary Loan workshops conducted across Nebraska and South Dakota in April and May by the MCRML headquarters staff.

We have become increasingly aware that some type of structured introduction to MEDLINE services is needed. While informal methods do serve to publicize the service, the information presented is frequently inconsistent, and valuable information may be inadvertently omitted. We have therefore developed a slide-tape user orientation program to provide a logical introduction to the system.

In preparing the program, we had three potential audiences in mind: (1) students, (2) faculty and other health professionals who are familiar with medical literature, and (3) groups outside the Medical Center. Since the project was funded by the University of Nebraska, our first priority was the orientation of our own personnel; but in our capacity as headquarters for the Midcontinental Region, we felt that it was essential to develop a program which could be used with audiences outside the Medical Center. We wanted to create a program which would be sophisticated enough to hold the interest of a professional audience, but which would be comprehensible to someone with virtually no background in medical literature.

A preliminary script was prepared, with suggestions for appropriate slides, and submitted to the Medical Center's Division of Biomedical Communications for preparation of the slides. Simultaneously, the script was tested in several workshops, using various handouts as substitutes for slides, to determine its effectiveness as a teaching device. When the slides were completed, a revised script was prepared, and that program was also presented several times for criticism and testing.

The final program consists of 32 slides and a tape cassette narration and runs for approximately 16 minutes. Basic instruction in the use of MeSH is incorporated into the presentation. MEDLARS searches are mentioned only in passing, since that service is fully explained in the slide-tape program

distributed by NLM. From the first, we visualized the program as flexible enough to be used either with the MEDLARS presentation, with relatively little overlap, or as an independent unit in itself.

The program briefly explains the background of MEDLINE, comparing it in terms of data base, retrieval, and response time with MEDLARS. It also mentions the factors to be considered in requesting a MEDLINE search. Using a narrative technic, it then shows the audience how the system solves a specific problem for a user. The requester is followed as she uses Index Medicus, MeSH (both the alphabetical and categorized sections), and the Tree Structures. She then requests a MEDLINE search, and the search process is followed from the time she dials into the system, until she uses a MEDLINE citation to request an article on interlibrary loan.

The complete MEDLINE printout is shown, from "Hello from Elhill II" through "Goodbye!". All three logical connectors are used in the formulation, and the "Print", "Print Title", and "Print Full" commands are all shown. Each step in the search is fully explained, and an attempt is made to show the logical development of the on-line formulation. Typing errors and error messages were deliberately included, since audiences enjoy seeing a computer "talk back" to the user.

Copies of the slide-tape program will be supplied on request for the cost of duplication. For further information, contact: Carolyn S. Green, University of Nebraska Medical Center Library, 42nd & Dewey Ave., Omaha, Nebraska 68105.

RENUMBERING OF CITATIONS ON THE CCF

P. E. Pothier
MEDLARS Management Section, NLM

Commencing with input for the January 1973 issue of Index Medicus, MEDLARS citations will be renumbered, beginning again (for the third time in the history of MEDLARS) with citation number 0,000,001. The reason for renumbering is that, if we continued with the present numbering, we would reach citation number 3,777,777 early in 1973. The number 3,777,777 is the largest octal number that can be expressed in the 20 available bits (binary 11 111 111 111 111 111 111). The number 4,000,000 would be binary 100 111 111 111 111 111 111, which would require 21 bits.

Therefore, citations in the Vol Index entered after the close of the December 1972 Index Medicus will be numbered from 0,000,001. When requesting a CCF printout, however, searchers must add a dummy number 7 to the high order position of the number in the Vol Index, e.g., 7,000,001.

Citation numbers printed in MEDLARS searches will not have the implied high order digit printed out. Citation (accession) numbers in MEDLINE printouts, however, will be printed with the dummy number in the high order position.

MEDLINE TRAINEES AT NLM, AUGUST 21, 1972

The eighth NLM MEDLINE Training Class was held August 21 - September 8, 1972. The following people attended:

Neil Barnhard	University of Arkansas Medical Center Library Little Rock, Arkansas
Beverly Brisco	University of Mississippi Rowland Medical Library Jackson, Mississippi
Genevieve Cole	Massachusetts General Hospital Treadwell Library Boston, Massachusetts
Joanne Crispin	Lutheran General Hospital Library Park Ridge, Illinois
James Crooks	University of Michigan Medical Center Library Ann Arbor, Michigan
Howertine Duncan	Reference Services Division National Library of Medicine Bethesda, Maryland
Helen Ehrhardt	American Medical Association Archive Library Chicago, Illinois
Lester Geiger	National Institutes of Health Division of Research Grants Bethesda, Maryland
Desmond Koster	Medical University of South Carolina Library Charleston, South Carolina
Ann Ludovici	Temple University Health Sciences Center Library Philadelphia, Pennsylvania
Tricia McKeown	University of Texas Southwestern Medical School Library Dallas, Texas
Margaret Norton	Veterans Administration Hospital Library Boise, Idaho

SUBJECT COVERAGE IN THE MEDLINE DATA BASE

Following is a list of subject areas covered in the MEDLINE data base and the number of journals included in each area. The same subject areas used in the List of Journals Indexed in INDEX MEDICUS have been used for this list; some journals appear in more than one category. Journals which have ceased publication or which are no longer indexed have been included; the number of journals which fall into this category are so specified beside the journal count, e.g. N-3.

SUBJECT	JOURNALS
Allergy see Hypersensitivity	
ANATOMY	45
ANESTHESIOLOGY	16
ANTHROPOLOGY	3
ARTIFICIAL ORGANS	2
AVIATION AND SPACE MEDICINE	2
Bacteriology see Microbiology	
BIOCHEMISTRY	68 (N-1)
see also Metabolism	
BIOLOGY	54
see also Botany; Zoology	
Biometry see Statistics	
Biophysics see Physics	
Blood see Hematology	
BOTANY	1
Cancer see Neoplasms	
CARDIOVASCULAR SYSTEM	40 (N-2)
CHEMISTRY	14 (N-2)
see also Biochemistry; Histocytochemistry; Pharmacy	
Chemotherapy see Pharmacology	
Chest Diseases see Respiratory System and Thoracic Diseases	
Clinical Chemistry see Biochemistry	
Clinical Medicine see General Medicine	
COMMUNICABLE DISEASES	5
see also Tuberculosis	
Cytochemistry see Histocytochemistry	
Cytology see Anatomy	
Deafness see Hearing Disorders	
DENTISTRY	40
DERMATOLOGY AND VENEREAL DISEASE	14
Dietetics see Nutrition	
DIGESTIVE SYSTEM	14 (N-1)
Drugs see Pharmacology or Pharmacy	
EDUCATION	5
Electronics see Engineering or Physics	
Embryology see Anatomy	

SUBJECT	JOURNALS
ENDOCRINOLOGY	24
ENGINEERING	11
Entomology see Zoology	
ENVIRONMENTAL HEALTH	18
see also Public Health	
Enzymology see Biochemistry	
Epidemiology see Public Health	
EQUIPMENT AND SUPPLIES	8
Eugenics see Genetics	
EXPERIMENTAL MEDICINE	52
Eye see Ophthalmology	
Fertility see Reproduction	
Food see Nutrition	
Forensic Medicine see Jurisprudence and Forensic Medicine	
Fungi see Microbiology	
Gastroenterology see Digestive System	
GENERAL MEDICINE	88
GENETICS	23
Genitourinary System see Urology	
GERIATRICS	9
Gynecology see Obstetrics and Gynecology	
HEARING DISORDERS	3
Heart see Cardiovascular System	
HEMATOLOGY	20
Heredity see Genetics	
HISTOCYTOCHEMISTRY	5
Histology see Anatomy	
HISTORY	1
HOSPITALS	6
Hygiene see Public Health	
HYPERSENSITIVITY	8 (N-1)
see also Immunology	
IMMUNOLOGY	30
see also Hypersensitivity	
INDUSTRIAL MEDICINE	8
Infectious Diseases see Communicable Diseases	
Injuries see Wounds and Injuries	
Instrumentation see Equipment and Supplies	
Internal Medicine see General Medicine	
JURISPRUDENCE AND FORENSIC MEDICINE	6
Kidney see Urology	
Laryngology see Otorhinolaryngology	
Legal Medicine see Jurisprudence and Forensic Medicine	
Leprosy see Tropical Medicine	
LIBRARY SCIENCE AND BIBLIOGRAPHY	1
Liver see Digestive System	
Malaria see Tropical Medicine	
Mental Deficiency see Psychiatry	

SUBJECT	JOURNALS	
METABOLISM	9	
MICROBIOLOGY	58	
Mycology see Microbiology		
NEOPLASMS	22	
NEUROLOGY AND NEUROSURGERY	79	
Nuclear Medicine see Radiology and Nuclear Medicine		
NURSING	6	
NUTRITION	18	
OBSTETRICS AND GYNECOLOGY see also Reproduction	19	
Occupational Therapy see Rehabilitation		
OPHTHALMOLOGY	24	
Optics see Physics		
ORTHOPEDICS	12	
OTORHINOLARYNGOLOGY	18	
Parasitology see Microbiology		
PATHOLOGY	36	
PEDIATRICS	31	(N-1)
Pharmacognosy see Botany		
PHARMACOLOGY	56	(N-1)
PHARMACY	12	
Physical Education see Sport Medicine		
PHYSICAL MEDICINE see also Rehabilitation	5	(N-1)
PHYSICS	17	
PHYSIOLOGY see also Reproduction	51	(N-1)
Plants see Botany		
Plastic Surgery see Surgery		
Poisoning see Pharmacology		
Proctology see Digestive System		
PSYCHIATRY	64	
Psychoanalysis see Psychiatry		
PSYCHOLOGY	35	
Psychosomatic Medicine see Psychiatry		
Psychotherapy see Psychiatry		
PUBLIC HEALTH see also Communicable Diseases; Environmental Health	26	
RADIOLOGY AND NUCLEAR MEDICINE	32	(N-1)
REHABILITATION see also Physical Medicine	5	
REPRODUCTION	11	
RESPIRATORY SYSTEM AND THORACIC DISEASES see also Tuberculosis	25	
RHEUMATISM	10	
Rhinology see Otorhinolaryngology		
Roentgenography see Radiology and Nuclear Medicine		

SUBJECT	JOURNALS	
SCIENCE	8	
Serology see Immunology		
SOCIAL MEDICINE	5	
SOCIOLOGY	7	
Space Medicine see Aviation and Space Medicine		
SPEECH DISORDERS	3	
SPORT MEDICINE	1	
STATISTICS	4	
Sterility see Reproduction		
Stomatology see Dentistry		
SURGERY	63	
see also Artificial Organs; Neurology and Neurosurgery		
Syphilis see Dermatology and Venereal Diseases		
TECHNOLOGY, MEDICAL	13	
Therapeutics see Pharmacology		
Thoracic Diseases see Respiratory System and Thoracic Diseases		
Toxicology see Pharmacology		
Traumatology see Wounds and Injuries		
TROPICAL MEDICINE	14	
TUBERCULOSIS	9	
UROLOGY	10	
Vascular Diseases see Cardiovascular System		
Venereal Diseases see Dermatology and Venereal Diseases		
VETERINARY MEDICINE	28	
Virology see Microbiology		
Vitaminology see Biochemistry		
Water Pollution see Environmental Health		
WOUNDS AND INJURIES	5	
ZOOLOGY	9	(N-1)

- -

MEDLARS/MEDLINE/AIM-TWX DATA BASE STATISTICS

FISCAL YEAR 1973	JUL 72	AUG 72	SEP 72	JUL 72-DATE	DATA BASE
CITATIONS INPUT:					
MEDLARS CURRENT FILE	20,777	20,870	20,687	62,334	859,427
MEDLINE	13,018	12,538	13,472	39,028	489,896
AIM-TWX	3,327	3,152	3,791	10,270	205,269

JOURNAL TITLES:	
MEDLARS CURRENT FILE	2,301
MEDLINE	1,222
AIM-TWX	128

AUGUST 1972 MEDLINE STATISTICS

The following report indicates, left to right, the number of off-line prints requested, the total number of MEDLINE searches entered per @ symbols, and the connect hours for the August reporting period. Please remember to enter an @ symbol for each completed search so that the statistics will reflect an accurate use of the system. These statistics are computer generated and the reporting period ends at close of business on the last Thursday of the month. If your figures differ greatly from these please notify MEDLARS Management Section.

MEDLINE INSTITUTION	AUGUST		
	OFF LINE	TOTAL SEARCHES	CONNECT HRS.
ALASKA HEALTH SCI INFO CTR	3	20	2.9
AMER MED ASSOC..ARCHIVE LIB	000	000	000000
BOSTON U SCH MED..MED LIB	13	7	2.?
BOWMAN GRAY SCH MED..LIB	21	55	4.6
CASE WEST RES U..CLEVELAND HEALTH SCI LIB	000	000	000000
COL MED DENT NJ..LIB	289	223	22.3
COL PHYSICIANS PHILA..LIB	26	38	13.2
CORNELL U MED COLL..LIB	20	44	6.2
CREIGHTON U..HEALTH SCI LIB	1	5	4.1
DARTMOUTH COL..DANA BIOMED LIB	11	26	6.0
DUKE U SCH MED..MED CTR LIB	8	38	7.?
EMORY U..A W CALHOUN MED LIB	6	45	8.0
ENVIRONMENT PROTECT AG 401 M ST SW DC	000	000	.?
ENVIRONMENT PROTECT AG CINCINNATI	13	87	18.6
GEORGE WASHINGTON U HOSP..HOSP BR LIB	8	121	20.5
GEORGETOWN U MED CTR..J V DAHLGREN MEM LIB	19	71	24.0
HARVARD U..F COUNTWAY LIB	32	22	4.3
HEALTH SERV MENTAL HEALTH ADM..NIMH LIB AND HSMHA LIB	3	3	1.4
IND U..SCH MED LIB	17	76	14.4
JOHN CREAR LIB	34	33	25.2
JOHNS HOPKINS U..WELCH MED LIB	8	72	14.6
JOINT MED LIB USA USAF..OFF SURG GEN	6	20	7.1
LETTERMAN GEN HOSP..MED LIB	14	42	6.1
LOMA LINDA U..V RADCLIFF MEM LIB	5	40	8.2
LOUISANA STATE U..SCH MED LIB	1	9	1.3
LUTHERAN GEN HOSP..LIB	000	000	000000
MASS GEN HOSP..TREADWELL LIB	000	000	000000
MAYO FOUND..MAYO CLINIC LIB	35	85	13.1
MED COL OHIO TOLEDO..LIB	5	28	5.8
MED COLL WIS..MIDDLETON MED LIB	000	000	000000
MED U SC..LIB	2	32	4.8
MICH STATE U..SCI LIB	17	27	13.7
NATL LIB MED	38	177	50.4
NATL LIB MED..NAVAL RM 152	140	150	53.1
NATL LIB MED..RSD	37	136	69.7
NATL NAVAL MED CTR..STITT LIB AND RESEARCH INST	21	147	17.2
NATL RES COUNCIL OF CANADA..NATL SCI LIB	11	37	8.7

MEDLINE INSTITUTION	AUGUST OFF LINE	TOTAL SEARCHES	CONNECT HRS.
[illegible]..DRC	000	000	000000
[illegible]..LIB	212	224	52.9
[illegible]..NATL CANCER INST	11	22	7.9
[illegible]..WAMD	4	000	4.3
NY ACAD MED..NY NO NJ RML	85	95	11.5
OHIO STATE U COL MED..HEALTH CTR LIB	4	135	21.5
PENNA STATE U..HERSHEY MED CTR LIB	25	88	16.7
PHARMACEUTICAL MFR ASSN	3	45	3.4
SACRED HEART GEN HOSP..MED CTR DOCTORS LIB	000	000	000000
SPARKS REG MED CTR..HEALTH SCI LIB	5	6	.7
ST LUKES HOSPITAL..LIB	000	21	2.8
STANFORD U MED CTR..LANE MED LIB	53	94	23.0
SUNY ALBANY..CENT OFF COMPUTER CTR	000	5	2.1
TEMPLE U..HEALTH SCI CTR LIB	000	000	000000
TEXAS MED CTR HOUSTON..J H JONES LIB	107	278	44.0
TOXICOLOGY INF RESPONSE CTR..BIOL DIV	33	20	6.0
TUFTS U..MED DENT LIB	000	140	21.6
U ALA..LISTER HILL CTR HEALTH SCI	12	200	21.8
U ARIZ..MED CTR LIB	21	23	8.2
U ARK..MED CTR LIB	000	000	000000
U CALIF DAVIS..HEALTH SCI LIB	24	26	4.0
U CALIF IRVINE..MED SCI LIB	1	9	2.6
U CALIF L.A...BIOMED LIB PAC SW RML	156	387	89.2
U CALIF S.F...LIB	115	67	44.0
U CALIF SAN DIEGO..BIOMED LIB	50	45	12.9
U CINCINNATI..MED CTR LIB	92	111	27.7
U COLO..DENISON MEM LIB	23	106	20.4
U CONN..L M STOWE LIB	38	43	7.0
U FLA..J H MILLER HEALTH CTR LIB	13	42	4.3
U IOWA..MED LIB	18	35	8.5
U KANS..CLENDENING MED LIB	12	52	9.8
U KY..MED CTR LIB	12	10	1.6
U LOUISVILLE..KORNHAUSER HEALTH SCI LIB	20	71	11.5
U MARYLAND BALTIMORE..HEALTH SCI LIB	20	96	33.0
U MASS..MED SCH LIB	000	000	000000
U MIAMI..L CALDER MEM LIB	14	51	14.0
U MICH..MED CTR LIB	15	25	7.3
U MINN..BIOMED LIB	54	92	19.3
U MISS MED CTR..ROWLAND MED LIB	000	000	000000
U MO COLUMBIA..MED LIB	51	75	12.0
U MO KANSAS CITY..SCH MED LIB	3	36	5.5
U NC..HEALTH SCI LIB	16	14	1.9
U NEBR..MIDCONTINENTAL RML PROG	19	98	17.3
U NEV RENO..LIFE HEALTH SCI LIB	3	21	2.0
U NM..LIB MED SCI	55	93	10.0
U OKLA..HEALTH SCI CTR LIB	6	32	7.6
U OREGON..MED SCH LIB	000	000	000000
U PITTSBURGH..FALK LIB	96	97	15.0
U S GOVT	7	19	3.2

MEDLINE INSTITUTION	AUGUST OFF LINE	TOTAL SEARCHES	CONNECT HRS.
U SO CALIF SCH MED..NORRIS MED LIB	73	114	19.5
U TENN..MED UNITS LIB	19	16	1.9
U TEXAS DALLAS..MED SCH LIB	52	95	21.8
U TEXAS MED BR GALVESTON..MOODY MED LIB	14	106	22.2
U TEXAS SAN ANTONIO..MED SCH LIB	21	47	13.4
U UTAH..ECCLES MED SCI LIB	27	26	6.7
U VA..MED SCH LIB	43	109	22.0
U WASHINGTON..PAC NW REG HEALTH SCI LIB	33	128	32.1
U WISC..MIDDLETON MED LIB	38	92	21.7
V A CTRL OFF 810 VERMONT AVE NW DC	3	10	5.7
V A HOSP BOISE IDAHO..LIB	000	000	000000
V A HOSP DC..LIB	13	75	13.1
V A HOSP ERIE PA..LIB	8	45	4.9
V A HOSP SEPULVEDA CALIF..MED LIB	5	31	4.1
V A HOSP WOOD WISC	5	18	5.9
VANDERBILT U..SCH MED LIB	1	4	.9
WALTER REED GEN HOSP WRAIR..LIB	29	111	27.8
WASHINGTON HOSPITAL CTR..MED LIB	000	23	6.5
WASHINGTON U..SCH MED LIB	98	183	43.1
WAYNE STATE U..SHIFFMAN MED LIB	15	36	9.1
WVA U..MED CTR LIB	13	25	9.6
YALE U..MED LIB	105	50	16.8

Totals: Off-line Prints - 2914
@ Symbols - 6319
Connect Hours - 1429.9

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 42 OCTOBER 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616
ASSISTANT EDITOR
Barbara Greehey

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . Leonard J. Bahlman and
Rose Marie Woodsmall
Regional Medical Libraries . . Dan Tonkery
Technical Services . . . . . Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

TYMSHARE NUMBERS

As of November 1, 1972 the Tymshare network will include telephone numbers in the following cities. These numbers all operate at 10 and 30 characters per second. The Western Union numbers are no longer available.

The numbers are:

Atlanta, Georgia
404/875-7963
Birmingham, Alabama
205/252-8331
Cincinnati, Ohio
513/381-8539
513/381-8527
Denver, Colorado
303/321-1105
Omaha, Nebraska
402/341-5832

1973 INDEXING ORIENTATION

Thelma Charen
Index Section, NLM

The Index Section held its annual fall orientation upon publication of the new indexer-searcher MeSH. This year, on 29 September, the twenty members of the Index Section staff at NLM attended, as well as 25 indexers employed by contractors, coming from as far away as Spencer, Mass., Atlanta, Ga. and Charleston, S.C. Other NLM staff members were present.

Most of the four-hour orientation was devoted to an examination of the new main headings in the 1973 MeSH. New terms added to MeSH for 1973 totalled 640, of which 340 were new Category D terms. Of the non-drug/non-chemical headings 160 were former Provisionals (and so will present no problem of memorization) and only 140 of these are brand new! Significant terms among these 140 were perused and commented on by category. Indexers were delighted at the appearance of favorites and of oft-requested terms.

The highlight of the orientation was the presentation of the indexer-searcher copy of the 1973 MeSH termed "the Annotated MeSH." This is a trial one-column printing of MeSH with thousands of main headings and selective cross-references annotated with indexing instructions gathered from various indexing tools: MEDLARS Indexing Manual, Goto's Main Heading/Subheading Combinations, Technical Notes, Cross-References: Indexing Instructions, the Network Technical Bulletin and various Index Section memoranda. Rather than publish a greatly needed enlarged Goto, subheading permissions and restrictions were added wholesale to the Annotated MeSH. Subheadings were restricted two ways, by

1973 INDEXING ORIENTATION: ADDENDUM

1973 Form of Earlier Main Headings

ANTIGENS, BACTERIAL	formerly BACTERIAL ANTIGENS
ANTIGENS, NEOPLASM	formerly NEOPLASM ANTIGENS
ANTIGENS, VIRAL	formerly VIRUS ANTIGENS
AUSTRALIA ANTIGEN	formerly HEPATITIS VIRUS, HOMOLOGOUS SERUM
AUTORADIOGRAPHY	formerly RADIOAUTOGRAPHY
FIBRIN FOAM	formerly FIBRIN FILM AND FOAM
TEMPOROMANDIBULAR JOINT SYNDROME	formerly COSTEN'S SYNDROME
TOMOGRAPHY, RADIOGRAPHIC	formerly TOMOGRAPHY

-OLOGICAL

MODELS, BIOLOGICAL	formerly MODELS, BIOLOGIC
MODELS, PSYCHOLOGICAL	formerly MODELS, PSYCHOLOGIC
STRESS, PSYCHOLOGICAL	formerly STRESS, PSYCHOLOGIC

Plurals

The terms listed below were all formerly singular:

BIRTH INJURIES
BLAST INJURIES
BRAIN INJURIES, ACUTE
ELECTRIC INJURIES
HOOKWORM INFECTIONS
PYROPHOSPHATASES
QUESTIONNAIRES
RADIATION INJURIES
RADIATION INJURIES, EXPERIMENTAL
SCHIFF BASES
TENDON INJURIES
TRANSDUCERS
WHIPLASH INJURIES
WHOLE BODY COUNTERS

Singulars

These two were formerly plural:

FOOD, FORTIFIED
INFANT FOOD

- -

The following main headings were deleted from MeSH for 1973:

Deleted	Replaced by
CINEFLUOROGRAPHY	CINERADIOGRAPHY
COSTEN'S SYNDROME	TEMPOROMANDIBULAR SYNDROME
PRENATAL INFLUENCES	EMBRYO or FETAL DISEASES or FETUS
PSYCHOSES, PRESENILE	DEMENTIA, PRESENILE
RADIOAUTOGRAPHY	AUTORADIOGRAPHY
REAGINS	IGE
REFLEX, CONDITIONED	CONDITIONING, CLASSICAL
RIFOMYCIN	RIFAMPIN
VINCENT'S INFECTION	GINGIVITIS, NECROTIZING ULCERATIVE

subcategory and by individual heading. Hundreds of main headings were indicated as "usually IM" or "usually NIM" to help in controlling the content and consistency of INDEX MEDICUS. Since this is the first Annotated MeSH, the reception by MEDLARS and MEDLINE users is eagerly awaited. Your acceptance or rejection may decide its fate.

You will find appended one of the various lists handed to indexers at the orientation. This list is of interest to searchers too.

Over 50 new pages for the MEDLARS Indexing Manual were distributed for 1973. Although each page is dated 1973, we have further identified the page as an addendum, a revision or an updating. The ENZYME KEY has been completely revised and can replace the previous editions since it contains many new MeSH enzymes. The Index to the manual has also been completely retyped toward updating and can fully replace the old one. The most important of the 50-odd pages can be briefly summarized thus, with write-ups to cover

1. the handling of inbred strains of rats and mice;
2. use of *immunology with the animal yielding the immunological matter (requested by British searchers);
3. use of both *adverse effects and *therapeutic use with drug terms if both aspects are discussed (requested by NLM searchers);
4. restricted subheadings for Subcategory B2;
5. amplification of indexing of primates (requested and approved by the Manager of the Primate Research Center in Seattle);
6. amplification of the section on infections;
7. indexing of syndromes using the new Provisional SYNDROME;
8. restriction of Category F subheadings by subcategory;
9. addition of three new geographic terms (GUYANA, ZAIRE, BANGLADESH).

New INDEXER QUERY and TRANSLATION QUERY forms were distributed and discussed. These are used by non-NLM indexers - foreign and contract - and will form the basis of future technical notes, MeSH suggestions and translation tools projected.

We announced the indexing aids forthcoming early in 1973 and displayed new aids. These will be announced in later issues of the Technical Bulletin as they are available.

THE TOXICOLOGY INFORMATION CONVERSATIONAL ON-LINE NETWORK SERVICE (TOXICON)

Henry M. Kissman, Ph.D.
Donald J. Hummel
Specialized Information Services, NLM

(Excerpted from a paper presented at the 164th Annual Meeting of the American Chemical Society, August 28-31, 1972, New York, New York)

The Toxicology Information Program (TIP) of the National Library of Medicine (NLM) was organized to serve a need for greater dissemination of toxicology information as identified by a Presidential Science Advisory Committee in 1966. The Program mission to collect and disseminate toxicity data has resulted, in part, in the development of a Toxicology Information Conversational On-line Network or TOXICON.

TOXICON Overview

TOXICON is designed to provide health professionals and related support personnel with the ability to access toxicology data and information by direct interaction with a computer-based store via a remote terminal. Access may be through the communications network provided or by direct communication to the computer located in Washington, D. C. Terminal devices acceptable to the system include the majority of models designed for standard alpha-numeric data transfer which are capable of being connected to a standard telephone device.

The data store in TOXICON will contain (1) bibliographic files including citations, abstracts and keywords; (2) whole text files containing the full text of articles and reviews; and (3) data files consisting of specific numerical and verbal descriptors. Each master linear file will be indexed by a variety of inverted files designed to optimize the precision of data retrieval. In the bibliographic file every word in the title, keyword and abstract fields is placed in an inverted file. The command language employed by the interactive system is designed to simplify data retrieval.

The charge to the user has been minimized to reflect only those costs directly associated with the utilization of the communication network and computer resources. The Toxicology Information Program assumes costs associated with the acquisition, creation, transformation and maintenance of all data bases, the storage of the master files and associated indexes and dictionaries, special hardware rental required by the system configuration, and software enhancements to improve the performance and cost effectiveness of the system.

File Organization and Interaction

The tripartite data base design for TOXICON defines three interrelated but distinct files. This approach facilitates searching specific files while minimizing the duplication of data among them. A unique, consistent structure exists for each of the three files comprising a data base as well as the supportive dictionaries or thesauri.

The key component of the data base is the bibliographic master file, a collection of 180,000 bibliographic records. Each record contains the full citation plus index terms, an abstract or both. The current holdings of the system include all of Toxicity Bibliography (TOXBIB), a subject matter subset of MEDLARS, annotated with Medical Subject Headings (MeSH) terms; the Health Aspects of Pesticides Abstract Bulletin (HAPAB), a publication of the Environmental Protection Agency, fully annotated with abstracts; and the first twelve of fourteen volumes of Chemical-Biological Activities (CBAC) acquired by permission of Chemical Abstracts Service. The CBAC and HAPAB records, in addition to the full citation, contain a complete abstract and all Chemical Abstracts Registry Numbers assigned to each article.

The second and third components of the data store are presently in the planning and building stages. The second component of the coordinated data base is the whole text file. This master file will contain a collection of full text reports and reviews ranging in size from books to brief one or two page review articles. The bibliographies associated with the textual material will be included in the main bibliographic master file and cross-referenced back to the whole text file.

The third component of the data base is the data file. Although not yet fully defined, some characteristics for this file have been determined. Records will be structured with a hierarchical arrangement of data fields consisting of structured verbal, numerical or alpha-numerical items. Data to be incorporated into this file will include controlled protocol animal studies, clinical reports, and chemical identification material. All applicable citations in these data files also will be referenced back into the main bibliographic file.

The three data files will be supported by specialized dictionaries such as a chemical synonym list similar to the Common Data Base (CDB) compiled by Chemical Abstracts Service for several cooperating Government Agencies, and a toxicology thesaurus created for the Toxicology Information Program following the general format of the Medical Subject Headings thesaurus developed by the National Library of Medicine.

TOXICON Configuration

Based upon an open competitive bid, the Toxicology Information Program selected for TOXICON, the STIMS/RECON software systems operating under the ALPHA time-sharing system as proposed by Informatics, Inc. STIMS (Scientific and Technical Information Modular System) and RECON (Remote Console) are both NASA-developed systems. Both are in the public domain and can be acquired from COSMIC at the University of Georgia in Athens, Georgia. ALPHA is a proprietary time-sharing system developed by COMNET of Washington, D. C. The entire package operates on an IBM 360/65 with a COM 40 as a communications handler and an AMPEX double density disc storage device. Most of the file maintenance is accomplished at the National Library of Medicine on an IBM 370/155.

TOXICON Command Language

RECON is the search mechanism for TOXICON and is the only part of the software encountered by the user. RECON provides the TOXICON user with a very simple command language consisting of fifteen words. Two commands serve a housekeeping purpose (Begin and End Search); two are supportive of the user (Explain and Search Status); four are primary to the search function (Expand, Select, Combine and Limit); and the remaining seven commands define or manage the output of data for the user (Display, Print, Type, Page, Keep, Specify Format and Sort). The search commands are the key to the successful use of the TOXICON service.

TOXICON Select Command

The select command is the most powerful and varied command in the TOXICON system. It basically creates a set of documents which are indexed by the attributes specified by the searcher. The simplest select is for a single unique term, either stated or existing in a prior expand list. All items falling between a stated range may be selected by a single command. If the limits of the range are undefinable, then a root or stem search can be executed to select all terms which begin with a user defined set of characters. The search command permits the user to specify word associations which must occur to meet the conceptual intent of a query. Word proximity may be specific up to an eight word distance or generalized to terms in the same sentence.

Developmental Activities

A number of other developmental activities are scheduled or under way to improve TOXICON during this fiscal year. An automated duplicate citation matching procedure is being designed to eliminate redundancy in the Bibliographic File. Enhancements are scheduled to be incorporated into RECON to improve retrieval time, extend the power of the search logic and provide additional output capability of the system. The bibliographic file will be enlarged and the whole text and data files will be initiated.

Access to TOXICON

Access to the TOXICON service is open to the public. To subscribe to the service, an individual or organization enters into a contract with Informatics, Inc. Under this contract, the subscriber is entitled to full use of the system during the hours of availability, normally 8:00 A.M. to 10:00 P.M. Eastern Time, Monday through Friday, and 8:00 A.M. to 6:00 P.M. on Saturday. Additionally, the full facilities of the communications network as provided by Tymshare, Inc., are included in the service. The training of one individual in the use of TOXICON, and the delivery and maintenance of manuals is also provided for by the contract. Terminals must be provided by the user, as well as the communications link, if any, to the nearest

node in the Tymshare network.

Charges for services provided under contract are: a one-time charge of $350.00 to cover training, manuals and customer support; $150.00 for each additional trainee; $2.00 for each additional manual; $45.00 per connect hour for actual system connect time with no minimum monthly charge; $5.00 per 1,000 lines of off-line print; and special charges for special services. For additional information about accessing TOXICON, contact Informatics, Inc., 6000 Executive Boulevard, Rockville, Maryland 20852.

MEDLINE TRAINEES AT UCLA, SEPTEMBER 18, 1972

University of California Biomedical Library, Los Angeles held its fourth MEDLINE Training Class September 18 - October 3, 1972. The following people attended:

Lora-Frances Davis	Brooke General Hospital Medical Library Fort Sam Houston, Texas
Harvey Hammond	Children's Hospital of Los Angeles Doctor's Library Los Angeles, California
Frances Ishii	Memorial Hospital Medical Center of Long Beach Medical Library Long Beach, California
Elizabeth King	Brain Information Service UCLA Biomedical Library Los Angeles, California
Robin Rasicot	University of Utah Eccles Medical Sciences Library Salt Lake City, Utah
Mollie Reeves	University of California, Davis Health Sciences Library Davis, California
Ferol Willblanks	Texas Medical Association Library Austin, Texas

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
MEDLARS Management Section, NLM

DATA BASE ERRORS

When reporting data base errors, please refer to the data base which you were accessing when the error was found, e.g., MEDLINE, SDILINE, AIM-TWX.

MEDLINE HOURS

Effective October 30, 1972, MEDLINE hours will be as follows:

Monday, Tuesday, and Friday	9:00 am to 4:00 pm (ET)
Wednesday and Thursday	9:00 am to 10:00 pm (ET)
Saturday	12:00 noon to 3:00 pm (ET)

Recent surveys have shown that MEDLINE is most heavily used during the afternoon hours, especially around 3:00 pm (ET). We encourage everyone, whenever possible, to use MEDLINE in the morning, on Wednesday or Thursday nights, or on Saturday. If you log in during a busy period, you may receive the message "System Full-Try Later." This message indicates that the maximum number of 50 users are already on the system.

MESSAGES ON-LINE

MEDLARS Management Section is now able to send messages, such as responses to user queries, on an on-line basis to individual users. Please log into the Tymshare news files daily and messages sent to your institution will appear automatically. This will eventually be changed and the messages will not appear automatically; at that time the user will then have to identify himself to receive the message. Please notify members of your staff, or anyone else using the system, that these messages should be routed to a central person. (DO NOT "escape" upon entering the News Files until you are certain there is no message for your institution or the messages will be lost)

OFF-LINE PRINTS

Many off-line prints are being returned to MEDLARS Management Section because they have been addressed to unknown personnel at the MEDLINE Centers. When off-line prints are mailed to the MEDLINE Center, please enter the name of the MEDLINE analyst in the address portion of the query and enter the name of the actual requester when prompted with REQUESTER's NAME OR SAME.

SDILINE

The current month of Index Medicus may now be searched on-line. When logged into MEDLINE, enter "FILE SDILINE" to access this file of the 2,300 journals in the current month of Index Medicus. This file will be replaced each month as the new month becomes available. Users will be informed of the contents of SDILINE through COM DATABASE in the Tymshare News Files. To return to

the MEDLINE data base from SDILINE, enter "FILE MEDLINE." Strategies are not retained when moving from one file to the other. For additional information on SDILINE, see the article by P. E. Pothier on page 11.

SEARCH REQUEST FORMS

An initial supply of 200 MEDLINE Search Request forms has been mailed to all MEDLINE institutions. If these forms meet your needs, you may have them reproduced in whatever quantity you wish. There will be no further distribution of these forms from the National Library of Medicine.

SEND NLMX

Users sending messages through the Tymshare system to a specific person in the Index Section at NLM, e.g. Ruth Stander, Thelma Charen, Stanley Jablonski, are requested to follow this procedure:

1. When sending Mail, enter SEND NLMX instead of SEND MMS. This will route the message directly to Index Section.

2. All messages not being sent to a specific person in Index Section should still be sent to MMS.

SIA DATA BASES

Users wishing information on the Science Information Association (SIA) data bases, such as usage costs and dates and locations of training sessions may contact:

Mr. Robert M. Landau, Vice President
Science Information Association
3514 Plyers Mill Road
Kensington, Maryland 20795
phone: 301/949-0220

STATISTICS

Users may now log into the Tymshare News Files and enter COM (MMS)REGIONSTATS for the most recently completed month of MEDLINE statistics broken down by region. These statistics formerly appeared in the Technical Bulletin. Our reporting period ends at the close of business on the last Thursday of each month. These statistics are computer-generated; if they differ greatly from yours, please notify MEDLARS Management Section.

RECURRING DEMAND SEARCHES AND SDILINE

P. E. Pothier
MEDLARS Management Section, NLM

After the close of the current Index Medicus year, each MEDLINE Center will be responsible for processing recurring demand searches originating from the user community it serves.

The file, against which the RDS's will be processed, is called SDILINE (Selective Dissemination of Information on LINE). This is a new on-line file containing all MEDLARS citations for the current month. By all citations, we mean all citations from all Index Medicus journals plus the special list journals. The entire contents of SDILINE will be changed once each month, usually by the first week of the month. The citations contained in SDILINE will be almost a month ahead of the Index Medicus publication date. Thus, for example, the Index Medicus citations available in SDILINE from early April until early May will be those that appear in the May Index Medicus.

SDILINE is accessed by logging in to MEDLINE and issuing the command "FILE SDILINE". All the commands available in MEDLINE are available in SDILINE. In addition SDILINE contains certain capabilities not presently available in MEDLINE.

1. SDILINE allows up to 175 search terms before an entries overflow is encountered. (This feature will be added to MEDLINE.)
2. SDILINE includes the capability to search a subheading alone or to apply a subheading to an explosion or to the sum of a number of main headings. Thus, when converting a MEDLARS RDS which includes explosions with subheadings or sums with subheadings, the searcher may AND the sum or the explosion with the subheading.

Example 1: Pesticide poisoning
SS 1: Explode D3.121 AND poisoning (SH)
or: Explode D3.121 AND po

Example 2: Etiology of multiple sclerosis, amyotrophic sclerosis or scrapie
SS 1: Multiple sclerosis or amyotrophic lateral sclerosis or scrapie
SS 2: 1 AND etiology (SH)
or: 1 AND et

Note that unless the subheading is followed by the qualifier (SH) or abbreviated, it will result in a multi-meaning message if an identical main heading exists. If you receive a multi-meaning message, do not respond with "ALL", as this will result in time-consuming and inefficient use of the system. Searching on unattached subheadings will, of course, retrieve some irrelevant

citations, in which the subheading is attached to other than the desired terms. However, in an experimental analysis of 13 searches, only one retrieved a significant amount of "noise" due to the use of unattached subheadings.

3. Because of the limited size of the SDILINE data base (about 20,000 citations), one may often successfully use explosions that would cause overflows on the vastly larger MEDLINE file. Most explosions at the second and third level will work. Explosions at the first level generally will not work.

An analysis of 100 RDS's showed that 78% of the RDS's could be reformulated without major changes to run on SDILINE. The other 22% could not run on SDILINE because they contained over 175 entry terms, because they included first level explosions or because they retrieved over 300 citations. In order for these searches to be run on SDILINE, they will have to be modified.

Searchers will probably want to take a close look at all the searches before converting them wholesale to SDILINE formulations. The average number of entry terms in the RDS's is 47. If the searches are to be input manually each month, searchers will want to reduce them to as few terms as possible.

For institutions whose terminals have paper or magnetic tape attachments, such as the TTY and some Terminet 300s, the monthly labor of inputting can be substantially reduced. The searcher punches his statements onto tape, following each statement with a CR, control X-off and a non-printing character such as a line feed. The control X-off stops the tape reader. When the computer response is completed, the program will transmit an X-on code, which will start the tape reader for the next line of input.

However, there are a number of pitfalls in the use of tape. If a search statement results in a message of "no postings", "ovflow, rec, partials", "rec ovflow", "ent ovflow" or "none", the user is returned to that search statement. The succeeding search statements will result in a retrieval that does not reflect the intended strategy. For example:

```
SS 1 /C?
USER:
BRAIN CHEMISTRY
PROG:
PSTG (138)
SS 2 /C?
USER:
DESMOSTEROL
PROG:
NP (DESMOSTEROL)
SS 2 /C?
USER:
1 AND 2
PROG:
NP (2)
SS 2 /C?
"PRINT OFF-LINE"
```

The user will get 138 citations on BRAIN CHEMISTRY. A similar problem occurs when a pre-punched strategy retrieves over 300 citations. For example:

```
SS 12 /C?
USER:
1 OR 2 OR 3 OR 4
PROG:
PSTG (832)
SS 13 /C?
USER:
"PRINT OFF-LINE"
PROG:
LIMIT OF 3ØØ DOCUMENTS FOR OFF-LINE PRINT --
    COMMAND DELETED
```

In each of these cases the pre-punched tape continues as if expected responses were received. The user of pre-punched tape cannot, therefore, set the machine in motion and go away. He must monitor the program responses and intervene manually where necessary. Furthermore, pre-punched tape can only be used for off-line prints, since the on-line print option requires that the number of citations to be printed, if over 5, be specified and a response be entered after each "continue printing?" prompt. Pre-punched tape can thus greatly speed up inputting, especially if one has a terminal that can read tape at 30 cps, but it is not a substitute for fully automatic batch processing.

MEDLARS/MEDLINE/AIM-TWX DATA BASE STATISTICS

FISCAL YEAR 1973	OCT 72 (Nov IM)	JUL 72-DATE	DATA BASE
CITATIONS INPUT:			
MEDLARS CURRENT FILE	20,932	83,266	880,359
MEDLINE	12,665	51,693	502,561
AIM-TWX	2,728	12,998	207,997
JOURNAL TITLES:			
MEDLARS CURRENT FILE			2,301
MEDLINE			1,230
AIM-TWX			128

MEDLINE TOOLS AVAILABLE FROM NTIS

William H. Caldwell
Deputy Chief, Bibliographic Services Division, NLM

As most readers of the Technical Bulletin are aware, various NLM products are available for purchase from the National Technical Information Service (NTIS). Among these products are a number which are required for searching the MEDLINE file, such as the alphabetic MeSH, tree structures, etc.

New, 1973 versions of MeSH will soon be available through NTIS. These are:

Medical Subject Headings -Tree Structures, 1973. All new terms (including provisional headings) added to MeSH during 1972 appear in the 1973 trees.

Medical Subject Headings - Alphabetic List, 1973. The format of the 1973 Alphabetic List has been changed to allow for the inclusion of helpful notes, hints, and indexing instructions:

GEOGRAPHY
H.121.;
see also related
MAPS (L)
must discuss geog features (lakes, streams, shores, mountains, plains, etc.); not for epidemiol aspects of disease; not for occur of diseases in cities named in a country (= *occur); no *

GEOLOGY
H.56.;

GEORGIA
Z.81.45.1;
U.S. only; differentiate from GEORGIAN SSR in Soviet Union

GEORGIAN SSR
Z.36.56.1;

• GEOTRICHOSIS
C1.40.31;

GEOTRICHOSIS see under MYCOSES (C1)

GERANIUM
B6.81.21.1;

GERBILS
B2.72.58.1;
IM; when IM, only *anat *class *embryol *growth *immunol *metab *physiol

GERIATRIC DENTISTRY
G2.8.30; G2.22.21
SPEC; SPEC *

GERIATRIC NURSING
G2.22.43; G2.48.56.1
SPEC; SPEC *

GERIATRICS
G2.22.; G2.36.12
see also related
PSYCHOSES, SENILE (C10, F2)
RETIREMENT (N1)
SPEC; SPEC * ; Manual 24.6

GERM CELLS
A11.70.;
see also related
FERTILIZATION (G1)
XR FERTILIZATION (G1)
GEN; All *

It is expected that MEDLINE searchers will find these additions to be extremely useful.

Medical Subject Headings - New Main Headings and Provisionals, 1973. All new headings added to MeSH during 1972, and all provisionals currently in use, are listed with scope notes and indexing instructions. The 1972 versions of these lists were included as part of one product available from NTIS: MEDLARS Indexing and Searching Aids (publication #PB207-175). The updated 1973 lists will be available as a separate product (see order information, below).

A new publication, the MEDLINE Reference Manual, will also be available from NTIS. This comprehensive manual is a companion volume to the MEDLINE Training Syllabus, and contains much additional information about MEDLINE. It is not required for use during the training course (as the Syllabus is), but most libraries participating in MEDLINE will probably find it to be a worthwhile purchase.

All products placed with NTIS for 1973 will be punched for 3-hole binding, and will not be stapled or otherwise bound. In addition, we have been working with NTIS in an effort to improve print quality. We are confident that this will continue to improve.

The four products mentioned above are scheduled to be available by early December. However, orders received by NTIS before then will be filled immediately when the products have been printed. All MEDLINE libraries are urged to get their orders in as soon as possible. The list of materials follows on the next page.

The following materials should be purchased by each library participating in the MEDLINE network. When ordering, be sure to give the accession number and title of each, and the superseded accession number if applicable.

SOURCE: The National Technical Information Service
The U. S. Department of Commerce
5285 Port Royal Road
Springfield, Virginia 22151

Accession No.	Publication Title	Price Per Copy
PB-207-177	MEDLARS Training Program: MEDLINE Training Syllabus	$3.00
PB-207-181	MEDLARS Indexing Manual	$6.00
PB-207-707	[1]Permuted MeSH, 1972	$6.00
PB-212-064 (Supersedes PB-207-175)	[2]MEDLARS Indexing and Searching Aids	$3.00
PB-212-065	Medical Subject Headings New Main Headings and Provisionals, 1973	$3.00
PB-212-066 (Supersedes PB-207-176)	Medical Subject Headings Tree Structures 1973	$6.00
PB-212-068 (Supersedes PB-207-180)	[3]Medical Subject Headings Alphabetic List 1973	$9.00
PB-212-067	MEDLARS Training Program: MEDLINE Reference Manual	$3.00

1. Permuted MeSH is not required for use of the MEDLINE system. However, most librarians find it to be a helpful tool.

2. The "MEDLARS Indexing and Searching Aids" includes three items:

   Hints for Index Medicus Users
   Eponymous Syndromes - MEDLARS Indexing Instructions
   Tumor Manual - MEDLARS Indexing Instructions

3. This is not the familiar MeSH with Categorized Lists, which is included with each subscription to Index Medicus. This version is used by indexers and searchers, and contains geographic terms, provisional headings, and helpful notes.

MEDLINE TRAINEES AT NLM, OCTOBER 2, 1972

The ninth NLM MEDLINE Training Class was held October 2 - October 20, 1972. The following people attended:

Eugenia Abbey	Veterans Administration Hospital Library Atlanta, Georgia
Mary Berwick	University of Pennsylvania School of Medicine Library Philadelphia, Pennsylvania
Ada Bowen	University of South Florida Medical Center Library Tampa, Florida
Gary Byrd	NLM Associate Program
Michele Chatfield	University of Illinois Library of the Health Sciences Chicago, Illinois
Margaret Henningsen	University of Chicago Billings Hospital Library Chicago, Illinois
Susan Kirkbride	NLM Associate Program
Emma Lue Kopp	University of Kansas Clendening Medical Library Kansas City, Kansas
Lillian Kozuma	NLM Associate Program
Joyce Levine	Medical Research Library of Brooklyn Brooklyn, New York
Becky Lyon	NLM Associate Program
Beth Mehalick	Washington Hospital Center Medical Library Washington, D.C.
Joy Richmond	Reference Services Division National Library of Medicine Bethesda, Maryland

Joan Rigney	Columbus Hospital Library Great Falls, Montana
Nancy Stiles	NLM Associate Program

MEDLINE TRAINING CLASSES, 1973

William H. Caldwell
Deputy Chief, Bibliographic Services Division, NLM

Five MEDLINE classes have been scheduled for 1973, at NLM, as follows:

January 22 - February 9
March 26 - April 13
June 11 - June 29
September 10 - September 28
October 29 - November 16

Priority for training will be given to those institutions yet to join the MEDLINE network, and to those which are losing their only trained staff member. Second trainees from operational MEDLINE centers will be accepted on a space-available basis.

Requests for space in the classes should be submitted to Mrs. Erika Love, Deputy Associate Director for Library Operations, NLM. It would be helpful if a brief resume were submitted for prospective trainees, giving information on their backgrounds and whether they have had any previous exposure to MEDLINE.

KEYWORD INDEX TO NLM LITERATURE SEARCHES (NOS. 1-69--72-24)

Angeline Durso, Head
PSRMLS, Information Services, UCLA

Literature Searches produced in 1967 and 1968 are not included in this list. They are included in "Index to NLM Literature Searches (No. 1-67--71-22)" published in the September 1971 Technical Bulletin (No. 29). Though some copies of these earlier Literature Searches may still be available, they will not be reprinted when the supply is depleted.

L.S. NO.	TITLE
70-29	ABORTION, Psychiatric aspects of
72-1	ACUPUNCTURE
71-17	ADDICTION, Drugs in control of narcotic
72-16	ADDITIVES (food) Toxicity of intentional
70-49	ADENOSINE cyclic 3', 5', -phosphate (cyclic AMP) and adenyl cyclase
70-49	ADENYL cyclase and cyclic AMP (adenosine cyclic 3', 5', -phosphate)
70-24	ADOLESCENT, The pregnant
71-10	ADVERSE drug reations, Oral manifestations of
70-13	ADVERSE effects of food additives
70-2	ADVERSE effects of oral contraceptives
8-69	AGED, Programs for rehabilitation of the
70-1	ALCOHOLISM, Drug therapy of
1-69	ALCOHOLISM, Psychotherapy in
72-13	ALLIED health occupations, Audio-visual aids in the teaching of
72-2	ALLIED health professions, Programmed instruction in medicine and (update of LS 70-9)
70-28	AMNIOCENTESIS
72-7	ANEMIA, sickle cell - diagnosis, pathology, complications and therapy
72-14	ANEMIA, sickle cell - epidemiologic, genetic, social, legal, and ethical aspects
71-5	ANIMAL interactions, Behavioral responses to
72-24	ANIMALS (laboratory) Care and maintenance of
70-33	ANTILYMPHOCYTE serum - human applications
70-45	AQUATIC organisms, foods and water, Mercury contamination of
70-46	ARTS in therapy, The
71-15	ASSISTANTS, Physicians'
70-38	ASSISTED circulation
70-44	ASTHMA, Psychological aspects of
71-12	ATOMIC radiation exposure, Health hazards and hygiene in
71-4	ATTITUDES toward death
72-13	AUDIO-VISUAL aids in the teaching of allied health occupations
72-11	AUDIO-VISUAL aids in the teaching of dentistry
72-10	AUDIO-VISUAL aids in the teaching of medicine
72-12	AUDIO-VISUAL aids in the teaching of nursing
71-16	AUTOMATED multiphasic screening
70-30	AUTOMATION or use of computers in laboratory diagnosis
70-42	BEHAVIOR, Genetics and socially deviant

L.S. NO.	TITLE
71-5	BEHAVIORAL responses to animal interactions
70-17	BRAIN-DAMAGED child, Conditioned learning in the
70-21	BURNS, Treatment of
4-69	CANNABIS toxicology
71-20	CANNABIS toxicology
70-18	CARDIOVASCULAR disease, Dietary fats and
72-24	CARE and maintenance of laboratory animals
70-36	CHELATING AGENTS, Clinical aspects of
70-17	CHILD (brain-damaged) Conditioned learning in the
72-6	CHILDREN (hyperkinetic) Drug therapy for
72-22	CHILDREN, Lead poisoning in
72-5	CHINA, Medicine and health in
70-38	CIRCULATION, Assisted
70-20	CIVIL disorders, Medical aspects of
70-36	CLINICAL aspects of chelating agents
71-25	CLINICAL laboratories, Quality control, reliability and standards in
72-8	COLD, Vitamin C and the common
72-8	COMMON cold, Vitamin C and the
70-10	COMPUTER applications in human electrocardiography
70-30	COMPUTERS in laboratory diagnosis, Automation or use of
70-17	CONDITIONED learning in the brain-damaged child
70-2	CONTRACEPTIVES (oral), Adverse effects of
71-17	CONTROL of narcotic addiction, Drugs in
70-16	CONTROL of obesity by diet
70-23	CORONARY artery disease, Surgery in obstructive
71-2	COUNSELING, Genetic
70-5	CRIME and drug abuse
70-49	CYCLIC AMP (adenosine cyclic 3', 5', -phosphate) and adenyl cyclase
71-4	DEATH, Attitudes toward
71-14	DEATH in infants, Sudden unexpected
71-19	DELIVERY of dental care in the United States, Government role in financing the
71-18	DELIVERY of health care in the United States, Government role in financing the
71-19	DENTAL care in the United States, Government role in financing the delivery of
70-27	DENTAL diseases, Enzymes and
72-11	DENTISTRY, Audio-visual aids in the teaching of
72-20	DENTISTRY, Forensic
70-47	DENTISTRY, Geriatric
72-19	DENTISTRY, Geriatric (Suppl. to LS 70-47)
70-11	DEVELOPING countries, Medical care in
72-3	DEVELOPING countries, Medical care in (Suppl. to LS 70-11)
70-42	DEVIANT behavior, Genetics and socially
71-13	DIABETES, Maturity onset
72-23	DIAGNOSIS and therapy of gonorrhea
70-30	DIAGNOSIS (laboratory) Use of computers or automation in
70-6	DIET and nutrition on learning, Effects of
70-16	DIET, Control of obesity by

L.S. NO.	TITLE
70-18	DIETARY fats and cardiovascular disease
70-18	DISEASE (cardiovascular) Dietary fats and
70-20	DISORDERS (civil) Medical aspects of
70-14	DISORDERS (neuromuscular) DOPA in
71-9	DNA polymerase
70-14	DOPA in neuromuscular disorders
70-5	DRUG abuse and crime
70-3	DRUG abuse, Mortality or self-destructive behavior in
2-69	DRUG abuse or drug addiction, Psychotherapy in
71-23	DRUG abuse or addiction, Psychotherapy in (Suppl. to LS 2-69)
2-69	DRUG addiction or abuse, Psychotherapy in
71-23	DRUG addiction or abuse, Psychotherapy in (Suppl. to LS 2-69)
3-69	DRUG addiction (Psychotropic) or withdrawal symptoms in man
71-10	DRUG reactions, Oral manifestations of adverse
72-6	DRUG therapy for hyperkinetic children
70-1	DRUG therapy of alcoholism
71-22	DRUG withdrawal symptoms in man
71-17	DRUGS in control of narcotic addiction
70-7	DYSLEXIA
70-39	ECOSYSTEMS, Pesticides and
70-31	EDUCATION (special) Teaching aids in
70-6	EFFECTS of diet and nutrition on learning
71-21	EFFECTS of hallucinogens on man
72-9	ELECTRICAL safety and hazards in the hospital
70-10	ELECTROCARDIOGRAPHY, Computer applications in human
71-8	EMERGENCY psychiatry (Supplement to LS 4-68)
71-24	ENCEPHALITIS virus, Venezuelan equine
70-50	ENVIRONMENTAL pollution, Urban
70-27	ENZYMES and dental diseases
71-24	EQUINE encephalitis virus, Venezuelan
70-25	ESKIMO health, North American Indian and
7-69	ESTROGENIC hormones and human lipid metabolism, Progestational or
71-6	EXPOSURE (occupational) to x-rays, Health aspects of
71-12	EXPOSURE to atomic radiation, Health hazards and hygiene in
71-11	FACTORS in the urban environment (Mental health services in cities) Psychological responses to
70-26	FATIGUE countermeasures
70-18	FATS (Dietary) and cardiovascular disease
71-1	FETAL monitoring during labor
71-19	FINANCING the delivery of dental care in the United States, Government role in
71-18	FINANCING the delivery of health care in the United States, Government role in
70-13	FOOD additives, Adverse effects of
72-16	FOOD additives, Toxicity of intentional
70-45	FOODS, water and aquatic organisms, Mercury contamination of
72-20	FORENSIC dentistry
70-34	GASTRIN release
71-2	GENETIC counseling
70-42	GENETICS and socially deviant behavior

L.S. NO.	TITLE
70-47	GERIATRIC dentistry
72-19	GERIATRIC dentistry (Suppl. to LS 70-47)
70-15	GERIATRICS and psychopharmacology
72-23	GONORRHEA, Diagnosis and therapy of
71-19	GOVERNMENT role in financing the delivery of dental care in the United States
71-18	GOVERNMENT role in financing the delivery of health care in the United States
70-48	GROUP interactions for social awareness; sensitivity training
71-21	HALLUCINOGENS on man, Effects of
72-9	HAZARDS (electrical) in the hospital, Electrical safety and
70-40	HEALTH aspects of mining
71-6	HEALTH aspects of occupational exposure to x-rays
70-8	HEALTH care for the poor in the United States
71-18	HEALTH care in the United States, Government role in financing the delivery of
72-21	HEALTH care to the poor in the United States, Provision of
71-12	HEALTH hazards and hygiene in exposure to atomic radiation
72-5	HEALTH in China, Medicine and
72-13	HEALTH occupations (allied) Audio-visual aids in the teaching of
72-2	HEALTH professions (allied) Programmed instruction in medicine and (Update of LS 70-9)
71-3	HEARING disorders, Transplantation in the therapy of
5-69	HEART transplantation
72-4	HEXACHLOROPHENE
72-9	HOSPITAL, Electrical safety and hazards in the
70-33	HUMAN applications, Antilymphocyte serum
70-10	HUMAN electrocardiography, Computer applications in
7-69	HUMAN lipid metabolism, Progestational or estrogenic hormones and
70-22	HUMANS, Lithium in
70-37	HUMANS, Metal implants in
71-12	HYGIENE and health hazards in exposure to atomic radiation
72-6	HYPERKINETIC children, Drug therapy for
70-37	IMPLANTS (Metal) in humans
71-14	INFANTS, Sudden unexpected death in
70-12	INFECTION in the microbiology laboratory, Risk of
10-69	INSECT control by sexual sterilization (Suppl. to LS 15-68)
72-2	INSTRUCTION (Programmed) in medicine and allied health professions (Update of LS 70-9)
70-9	INSTRUCTION (Programmed) in medicine and allied professions
70-48	INTERACTIONS (Group) for social awareness; sensitivity training
6-69	KIDNEY transplantation in man
71-1	LABOR, Fetal monitoring during
71-25	LABORATORIES (clinical) Quality control, reliability and standards in
72-24	LABORATORY animals, Care and maintenance of
70-30	LABORATORY diagnosis, Automation or use of computers in
70-12	LABORATORY, Risk of infection in the microbiology

L.S. NO.	TITLE
72-22	LEAD poisoning in children
70-17	LEARNING (Conditioned) in the brain-damaged child
70-6	LEARNING, Effects of diet and nutrition on
7-69	LIPID metabolism (human) Progestational or estrogenic hormones and
70-22	LITHIUM in humans
72-15	MALNUTRITION and mental development in man
71-22	MAN, Drug withdrawal symptoms in
71-21	MAN,Effects of hallucinogens on
72-15	MAN, Malnutrition and mental development in
71-13	MATURITY onset diabetes
70-20	MEDICAL aspects of civil disorders
70-11	MEDICAL care in developing countries
72-3	MEDICAL care in developing countries (Suppl. to LS 70-11)
72-2	MEDICINE and allied health professions, Programmed instruction in (Update of LS 70-9)
70-9	MEDICINE and allied professions, Programmed instruction in
72-5	MEDICINE and health in China
72-10	MEDICINE, Audio-visual aids in the teaching of
70-19	MEDICINE in Vietnam
72-18	MEDICINE in Vietnam
70-41	MEDICINE, Sport
72-15	MENTAL development in man, Malnutrition and
71-11	MENTAL health services in cities, Psychosocial response to factors in the urban environment
70-45	MERCURY contamination of water, aquatic organisms, and foods
70-37	METAL implants in humans
70-12	MICROBIOLOGY laboratory, Risk of infection in the
70-40	MINING, Health aspects of
71-1	MONITORING (Fetal) during labor
70-3	MORTALITY or self-destructive behavior in drug abuse
71-16	MULTIPHASIC screening, Automated
70-43	MUSCLES (smooth) Prostaglandins and
71-17	NARCOTIC addiction, Drugs in control of
70-14	NEUROMUSCULAR disorders, DOPA in
70-4	NON-NUTRITIVE sweeteners
70-25	NORTH AMERICAN Indian and Eskimo health
72-12	NURSING, Audio-visual aids in the teaching of
70-6	NUTRITION on learning, Effects of diet and
70-16	OBESITY by diet, Control of
70-23	OBSTRUCTIVE coronary artery disease, Surgery in
71-6	OCCUPATIONAL exposure to x-rays, Health aspects of
70-2	ORAL contraceptives, Adverse effects of
71-10	ORAL manifestations of adverse drug reactions
70-39	PESTICIDES and ecosystems
11-69	PESTICIDES to man, Toxicity of (Suppl. to LS 27-68)
71-15	PHYSICIANS' assistants
72-22	POISONING (Lead) in children
70-50	POLLUTION, Urban environmental
70-8	POOR in the United States, Health care for the

L.S. NO.	TITLE
72-21	POOR in the United States, Provision of health care to the
70-24	PREGNANT adolescent, The
7-69	PROGESTATIONAL or estrogenic hormones and human lipid metabolism
72-2	PROGRAMMED instruction in medicine and allied health professions (Update of LS 70-9)
70-9	PROGRAMMED instruction in medicine and allied professions
70-43	PROSTAGLANDINS and smooth muscles
72-21	PROVISION of health care to the poor in the United States
70-29	PSYCHIATRIC aspects of abortion
71-8	PSYCHIATRY, Emergency (Suppl. to LS 4-68)
70-44	PSYCHOLOGICAL aspects of asthma
70-35	PSYCHOLOGICAL aspects of transplantation
70-15	PSYCHOPHARMACOLOGY in geriatrics
72-17	PSYCHOSOCIAL aspects, Vasectomy
71-11	PSYCHOSOCIAL response to factors in the urban environment (Mental health services in cities)
1-69	PSYCHOTHERAPY in alcoholism
2-69	PSYCHOTHERAPY in drug addiction or abuse
71-23	PSYCHOTHERAPY in drug addiction or abuse (Suppl. to LS 2-69)
3-69	PSYCHOTROPIC drug addiction or withdrawal symption in man
71-25	QUALITY control, reliability and standards in clinical laboratories
71-7	RABIES in wildlife
71-12	RADIATION (atomic) Health hazards and hygiene in exposure to
8-69	REHABILITATION of the aged, Programs for
71-25	RELIABILITY, and standards in clinical laboratories, Quality control,
71-11	RESPONSE (Psychosocial) to factors in the urban environment (Mental health services in cities)
70-12	RISK of infection in the microbiology laboratory
72-9	SAFETY (Electrical) and hazards in the hospital
9-69	SARCOIDOSIS
71-16	SCREENING, Automated multiphasic
70-3	SELF-DESTRUCTIVE behavior in drug abuse, Mortality or
70-48	SENSITIVITY training, Group interactions for social awareness
70-33	SERUM (Antilymphocyte) human applications
10-69	SEXUAL sterilization, Insect control by (Suppl. to LS 15-68)
72-7	SICKLE cell anemia - diagnosis, pathology, complications and therapy
72-14	SICKLE cell anemia - epidemiologic, genetic, social, legal, and ethical aspects
70-43	SMOOTH muscles, Prostaglandins and
70-48	SOCIAL awareness; sensitivity training, Group interactions for
70-42	SOCIALLY deviant behavior, Genetics and
70-31	SPECIAL education; Teaching aids in
70-41	SPORT medicine
71-25	STANDARDS in clinical laboratories, Quality control, reliability and
71-14	SUDDEN unexpected death in infants

L.S. NO.	TITLE
70-23	SURGERY in obstructive coronary heart disease
70-4	SWEETENERS, Non-nutritive
71-22	SYMPTOMS in man, Drug withdrawal
3-69	SYMPTOMS in man, Psychotropic drug addiction or withdrawal
70-31	TEACHING aids in special education
72-13	TEACHING of allied health occupations, Audio-visual aids in the
72-11	TEACHING of dentistry, Audio-visual aids in the
72-10	TEACHING of medicine, Audio-visual aids in the
72-12	TEACHING of nursing, Audio-visual aids in the
72-6	THERAPY (Drug) for hyperkinetic children
72-23	THERAPY of gonorrhea, Diagnosis and
70-46	THERAPY, The arts in
72-16	TOXICITY of intentional food additives
11-69	TOXICITY of pesticides to man (Suppl. to LS 27-68)
4-69	TOXICOLOGY, Cannabis
71-20	TOXICOLOGY, Cannabis
5-69	TRANSPLANTATION, Heart
6-69	TRANSPLANTATION (Kidney) in man
70-35	TRANSPLANTATION, Psychological aspects of
71-3	TRANSPLANTATION therapy of hearing disorders
70-21	TREATMENT of burns
71-19	UNITED STATES, Government role in financing the delivery of dental care in the
71-18	UNITED STATES, Government role in financing the delivery of health care in the
70-8	UNITED STATES, Health care for the poor in the
72-21	UNITED STATES, Provision of health care to the poor in the
71-11	URBAN environment (Mental health services in cities) Psychosocial response to factors in the
70-50	URBAN environmental pollution
72-17	VASECTOMY - psychosocial aspects
71-24	VENEZUELAN equine encephalitis virus
70-19	VIETNAM, Medicine in
72-18	VIETNAM, Medicine in
71-24	VIRUS, Venezuelan equine encephalitis
72-8	VITAMIN C and the common cold
70-45	WATER, aquatic organisms, and foods, Mercury contamination of
71-7	WILDLIFE, Rabies in
71-22	WITHDRAWAL symptoms in man, Drug
3-69	WITHDRAWAL symptoms in man, Psychotropic drug addiction or
71-6	X-RAYS, Health aspects of occupational exposure to

NOTE: The National Library of Medicine requests that orders for Literature Searches be identified by title and order number and a self-addressed gummed label be included with the request. No postage is required.

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 43 NOVEMBER 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
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of the
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Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616
ASSISTANT EDITOR
Barbara Greehey

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . Leonard J. Bahlman and
Rose Marie Woodsmall
Regional Medical Libraries . . Dan Tonkery
Technical Services . . . . . Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

ADJUSTMENT IN MEDLINE HOURS

Until further notice, the Tuesday hours will be as follows:
1:00 PM - 4:00 PM (Eastern Time)
Extra computer time is needed at NLM for system maintenance and the creation and testing of new files.

The AIM-TWX data base in California has been replaced by the MEDLINE data base and is available from 10:30 AM - 3:20 PM (Eastern Time). We encourage your use of the California computer when the NLM computer is unavailable or overloaded. See p. 14 for details.

CITATION IDENTIFIER (CI)

Elizabeth Sawyers
Library Operations, NLM

With the generation of the 1973 MEDLINE data base, citations will carry a unique identification number which consists of:

1. The International Standard Serial Number (ISSN)
2. Volume number of the journal
3. Beginning page of the article
4. A two digit number for the year

Format:	ISSN	Vol No: Pg	Yr
	0021-5287	63:343	72

This citation identifier will not be searchable but will be printed when the standard "PRINT" or "PRINT FULL" commands are used.

This identifier will ultimately serve as a bridge between various machine readable data bases to allow for the interchange of bibliographic data between various of the abstracting and indexing services. In addition, it is also intended to serve ultimately as a link between the Library's retrieval and document delivery services. Although these two uses may not be fully implemented for some time, we have begun to carry the identifier in the data base as a first step toward this end. We believe this use to be the first major operational use of the recently implemented International Standard Serial Number.

At the time of data base generation ISSN's had not yet been assigned to all the serial titles contained in the data base. A request for the assignment of codes to these titles has been forwarded to the U.S. National Serials Data Program, which will serve as the center for the assignment of ISSN's in this country. As the codes are assigned they will be added to the data base and will appear for newly added citations. In addition, the algorithm to verify the check digit for the ISSN had not been implemented when the new MEDLINE data base was generated. Subsequently that algorithm has been added, and as a result, 10 of the ISSN's for MEDLINE journals have been found to be in error. The correct codes are as follows:

JTC	JTA	Correct ISSN
AV4	BR J CANCER	0007-0920
B68	BROOKHAVEN SYMP BIOL	0068-2799
ECQ	DTSCH STOMATOL	0012-0790
FØF	FOLIA HAEMATOL %LEIPZ<	0015-556X
IEF	J HYG %CAMB<	0022-1724
I9Z	J GENET PSYCHOL	0022-1325
J4N	J MENT DEFIC RES	0022-264X
LU6	MED CLIN NORTH AM	0025-7125
QAZ	PSYCHIATR NEUROL MED PSYCHOL %LEIPZ<	0033-2739
9W8	BIBL PSYCHIATR	0067-8147

The correct codes will be used for SDILINE, COMPFILE and the 1973 updates to MEDLINE.

BOOK LOANS

Sheldon Kotzin
Loan and Stack Section, NLM

Because of the Christmas mail rush, loan of books from the National Library of Medicine will be suspended from December 2, 1972 to January 3, 1973. For books which would be due between those dates, the loan period will be extended and books will be due back at the National Library of Medicine no later than January 8, 1973.

Requests for books received during this period will be held until service is resumed.

Loans normally supplied in the form of photoduplicates will be sent as usual throughout the period.

TYMSHARE PROGRAM MESSAGES

Leonard J. Bahlman
MEDLARS Management Section, NLM

Listed below are Tymshare program messages and a brief explanation of each. Users may occasionally receive these messages when accessing the Tymshare News Files or MEDLINE or the SDC system in California via the Tymshare network.

If you receive a program message which you do not recognize and which is not on this list, please notify MEDLARS Management Section by telephone or through the Tymshare SEND MMS procedure.

(.)	If you are prompted with a period when accessing the Tymshare News Files, usually when you have pressed the ESCAPE key, type the word QUIT and you will be prompted with a hyphen. You may then access any of the News Files, or logout of the Tymshare News.
(;)	When accessing MEDLINE, after entering the password and a carriage return, the system will respond with a semicolon. This indicates that the user is to now enter the project code (terminal ID assigned by the National Library of Medicine).
ABORTED	The program printing the particular News File being accessed has been disrupted. If you are prompted with a period, type the word QUIT. When you receive the hyphen, you may then enter a command to access one of the News Files.
ALREADY ENTERED	Users may receive this message when they are logging into the Tymshare News Files and the user name being entered, NLM4, NLM4A, etc., is already in use. If you receive this message, re-login under one of the other user names.
ERROR, TYPE FROM FILE	When accessing one of the News Files, this message will appear if the user has misspelled a word or if there is line interference, e.g., COM NEWW instead of COM NEWS. Retype the filename only, e.g., NEWS. If you are still unable to access the file, please notify MEDLARS Management Section.
ERROR, TYPE PASSWORD	An invalid password has been entered, or there has been line interference. Reenter the password, i.e., MED.
ERROR, TYPE USER NAME	An invalid User Name has been entered, or there has been line interference. Reenter the user name, e.g., NLM to access MEDLINE or NLM4 through NLM4E to access the News Files.

FILE BUSY CANNOT OPEN	This message appears if the user is trying to access one of the News Files that can only be accessed by one user at a time. At present these files are COM ENTRYDATES, COM(MMS)REGIONSTATS, AND COM PHONES.
OUT OF CHANNELS SYSTEM UNAVAIL- ABLE	The Tymshare network circuit is loaded. Wait 30 - 90 seconds and then try to log in again.
OUT OF PORTS PLEASE LOG IN	All ports into the National Library of Medicine computer are in use. Wait for a short period and then re-login.
PLEASE LOG IN	If this message does not appear after you have dialed your Tymshare access number and identified your terminal type, the Tymsat in the city you have dialed may be down. Similar problems in the beginning of your login may be indicative of problems with the Tymsat. Please call MEDLARS Management Section to report these problems (301/496-6193).
PLEASE SEE YOUR TYMSHARE REPRESENTATIVE IF YOU ARE HAV- ING TROUBLE LOG- GING IN	The Tymshare system allows users up to 90 seconds to complete a login. If by that time the user has not successfully completed his login, this message will appear and the user must re-dial the Tymshare number. If you need assistance, please notify MEDLARS Management Section.
PROJ CODE	User should respond to PROJ CODE by entering the terminal ID assigned by the National Library of Medicine.
SYSTEM FULL TRY LATER	Synonymous with OUT OF PORTS PLEASE LOG IN
SYSTEM UNAVAILABLE	If this message appears when logging into MEDLINE, either the NLM computer is not operational, or the Tymsat may be overloaded. Log into the Tymshare News Files and enter COM DOWN for the status of the system. If the Down File indicates that the system is operational, wait for two minutes and try to re-login. If you are unable to login at this point, contact MEDLARS Management Section. If "SYSTEM UNAVAILABLE" appears when logging into the Tymshare News Files under NLM4, or NLM4A through NLM4E, the Tymshare computer handling these user names is down. You may then be able to login under the user names NLM4F through NLM4H, which are located on another computer in the Tymshare network. Files NLM4F-H are intended as emergency backups in case the

computer containing NLM4A-E is unavailable. They contain only the NEWS and DOWN files and will not contain files such as COM ACCESS or COM (MMS) REGIONSTATS. Users should initially login to NLM4 or NLM4A through NLM4E to send or receive messages, as all MMS messages to or from users are sent through these user names.

USER NAME — The message USER NAME and the message PLEASE LOG IN require the same response from the user, i.e. NLM to access MEDLINE, NLM4 through NLM4H to access the News Files, or AIM to access the SDC MEDLINE file.

IBM 370 SEARCH PROCESSING

1. The demand search programs on the IBM 370 are now able to process exploded T's and Z's, F1 = Review, and the AND NOT strategy. Moreover, the program for processing card output has been implemented. It is therefore no longer necessary to flag these items on your DSFR's.

2. The following cannot be processed on the 370 and must therefore be flagged:

More than 99 elements
More than 50 C elements or 50 exploded M elements
Expected retrieval over 29,997 citations
OR NOT strategy
Any non-standard report generator including
F2, F*, FC, and M, T, Z, G, or Q expansions.

MEDLARS DATA BASE

As of December 11, 1972, the MEDLARS data base will cover January 1970 through December 1972.

CHARGING SYSTEM FOR MEDLINE

Cyril Feng
Medical School Library, University of Miami

While attending a local library association meeting, I told some of my MEDLINE operator friends about our method of charging for MEDLINE service. They thought it was a timesaving and simple device that others might wish to know about.

When a patron requests a MEDLINE search, after explaining the service, the first thing we obtain from him is his telephone number and whether it is a home number, an office number, or an out-of-town number. Our nearest Tymshare connecting point is in Tampa. The average charge is 20¢ per minute when dialed directly without the operator's assistance (1-Area Code-Tymshare No.) and 30¢ per minute when dialed directly with the operator's assistance (0-Area Code-Tymshare No.).

The University telephones are in a Centrex system. Whenever one uses the office phone to make a long distance call, the operator will cut-in when dialing is completed asking for the caller's number and then will let the call go through. In this case, if the MEDLINE requester is from the University and wants to use his office number we simply give his number to the operator when she requests it. Therefore the long distance call rate is 20¢ per minute. In case the requester does not have a University number or he is from outside the University or he is an out-of-town physician, we dial "0" before dialing the Tymshare number in order to access MEDLINE. When the operator cuts in, we give her the number we are using and the number to which we wish to charge the call. In this case the higher rate is charged. The advantages of this charge system, which both save staff time, are:

1. No billing is necessary. Charges will appear on requester's monthly telephone bill from the telephone company.
2. The MEDLINE operator does not have to worry about checking the exact log-in and log-out time or the total time consumed, unless for statistical purposes.

To those lucky ones who only have to dial a local number to get MEDLINE we offer our envy and congratulations. No, on second thought, they may have to work harder than we because of the free service.

DENTISTRY HEDGE (1973 MeSH)

Susanne Humphrey
MeSH Section, NLM

The following is a cross-subcategory list of headings relating to DENTISTRY based on 1973 MeSH. Headings within a subcategory which are in other subcategories as well are followed by the other subcategory numbers. Provisional headings are followed by "(PROV)". EXPLODE (TREE NUMBER) indicates that the preceding term is a parent term and has indentations listed in the MeSH Tree Structures.

A1
CHEEK
CHIN
FACE
LIP (A3)
MOUTH (A3)

A2
ALVEOLAR PROCESS (A3)
DENTAL ARCH
FACIAL BONES
FACIAL MUSCLES
JAW
MANDIBLE
MANDIBULAR CONDYLE
MAXILLA
PALATE (A3)
TEMPOROMANDIBULAR JOINT
ZYGOMA

A3
MOUTH-EXPLODE A3.54

A4
MAXILLARY SINUS

A8
CHORDA TYMPANI NERVE
FACIAL NERVE
LINGUAL NERVE (PROV)
MANDIBULAR NERVE
MAXILLARY NERVE
TRIGEMINAL NERVE

A9
TASTE BUDS (A3)

A10
MOUTH MUCOSA (A3)

A11
AMELOBLASTS
ODONTOBLASTS
ODONTOCLASTS

A12
GINGIVAL EXUDATE (PROV)
SALIVA

C1
FOCAL INFECTION, DENTAL (C4)
GINGIVITIS, NECROTIZING ULCERATIVE (C4)
HERPES LABIALIS (C4)
HUTCHINSON'S TEETH (C16)
LUDWIG'S ANGINA (C4)
MONILIASIS, ORAL (C4)
MUMPS (C4)
PERIAPICAL ABSCESS (C4)
STOMATITIS, APHTHOUS
TUBERCULOSIS, ORAL (C4)

C2
FACIAL NEOPLASMS
GINGIVAL POLYPS (C4)
JAW NEOPLASMS-EXPLODE C2.74.26
MIXED SALIVARY GLAND TUMOR
MOUTH NEOPLASMS-EXPLODE C2.80.42
NEOPLASMS, DENTAL TISSUE-EXPLODE C2.36.50
NONODONTOGENIC CYSTS
ODONTOGENIC CYSTS-EXPLODE C2.7.43
PEUTZ-JEGHER'S SYNDROME (C4, C12)
RANULA (C4)

C3
CRANIOFACIAL DYSOSTOSIS (C16)-EXPLODE C3.30.24
ELLIS-VAN CREVELD SYNDROME (C12, C16)
JAW DISEASES-EXPLODE C3.20.26
SJOGREN'S SYNDROME (C4, C11)

C4
MOUTH DISEASES-EXPLODE C4.66
PEUTZ-JEGHER'S SYNDROME (C2, C12)

C5
GRANULOMA, LETHAL MIDLINE (C17)
MOUTH BREATHING (C17)

C10
CRYING CAT SYNDROME (C16, F2)
DE LANGE'S SYNDROME (C16, F2)
FACIAL NEURALGIA
FACIAL PARALYSIS
MELKERSSON-ROSENTHAL SYNDROME (C4)
TRIGEMINAL NEURALGIA
TRISMUS

C11
BEHCET'S SYNDROME (C4, C12)
SJOGREN'S SYNDROME (C3, C4)
STEVENS-JOHNSON SYNDROME (C4, C12)

C12
BEHCET'S SYNDROME (C4, C11)
DE LANGE'S SYNDROME (C10, C16)
ELLIS-VAN CREVELD SYNDROME (C3, C16)
STEVENS-JOHNSON SYNDROME (C4, C11)

C14
BITES, HUMAN (PROV)
JAW FRACTURES
MANDIBULAR FRACTURES
MAXILLARY FRACTURES
MAXILLOFACIAL INJURIES-EXPLODE C14.88.41
TOOTH FRACTURES (C4)
TOOTH LUXATION (C4)
ZYGOMATIC FRACTURES

C16
CRANIOFACIAL DYSOSTOSIS (C3) EXPLODE C16.91.18
CRYING CAT SYNDROME (C10, F2)
DE LANGE'S SYNDROME (C10, F2)
ELLIS-VAN CREVELD SYNDROME (C3, C12)
JAW ABNORMALITIES-EXPLODE C16.91.36
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TOOTH ABNORMALITIES-EXPLODE C16.35.56

C17
FACIAL HEMIATROPHY
GLOSSALGIA (C4)
GRANULOMA, LETHAL MIDLINE (C5)
GRANULOMA, REPARATIVE GIANT CELL
HALITOSIS
HEMORRHAGE, ORAL (C4)
MOUTH BREATHING (C5)
TOOTHACHE (C4)

D1
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DENTAL AMALGAM (D13)
FLUORIDES, TOPICAL (D13)
GOLD ALLOYS (D13)

D10
DENTAL ENAMEL PROTEINS

D13
CARIOGENIC AGENTS
CARIOSTATIC AGENTS
DENTAL MATERIALS-EXPLODE D13.34
DENTIFRICES
FLUORIDES, TOPICAL (D1)
MOUTHWASHES

E1
CEPHALOMETRY (E5, E6)
DIAGNOSIS, ORAL (E6)
RADIOGRAPHY, DENTAL (E6)-EXPLODE E1.85.39
SIALOGRAPHY (E6)

E3
ANESTHESIA, DENTAL (E6)-EXPLODE E3.26.16

E4
CLEFT PALATE PROSTHESIS (E6)
MANDIBULAR PROSTHESIS (E6)
MAXILLOFACIAL PROSTHESIS (E6)
SURGERY, ORAL (E6)-EXPLODE E4. 80

E5
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DENTAL EQUIPMENT (E6)
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HARDNESS TESTS (E6)
MOUTH PROTECTORS (E6)

E6
DENTISTRY (G2)-EXPLODE E6

F1
DENTIST-PATIENT RELATIONS (N2)
FINGERSUCKING (F2)
NAIL BITING (F2)
TASTE (G1)
TONGUE HABITS (F2)

F2
CRYING CAT SYNDROME (C10, C16)
DE LANGE'S SYNDROME (C10, C16)
FINGERSUCKING (F1)
NAIL BITING (F1)
TONGUE HABITS (F1)

G1
DEGLUTITION
MAXILLOFACIAL DEVELOPMENT
MOUTH PHYSIOLOGY (NON-MESH)
EXPLODE G1.73
ODONTOGENESIS-EXPLODE G1.57.54
TASTE (F1)

G2
DENTISTRY (E6)-EXPLODE G2.8

G3
DENTAL CARIES SUSCEPTIBILITY
PREVENTIVE DENTISTRY (G2)
EXPLODE G3.81.40

I
EDUCATION, DENTAL-EXPLODE I.22.12
EDUCATION, PREDENTAL
FACULTY, DENTAL (M, N2)
HEALTH EDUCATION, DENTAL (N2)
PALEODONTOLOGY
SCHOOLS, DENTAL (N2)
STUDENTS, DENTAL (M, N2)

J
CHEWING GUM
TECHNOLOGY, DENTAL (E6, G2)

K
ETHICS, DENTAL
HISTORY OF DENTISTRY
PHILOSOPHY, DENTAL (PROV)

L
DICTIONARIES, DENTAL
FORMULARIES, DENTAL
JOURNALISM, DENTAL (PROV)
LIBRARIES, DENTAL

M
DENTAL ASSISTANTS (N2)
DENTAL HYGIENISTS (N2)
DENTAL STAFF (N2)-EXPLODE M.21
DENTAL TECHNICIANS (N2)
DENTISTS (N2)-EXPLODE M.25
FACULTY, DENTAL (I, N2)
STUDENTS, DENTAL (I, N2)

N1
DENTAL HEALTH SURVEYS (E6)
DMF INDEX (E6)
ORAL HEALTH
PERIODONTAL INDEX (E6)

N2
DENTAL ASSISTANTS (M)
DENTAL FACILITIES (E6)-EXPLODE N.2.18.8
DENTAL STAFF (M)-EXPLODE N2.36.14
DENTAL TECHNICIANS (M)
DENTISTS (M)-EXPLODE N2.36.18
FACULTY, DENTAL (I, M)
HEALTH EDUCATION, DENTAL (I)
HOSPITAL DENTAL SERVICE
SCHOOLS, DENTAL (I)
STUDENTS, DENTAL (I, M)

N3
ECONOMICS, DENTAL-EXPLODE N3.13.10
INSURANCE, DENTAL
LEGISLATION, DENTAL
LICENSURE, DENTAL
SOCIETIES, DENTAL-EXPLODE N3.52.39
STATE DENTISTRY

N4
COMPREHENSIVE DENTAL CARE
DENTAL RECORDS
DENTIST-PATIENT RELATIONS (F1)
GROUP PRACTICE, DENTAL
PARTNERSHIP PRACTICE, DENTAL (PROV)
PRACTICE MANAGEMENT, DENTAL

MAXIMUM NUMBER OF SEARCH TERMS IN MEDLINE

David L. Kenton
Office of Computer and Engineering Services, NLM

The total number of terms that may be used in a series of 16 search statements has been raised from 84 to 175. A single term is defined as:

1) the data between the boolean connectors (and, or, and not),

2) an explode,

3) specifying one or more numbers or all as the response to a multi-meaning message, or,

4) a term standing alone, be it an actual term or a previous search statement number.

e.g.
SS 1: DOPA
SS 2: 1
SS 3: EXPLODE C2
SS 4: PHENYL#

Each of the above has one (1) term, the total terms used after SS 4 would be four (4).

SS 5: 1 and 2 or 4 and SURGERY

SS 5 contains four terms. The total after SS 5 would be eight (8).

SS 6: 5 and 69 thru 71

SS 6 contains 2 terms. The total after SS 6 would be ten (10).

ENTERING LONG MAIN HEADINGS

There are a very small number of terms that are greater than 33 characters such as UNITED STATES NATIONAL LIBRARY OF MEDICINE. To avoid the No Postings Message, insert less than 33 characters and end the term with a hash mark (#) or type in exactly 33 characters (no hash mark is necessary). You might indicate in your copies of MeSH the first 33 characters, including spaces and punctuation, of these long terms, e.g., UNITED STATES NATIONAL LIBRARY OF MEDICINE.

MEDLINE TRAINEES AT NLM, NOVEMBER 6, 1972

The tenth NLM MEDLINE Training Class was held November 6 - November 22, 1972. The following people attended:

Elizabeth Bitney	Veterans Administration Hospital Library Lincoln, Nebraska
Dorothy Coffman	Southern Illinois University School of Medicine Library Springfield, Illinois
Dorothy Dralle	Ellis Hospital Library Schenectady, New York
Ruth Hyman	SUNY at Buffalo Library Buffalo, New York
Edna Jolliff	Harper Hospital Department of Libraries Detroit, Michigan
Patricia Lynch	University of Detroit School of Dentistry Library Detroit, Michigan
Jane Magenheim	New York Academy of Medicine New York, New York
Joyce Malin	Henry Ford Hospital Medical Library Detroit, Michigan
Alma Roman	Albert Einstein College of Medicine Library Bronx, New York
Angela Sirrocco	Health Services & Mental Health Administration (HSMHA) Library Rockville, Maryland
Joan Smith	William Beaumont Hospital Medical Library Royal Oak, Michigan
LaVera Tillman	University of Illinois Rockford School of Medicine Library Rockford, Illinois

Barbara Williams	Hahnemann Medical College Library Philadelphia, Pennsylvania

MEDLINE TRAINEES AT UCLA, NOVEMBER 6, 1972

University of California Biomedical Library, Los Angeles held its fifth MEDLINE Training Class November 6 - 21, 1972. The following people attended:

Elizabeth Bolden	Madigan General Hospital Library Tacoma, Washington
Eleanor Goodchild	Los Angeles County Harbor General Hospital Medical Library Torrance, California
Roger Harris	William Beaumont Army Hospital Medical Library El Paso, Texas
William Maina	University of California, San Diego Biomedical Library La Jolla, California
Lawrence Onsager	Loma Linda University Vernier Radcliffe Memorial Library Loma Linda, California
Barbara Sherry	Orthopaedic Hospital Rubel Memorial Library Los Angeles, California
Mark Shier	University of California Biomedical Library Los Angeles, California

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
MEDLARS Management Section, NLM

AIM CITATIONS

With the generation of the new MEDLINE data base, users will have the option of searching on those journals which appear in ABRIDGED INDEX MEDICUS (Jan 1970 - present) by specifying AIM in their search statement, e.g., LIVER DISEASES AND AIM. A listing of the 100 clinical AIM journal titles appears in the front of each issue of ABRIDGED INDEX MEDICUS.

AIM-TWX

On November 22, the AIM-TWX data base, which is located in Santa Monica, California was replaced by the MEDLINE data base. If, between 10:30 AM and 3:20 PM (Eastern Time), you are unable to log into MEDLINE at NLM, or if there are more than 40 users on the system, you should log into the MEDLINE data base at Santa Monica (i.e. PLEASE LOG IN: AIM PASSWORD: MED). At present SDILINE is not available on the Santa Monica computer. The data base at Santa Monica will be maintained until about February 1973.

DATA BASE

The MEDLINE data base has been regenerated and now covers the MEDLARS years Jan 1970 - Dec 1972. This data base has been file-maintained to agree with the 1973 MeSH vocabulary and tree structures. The MEDLARS 1969 year has been dropped. As in the past, new citations will be added to the data base each month. New 1973 terms will have no postings until citations for Jan 1973 INDEX MEDICUS are added to the data base. Most of the data base errors (e.g. duplicate citations, entry errors, incorrect volume numbers, etc.) will have been corrected.

DISCONNECTS

If you are accidently disconnected from MEDLINE, please reconnect if only to go through the regular STOP procedure. After these accidental disconnects, usually caused by line problems, your user environment is still being held for you in the computer (presently this is until the time that the computer goes down). These idle user environments cannot be accessed by anyone else. During peak periods, users are frequently not able to get into the system and this is partially due to these idle user environments. So, for instance, if PLEASE LOG IN appears in the middle of your search and you decide at that point not to continue searching, please log in again and then enter the STOP command so that you will actually be logged out of MEDLINE. We ask you to do this, even if it is necessary to pay an additional line charge.

MESSAGES TO MMS ON-LINE

MEDLARS Management Section is occasionally receiving messages on-line from users which have not been signed. If your message requires an answer, or if you are submitting statistics, please identify yourself and your institution. If you are using the COMMENT command in MEDLINE, please answer YES to the system question REPLY? (YES/NO). If you do not wish to identify yourself when using this COMMENT command you

may enter any characters you wish when the system prompts you for your name and address.

NEWS FILE — The current MEDLINE news automatically appears upon logging in to the Tymshare News Files. If, at a later point you wish to access the news, enter COM NEWS instead of TYPE NEWS.

OFF-LINE PRINTS — When requesting an off-line print, after entering your name and address and related information, the system will respond with the message OK? (YES/NO). This applies only to the address information you have entered. If you misspell YES, the system will assume you have answered NO and you will have to reenter your name and address when the system prompts you to do so.

SDILINE — December SDILINE is available for searching. It has been file-maintained for 1973. Terms deleted for 1973 are not searchable. 1973 Tree Structures should be used, but new 1973 MeSH terms will not retrieve anything unless they happen to be on the citation record as a result of one for one changes in class file maintenance. 1973 Trees and other 1973 tools are available from the National Technical Information Service as noted in the Technical Bulletin for October, pages 14-16.

STATISTICS ON-LINE — The MEDLINE statistical file within the Tymshare News now includes the average minutes per search for each MEDLINE Center. This figure is computed from the number of @ symbols entered and the total number of connect hours. To receive the previously completed month of MEDLINE statistics on-line for all regions, log into the Tymshare News and enter COM (MMS)REGIONSTATS. If you wish only the statistics for your region, enter the same command with your region number attached, e.g., COM (MMS)REGIONSTATS4.

WESTERN UNION — Except for the TWX lines, access to MEDLINE through the Western Union network has been discontinued. Users must access the system either directly or through the Tymshare network.

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MEDLARS/MEDLINE DATA BASE STATISTICS

	JOURNAL TITLES	CITATIONS
MEDLARS (JAN 69 - DEC 72)	2,301	900,651
MEDLINE (JAN 70 - DEC 72)	1,218	390,537
MEDLINE with AIM identifier	100	78,805
SDILINE (DEC 72)	2,301	20,857

MESH MATERIALS ERRATA

Medical Subject Headings Alphabetic List 1973 (PB-212-068)

Page 206 Data listed under EDUCATION, NURSING, DIPLOMA PROGRAMS should be listed under EDUCATION, NURSING, DEGREE PROGRAMS

Page 249 Change FLUDROCROTISONE to FLUDROCORTISONE

Page 326 Change IMMUNOFLUORESCENCE TECHNIC SEE ANTIBODY TECHNIC to IMMUNOFLUORESCENCE TECHNIC SEE FLUORESCENT ANTIBODY TECHNIC

Page 500 Under PLAQUE ASSAY
Change XR CYTOPATHIGENIC EFFECT, VIRAL
To XR CYTOPATHOGENIC EFFECT, VIRAL

Page 629 Delete Cross Reference: THIOTHIXENE see under XANTHENES (D2)

Page 682 Delete under XANTHENES: XU THIOTHIXENE (D2)

All headings listed in B3 tree structures as B3.30.0.1 and B3.36.0.1 will appear in the alphabetic list as B3.30 and B3.36

Add: ZAIRE Z1.9.44.1

New Main Headings 1973 and Provisional Headings 1973 (PB-212-065)

Main Headings

Add: GESTONORONE CAPROATE (D2, D8) use the definition in the provisional heading list

Provisional Headings

Page 38 Col. 2 Delete: GESTONORONE CAPROATE (D2, D8) it is a main heading for 1973

Page 57 Col. 1 Delete: MYCOPHENOLIC ACID, it is a main heading for 1973

NOTE: The list of MEDLINE printed tools as available through the National Technical Information Service (NTIS) appears in the October issue of the Technical Bulletin, p. 14-16.

Mrs. Yvonne Scott
MMS

NATIONAL LIBRARY OF MEDICINE

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN

of the

Library Component of the Biomedical Communications Network

No. 44 DECEMBER 1972

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U.S. DEPARTMENT OF HEALTH, EDUCATION, AND WELFARE
Public Health Service
National Institutes of Health

LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
of the
Library Component of the Biomedical
Communications Network

EDITOR
Grace T. Jenkins
Head, MEDLARS Management Section
National Library of Medicine
8600 Rockville Pike
Bethesda, Maryland 20014
(301) 496-6193 TWX: 710-824-9616
ASSISTANT EDITOR
Barbara Greehey

STAFF CORRESPONDENTS
Computer Services . . . . . Sue Geddes
Communications Network . . . Hector Maynez
Indexing . . . . . Thelma Charen
MEDLARS . . . . . Geri Nowak
On-Line Systems . . Leonard J. Bahlman and
Rose Marie Woodsmall
Regional Medical Libraries . . Dan Tonkery
Technical Services . . . . . Cecile Quintal

The LIBRARY NETWORK/MEDLARS TECHNICAL BULLETIN
is issued monthly by the Office of the
Associate Director for Library Operations.

HOLIDAY HOURS

MEDLINE will not be operational on Christmas weekend, December 23 through December 25 or New Years weekend, December 30 through January 1.

MEDLINE NEWS BRIEFS

Leonard J. Bahlman
MEDLARS Management Section, NLM

NEWS FILE — Please remember to access the Tymshare News Files on a daily basis, as many messages and responses to individual user questions are sent on-line through the Tymshare News Files. Messages will appear upon login to NLM4 or NLM4A through NLM4E. Special notices pertaining to all users will follow automatically in the news. Users may enter COM UPDATES after receiving the hyphen for a listing of each News File name and the date it was last changed.

OFF-LINE PRINTS — The formatting of the off-line prints has been changed in order to decrease the size and the cost of mailing the prints. Authors and main headings are now printed across the page as opposed to a separate line for each author and main heading.

TREE STRUCTURE NUMBERS — Some of the terms in the 1973 MeSH vocabulary have been assigned new tree structure numbers. These numbers, used in explosions, may be obtained by using the TREE and the MESHNO commands in MEDLINE or the 1973 MEDICAL SUBJECT HEADINGS, which is available from NTIS. (For information on ordering any of the MEDLINE tools, refer to the October 1972 Technical Bulletin, page 16.)

TYMSHARE DISCONNECTS

Users are requested to continue reporting their Tymshare disconnects to MEDLARS Management Section on a monthly basis. Please record the following information for each Tymshare disconnect from MEDLINE in Bethesda and/or MEDLINE in California, and send it to MEDLARS Management Section at the close of business on the last Thursday of each month.

1. Terminal ID assigned by NLM, e.g. MEDXXX01
2. Date of disconnect.
3. Time of disconnect.
4. If you are connected to MEDLINE in Bethesda or MEDLINE in California.

If you are logged into MEDLINE and receive the message PLEASE LOG IN:, this constitutes a Tymshare disconnect.

@ SYMBOL

REMINDER:

1. Enter an @ symbol after each completed search, whether in SDILINE or MEDLINE, before changing files.
2. Enter the @ symbol after any user cue and press the carriage return immediately. System will then respond with USER:
3. Enter only one @ symbol per line.

- -

MEDLARS/MEDLINE DATA BASE STATISTICS

	JOURNAL TITLES	CITATIONS
MEDLARS (Jan.'70 - Jan. '73)	2,203	684,086
MEDLINE (Jan.'70 - Jan.'73)	1,262	401,972
MEDLINE w/AIM Identifier	100	80,721
SDILINE (Jan. 1973)	2203	17,110

ADRENERGIC RECEPTOR DRUGS

Dorice Des Chene
Pacific Northwest Regional Health Sciences Library
Nancy G. Blase, Health Sciences Library
University of Washington, Seattle, Washington

Most sympathetic nerves exert their effects through the mediation of norepinephrine, whereas epinephrine is the emergency hormone of the sympathetic nervous system, released from the adrenal medulla. Drugs which appear to influence the same receptors as norepinephrine and epinephrine are termed adrenergic drugs.

Receptors are classified as alpha and beta, depending on their responses to adrenergic drugs. For example, isoproterenol is active only on beta receptors, and phenylephrine and methoxamine stimulate alpha receptors predominantly. The great majority of other adrenergic drugs have actions on both types of receptors.

The basic structure of the majority of adrenergic receptor agonists is the beta-phenethylamine skeleton often substituted with one or two phenolic OH groups.

Since drugs that stimulate (i.e., the agonists) the adrenergic receptors mimic the action of epinephrine and norepinephrine, they are called "sympathomimetics" or adrenergic receptor agonists.

Adrenergic blocking agents are drugs which block the effects of norepinephrine and related compounds on adrenergic receptors in various effector cells. In addition, they oppose the effects of sympathetic stimulation. The literature still contains obsolete terminology referring to adrenergic blocking agents as "sympatholytic" drugs.

The alpha adrenergic blocking drugs prevent vasoconstriction and other smooth muscle contraction induced by catecholamines or other adrenergic agonists.

The beta adrenergic blocking agents block the cardiac, bronchodilator, and some metabolic actions of the catecholamines or other adrenergic agonists.

The following hedges have been prepared in response to search requests involving the adrenergic receptor agonists and blockaders. Indexing instructions for some of the more frequently encountered adrenergic receptor agonists and blockaders which are not MeSH terms have been included also. Terms are from 1973 Medical Subject Headings.

ADRENERGIC ALPHA RECEPTOR AGONISTS

- AMPHETAMINE
- DOPAMINE
- EPHEDRINE
- EPINEPHRINE
- MEPHENTERMINE
- METARAMINOL
- METHAMPHETAMINE
- METHOXAMINE
- *NAPHAZOLINE
- NOREPINEPHRINE

*Provisional heading

*OXYMETAZOLINE
PHENYLEPHRINE
*PHENYLPROPANOLAMINE
VASOCONSTRICTOR AGENTS
ANGIOTENSIN
ANGIOTENSIN AMIDE
EPHEDRINE
METARAMINOL
METHOXAMINE
PHENYLEPHRINE
VASOCONSTRICTOR AGENTS, NASAL
*NAPHAZOLINE
*OXYMETAZOLINE
*PHENYLPROPANOLAMINE

Indexing for adrenergic alpha receptor agonists which are not MeSH terms:

cyclopentamine: CYCLOPENTANE (IM); PROPYLAMINES (IM); ADRENERGIC ALPHA RECEPTOR AGONISTS (IM) or VASOCONSTRICTOR AGENTS, NASAL (IM) as appropriate

hydroxyamphetamine: AMPHETAMINE (IM); PHENOLS (NIM); ADRENERGIC ALPHA RECEPTOR AGONISTS (IM) or VASOCONSTRICTOR AGENTS (IM) as appropriate

methylhexane amine: AMINES (IM); ADRENERGIC ALPHA RECEPTOR AGONISTS (IM) or VASOCONSTRICTOR AGENTS, NASAL (IM) as appropriate

propylhexadrine: PROPYLAMINES (IM); CYCLOHEXANE (IM); ADRENERGIC ALPHA RECEPTOR AGONISTS (IM) or APPETITE DEPRESSANTS (IM) as appropriate

tuaminoheptane: AMINES (IM); ADRENERGIC ALPA RECEPTOR AGONISTS (IM) or VASOCONSTRICTOR AGENTS, NASAL (IM) as appropriate

ADRENERGIC BETA RECEPTOR AGONISTS
AMPHETAMINE
BAMETHAN
EPHEDRINE
EPINEPHRINE
ISOPROTERENOL
ISOXSUPRINE
NOREPINEPHRINE
NYLIDRIN
*QUINTERENOL

Indexing for adrenergic beta receptor agonists which are not MeSH terms:

salbutamol: PHENETHYLAMINES (IM); ETHANOLAMINES (IM); BUTYLAMINES (NIM); BRONCHODILATOR AGENTS (IM) as appropriate; ADRENERGIC BETA RECEPTOR AGONISTS (IM) as appropriate

terbutaline: ETHANOLAMINES (IM); BUTYLAMINES (NIM); RESORCINOL (NIM); BRONCHODILATOR AGENTS (IM) as appropriate; ADRENERGIC BETA RECEPTOR AGONISTS (IM) as appropriate

*Provisional heading

protochylol: PHENETHYLAMINES (IM); CATECHOLAMINES (IM); DIOXOLES (NIM); ETHANOLAMINES (NIM); BRONCHODILATOR AGENTS (IM) as appropriate; ADRENERGIC BETA RECEPTOR AGONISTS (IM) as appropriate

ADRENERGIC ALPHA RECEPTOR BLOCKADERS

DIBENAMINE
ERGOT ALKALOIDS
    ERGOT ALKALOIDS, HYDROGENATED
    ERGOTAMINE
PHENOXYBENZAMINE
PHENTOLAMINE
THYMOXAMINE
TOLAZOLINE
YOHIMBINE

Indexing for adrenergic alpha receptor blockaders which are not MeSH terms:

azapetine: DIBENZAZEPINES (IM); ALLYL COMPOUNDS (NIM); ADRENERGIC ALPHA RECEPTOR BLOCKADERS (IM) as appropriate

piperoxan: PIPERIDINES (IM); DIOXINS (NIM); ADRENERGIC ALPHA RECEPTOR BLOCKADERS (IM) as appropriate

ADRENERGIC BETA RECEPTOR BLOCKADERS

ALPRENOLOL
BUNOLOL
*BUTOXAMINE
DICHLOROISOPROTERENOL
OXPRENOLOL
PINDOLOL
PRONETHALOL
PROPRANOLOL
SOTALOL

Indexing for adrenergic beta receptor blockaders which are not MeSH terms:

nifenalol (INPEA): PHENETHYLAMINES (IM); ETHANOLAMINES (IM); NITROBENZENES (NIM); ADRENERGIC BETA RECEPTOR BLOCKADERS (IM) as appropriate

practolol: AMINO ALCOHOLS (IM); ACETANILIDE (NIM); PROPYLAMINES (NIM); ADRENERGIC BETA RECEPTOR BLOCKADERS (IM) as appropriate

butidrine: ETHANOLAMINES (IM); BUTYLAMINES (NIM); NAPHTHALENES (NIM); ADRENERGIC BETA RECEPTOR BLOCKADERS (IM) as appropriate (1973)

Ko 592: AMINO ALCOHOLS (IM); PROPYLAMINES (NIM); ALCOHOL, PROPYL (NIM); CRESOLS (NIM); ADRENERGIC BETA RECEPTOR BLOCKADERS (IM) as appropriate

The authors wish to thank Ruth Stander of the National Library of Medicine for providing the indexing instructions for non-MeSH terms.

OFF-LINE PRINT EVALUATION/MEDLINE STATISTICAL SURVEY, SEPTEMBER 1972

Grace T. Jenkins
MEDLARS Management Section, NLM

OFF-LINE PRINT EVALUATION

During the week of September 18, 1972, MEDLINE Search Evaluation cards were enclosed with all MEDLINE off-line prints mailed from the National Library of Medicine.

Requesters of off-line prints during this period were asked to enter, on the evaluation card, the date on which they requested the MEDLINE search, the date on which they received the off-line print, the number of citations they received, and in addition, to check one item in each of the following categories:

A. Purpose of search
B. Entered by
C. Value
D. Profession

In reviewing the statistics, note that some users neglected to check all items while others checked more than one item in some categories. Six hundred and forty-eight evaluation forms were mailed with the off-line prints during the week of September 18. Three hundred and twenty-eight (50.6%) were returned.

Following is a summary of our findings from the evaluation study:

1. 648 evaluation forms sent out
   328 returned
   50.6% return rate

2. Average number of citations:

per evaluation form returned	100.5
for the 648 off-line prints	103.7

3. Average number of days from:

date search requested until date received	5.0
date off-line print mailed from NLM until date received	3.0

4. Purpose of search:

	Number	Percent
1. Direct patient care	31	8.9
2. Education	72	20.6
3. Research	239	68.5
4. Other	7	2.0
5. Unknown	0	0.0
	349	

5. Search was entered:

	Number	Percent
1. By yourself	69	21.3
2. With assistance	172	53.1
3. In your absence	83	25.6
	324	

6. Value of search:

	Number	Percent
1. Major value	98	30.1
2. Considerable value	185	56.8
3. Minor value	35	10.7
4. No value	1	0.3
5. Unknown	7	2.1
	326	

7. Profession:

	Number	Percent
1. Physician	122	36.8
2. Information Specialist	23	6.9
*3. Non-physician-Scientist (specify)	116	34.9
**4. Student (specify)	47	14.2
***5. Other (specify)	24	7.2
	332	

*The following categories were specified three or more times by the Non-Physician Scientist:

Biochemist	Ph.D., Pharmacology
Biologist	Physiologist
Chemist	Psychologist
Demographer	Toxicologist
Pharmacologist	

**The following categories were specified three or more times by students:

Graduate	Nursing
Graduate, Anatomy	Ph.D., (various programs)
Medical	

***The following categories were specified three or more times by requesters who had checked "other":

Librarian
Nursing
Veterinarian

MEDLINE STATISTICAL SURVEY

In addition to the evaluation study, MEDLARS Management Section requested each of the 91 then existing MEDLINE Centers to participate in a "sample" statistical study. We asked each center to complete a brief statistical form for data relating to their MEDLINE Search activity for one month, i.e., September. Using the Index Medicus month, the dates covered were September 1 through September 28, 1972. Of the 91 statistical reporting forms that were mailed to the MEDLINE Centers, 90 were returned to MEDLARS Management Section. Prior to this Centers were not necessarily keeping statistical data which MEDLARS Management Section was requesting for this survey, and since the statistical reporting forms were mailed after the reporting period had begun, statistics from some of the Centers were incomplete.

	NUMBER	PER CENT
Requests filled:		
Affiliates	5,237	73
Non-affiliates	1,910	27
	7,147	
Requests referred	65	
Requests rejected	140	
Searches entered by:		
Analyst	5,997	79
Requester	348	5
Requester with help	1,212	16
	7,557	
Throughput time:		
One day	5,000	77
Two days	666	10
Three days	299	5
Over three days	506	8
	6,471	

- MEDLINE OFF-LINE PRINTS -
200 MOST OFTEN RETRIEVED MEDLINE JOURNAL TITLES

Clifford A. Bachrach, M.D.
Bibliographic Services Division, NLM

The list that follows presents 200 MEDLINE journal titles in order of frequency of retrieval in MEDLINE searches. While it may be of interest to many MEDLINE users, it should not be interpreted as a list of the "200 best," or the "200 most useful."

The frequency with which a citation to a given journal is retrieved on MEDLINE is the resultant of a number of factors. It is evident that a journal has no chance of appearing among the top 200 if it has no citations included in the MEDLINE file. And there are numerous respectable journals that are not included in MEDLINE. MEDLINE includes only half of the Index Medicus titles. In the selection of MEDLINE titles, foreign language journals, journals concerned primarily with subjects peripheral to the medical sciences, and journals having less authoritative and exhaustive articles have a reduced probability of inclusion.

Why are these two hundred titles retrieved more frequently than the other 1,000 MEDLINE titles? One most important factor in frequency of retrieval is the number of items input from a given journal. Note that most of the "top ten" are weeklies that publish many articles in each issue. Without denying the quality of these leaders, I might point out that there are other excellent journals that are entirely missing from this list because they publish only a few articles in each issue, and publish less frequently. An example is the Quarterly Journal of Medicine.

The frequency of retrieval also depends on the character of the search questions that are addressed to the system. Our users include a great number of persons with basic research interests. Consequently their searches retrieve articles from such journals as Proceedings of the Society for Experimental Biology and Medicine, and Experientia, both of which appear among the top 25 titles. But some journals that would be indispensible in an institution where medicine is practiced are far down this list, or entirely missing. For example, the Journal of Bone and Joint Surgery (American edition) barely made this list, and the British edition missed it.

The list is further affected by some of our indexing practices and ground rules. Journal of Physiology (London) publishes many very brief papers read at meetings. Because these have some substance, and contain some original data and tables, they have long been regarded as original articles, and each is indexed. Consequently, Journal of Physiology (London) appears 30th on this list. On the other hand, Journal of Anatomy (London), contains similar papers, but these have appeared to us to contain a tiny bit less in the way of data and tables, and these have therefore been regarded as abstracts. We do not index abstracts. Possibly in part for this reason, Journal of Anatomy (London) does not appear on the present list.

It must now be clear that this list represents a MEDLINE phenomenon, and must not be used as it stands as a basis for serials acquisition in any particular institution. The Library of Congress has just released a list of the books for which they received 1,000 or more orders for catalog cards in the previous 12 months. They state that the titles "reflect in ome vaguely defined or non-defined manner the reading tastes of the public, or possibly the acquisition habits of American librarians." Similarly, our list reflects, vaguely, the publication patterns of the titles we choose to index, the vagaries of our indexing practices, and the subject interests of that non-existent person, the average MEDLINE user

- MEDLINE OFF-LINE PRINTS -
200 MOST OFTEN RETRIEVED MEDLINE JOURNAL TITLES
JUNE 1972 - NOVEMBER 1972

CODE	ABBREV	USE72
LOS	LANCET	36907
B4W	BR MED J	30680
NOW	N ENGL J MED	28487
KFR	JAMA	24569
AOW	BIOCHIM BIOPHYS ACTA	23956
M26	MED J AUST	16674
NSC	NATURE (LONDON)	15624
UJ7	SCIENCE	14299
HIV	J BIOL CHEM	13989
3VG	AM J PSYCHIATRY	13610
3NI	AM J OBSTET GYNECOL	12934
3XW	AM J PUBLIC HEALTH	12089
PXZ	PROC SOC EXP BIOL MED	12024
5NM	ANN NY ACAD SCI	11978
EGZ	ENDOCRINOLOGY	11754
CLZ	CANCER	10853
OXV	PEDIATRICS	10109
CKW	CAN MED ASSOC J	10056
9Y8	BIOCHEM BIOPHYS RES COMMUN	9862
PXM	PROC R SOC MED	9665
JLZ	J PEDIATR	9623
B5L	BRAIN RES	9130
PV3	PROC NATL ACAD SCI USA	9029
5A6	ANN INTERN MED	8941
EQZ	EXPERIENTIA	8906
3U8	AM J PHYSIOL	8826
CNF	CANCER RES	8766
HRB	J CLIN ENDOCRINOL METAB	8649
9YO	BIOCHEM J	8568
JQV	J PHYSIOL (LONDON)	8361
AOG	BIOCHEMISTRY	8332
72C	ARCH GEN PSYCHIATRY	8331
EEH	ELECTROENCEPHALOGR CLIN NEUROPHYSIOL	8000
IFB	J IMMUNOL	7732
DAW	CIRCULATION	7730
UVH	SOUTH MED J	7398
OC2	OBSTET GYNECOL	7111
B1K	BR J PSYCHIATRY	7091
HS7	J CLIN INVEST	7012
9Z4	BIOCHEM PHARMACOL	6967
QSH	RADIOLOGY	6842
I1J	J ENDOCRINOL	6706
U4R	S AFR MED J	6666
7FS	ARCH INTERN MED	6504
JP3	J PHARMACOL EXP THER	6424
3GS	AM J DIS CHILD	6360

ECL	DTSCH MED WOCHENSCHR	6267
GDL	HOSPITALS	6263
8IA	ARCH SURG	6231
Y3O	Z ZELLFORSCH MIKROSK ANAT	6197
EPB	EXP CELL RES	6188
6SK	ARCH BIOCHEM BIOPHYS	6173
WE9	TRANSPLANT PROC	6132
HH3	J BACTERIOL	6079
3DQ	AM J CARDIOL	6056
J13	J MED EDUC	5899
6YO	ARCH ENVIRON HEALTH	5879
BOO	BR J PHARMACOL	5800
KC7	J UROL	5780
JAV	J NEUROCHEM	5732
OZB	PERCEPT MOT SKILLS	5726
3JU	AM J MED	5650
91U	ARZNEIM FORSCH	5605
3EY	AM J CLIN NUTR	5600
J9J	J NATL CANCER INST	5567
3Z4	AM J SURG	5517
DCC	CLIN CHIM ACTA	5465
PLP	PRESSE MED	5364
3BW	AM HEART J	5291
3YI	AM J ROENTGENOL RADIUM THER NUCL MED	5284
C9C	C R ACAD SCI D (PARIS)	5231
UEI	SCHWEIZ MED WOCHENSCHR	5181
XEA	VIROLOGY	5049
NSH	NATURE NEW BIOL	5037
KCV	J VIROL	4987
NMM	MUNCH MED WOCHENSCHR	4979
LU6	MED CLIN NORTH AM	4977
K9J	J THORAC CARDIOVASC SURG	4949
HMV	J CELL BIOL	4915
B34	BR J SURG	4883
67S	ANN SURG	4881
VC3	SURGERY	4865
DHE	CLIN PEDIATR (PHILADELPHIA)	4859
PFK	POSTGRAD MED	4817
VBD	SURG GYNECOL OBSTET	4764
7EK	ARCH INT PHARMACODYN THER	4737
HEF	J APPL PHYSIOL	4682
EN6	EUR J PHARMACOL	4667
6WU	ARCH DERMATOL	4627
6XG	ARCH DIS CHILD	4526
EAL	DIS NERV SYST	4513
N6M	MINERVA MED	4470
PHQ	PRACTITIONER	4460
O4K	NORD MED	4453
M4E	MED KLIN	4452
DFY	CLIN ORTHOP	4413
ATS	BR HEART J	4399
D1C	CHEST	4376

JWN	J REPROD FERTIL	4371
A74	BIULL EKSP BIOL MED	4359
ONC	ACTA ENDOCRINOL (KBH)	4330
IVR	J LAB CLIN MED	4310
KU9	KARDIOLOGIIA	4275
NZO	NEUROLOGY (MINNEAP)	4251
QL9	Q J STUD ALCOHOL	4238
3OQ	AM J OPTHALMOL	4155
I2V	J EXP MED	4143
JG7	J OBSTET GYNAECOL BR COMMONW	4138
6KO	APPL MICROBIOL	4043
EMZ	EUR J BIOCHEM	4036
3FK	AM J CLIN PATHOL	4029
EQF	EXP NEUROL	4008
DAJ	CIRC RES	3978
DD7	CLIN EXP IMMUNOL	3930
J6V	J MOL BIOL	3902
3MW	AM J NURS	3846
IH3	J INFECT DIS	3834
GYO	ISR J MED SCI	3766
4SG	ANESTHESIOLOGY	3753
HAV	J AM VET MED ASSOC	3743
JAF	J NERV MENT DIS	3694
426	AM REV RESP DIS	3661
3R6	AM J ORTHOPSYCHIATRY	3637
WEJ	TRANSPLANTATION	3637
A8G	BLOOD	3613
EUV	FED PROC	3581
2RQ	AEROSP MED	3577
14G	ACTA MED SCAND	3575
JD3	J NEUROSURG	3574
HT3	J CLIN PATHOL	3557
KWH	KLIN WOCHENSCHR	3550
VAN	SURG CLIN NORTH AM	3544
4R8	ANESTH ANALG (CLEVE)	3511
AUO	BR J ANAESTH	3499
MTQ	MENT HYG	3444
CLM	CAN PSYCHIATR ASSOC J	3428
FH3	GASTROENTEROLOGY	3419
QGE	PSYCHOPHARMACOLOGIA	3417
DJK	CLIN SCI	3398
FVT	GUT	3395
830	ARCH OPHTHALMOL	3362
HTJ	J CLIN PSYCHOL	3332
1U4	ACTA PHYSIOL SCAND	3317
VBO	SURG FORUM	3306
OBQ	NZ MED J	3293
PB1	POL MED J	3291
JEV	J NUTR	3280
FO1	GERIATRICS	3259
86O	ARCH OTOLARYNGOL	3257
GCJ	HOSP COMMUNITY PSYCHIATRY	3231

AWO	BR J DERMATOL	3225
40C	AM J VET RES	3222
80K	ARCH NEUROL	3189
DFL	CLIN OBSTET GYNECOL	3155
P9S	PLAST RECONSTR SURG	3125
KZ4	LAB INVEST	3125
JRB	J PHYSIOL (PARIS)	3094
Y9Y	ZH NEVROPATOL PSIKHIATR	3074
Y9O	ZH MIKROBIOL EPIDEMIOL IMMUNOBIOL	3072
QJA	PUBLIC HEALTH REP	3072
JNR	J PHARM PHARMACOL	3067
GP9	INT ARCH ALLERGY APPL IMMUNOL	3064
OZX	PFLUEGERS ARCH	3048
GH7	IMMUNOLOGY	3021
DBZ	CLIN CHEM	3018
KAF	J TRAUMA	3016
H6F	J AM DIET ASSOC	3010
88I	ARCH PATHOL	2995
WBU	TRANS R SOC TROP MED HYG	2991
683	ANN THORAC SURG	2936
E83	DEV MED CHILD NEUROL	2932
MUM	METABOLISM	2927
JO7	J PHARM SCI	2910
XUY	Z GESAMTE INN MED	2892
XS6	Z AERZTL FORTBILD (JENA)	2874
VWO	TOXICOL APPL PHARMACOL	2866
NTQ	NAUNYN SCHMIEDEBERGS ARCH PHARMACOL	2857
HVR	J COMP PHYSIOL PSYCHOL	2854
NFI	MOD HOSP	2849
GU1	INT PSYCHIATRY CLIN	2844
3MA	AM J MENT DEFIC	2837
CA2	C R SOC BIOL (PARIS)	2803
OUM	PEDIATR CLIN NORTH AM	2795
ULD	SEM HOP PARIS	2782
4NK	ANAL BIOCHEM	2779
H6V	J AM GERIATR SOC	2768
73K	ARCH GESAMTE VIRUSFORSCH	2744
B28	BR J RADIOL	2734
P72	PHYSIOL BEHAV	2727
1LV	ACTA PAEDIATR SCAND	2727
AXC	BR J HAEMATOL	2706
3H3	AM J EPIDEMIOL	2667
H5J	J AM DENT ASSOC	2650
3RS	AM J PATHOL	2649
UUA	SOC SCI MED	2643
EVF	FERTIL STERIL	2632
HJR	J BONE JOINT SURG AM	2592
JSV	J PROSTHET DENT	2585
JOF	J MED CHEM	2572
JEF	J NUCL MED	2561

MESH MATERIALS ERRATA

Medical Subject Headings Alphabetic List 1973

Page 179 Cross Reference: Change: Diabinses see CHLORPROPAMIDE (D2, D8)
To: Diabinese see CHLORPROPAMIDE (D2, D8)

Page 262 Change: GAMMA GLOBULIN 7S
To: GAMMA GLOBULIN, 7S

Change: GAMMA GLOBULIN 19S
To: GAMMA GLOBULIN, 19S

Page 403 Cross Reference: Change: Microangiography, Diabetic see DIABETIC ANGIOPATHIES (C7, C8, C13)
To: Microangiopathy, Diabetic see DIABETIC ANGIOPATHIES (C7, C8, C13)