

Washington State Medical Association Clinical Information Needs Questionnaire

Introduction

In March 2008, staff of the Regional Medical Library (RML) for the Pacific Northwest Region of the National Network of Libraries of Medicine collaborated with the Washington State Medical Association (WSMA) to survey the WSMA membership. Survey information was sought to better understand WSMA members' clinical information use patterns and to assess needs for training about NLM resources.

The survey was conducted electronically by the WSMA to WSMA members using an online survey tool called Zoomerang. Data was compiled by the WSMA and forwarded to the RML for analysis and reporting. WSMA membership is approximately 9,000 members, and the survey was distributed to those members who have an email address on file with WSMA – approximately 4,160 individuals. 377 survey responses were received (9% response rate but only 4% of all WSMA members). Given this low response rate, results can be generalized only to survey respondents, not to the WSMA as a whole or to physicians in general.

Demographics

Specialties

Respondents were asked to indicate their practice specialty, and 41% indicated their specialty was primary care (Family Practice, Internal Medicine or Pediatrics). Over half, 55%, indicated their specialty was something other than primary care. No further breakdown about practitioners' individual specialties other than primary care was provided.

Years in practice

Nearly three quarters (74%) of the survey respondents said it had been eleven years or more since their completion of residency or training (29% indicated 11-20 years and 45% indicated 20 or more years). About one quarter, 26%, had been in practice for fewer than ten years.

Access to a medical librarian or library service

Most respondents (72%) indicated they do have access to the services of a medical librarian or a medical library. No breakdown was given between those two options.

Information Resources Used

Survey respondents were asked to indicate any information resources they had used during the past month to help them do their job better, by checking all options that applied. The choices included types

of resources as well as distinguishing between online and printed versions of those resources. A table and a bar graph showing the percentages of each response are included in Appendix A.

Over three-quarters of respondents (81%) said they had consulted a colleague for information during the past month. No breakdown was given of whether these consultations were done in-person, by telephone, or online.

Drug resources were consulted online by nearly three quarters of respondents (74%) and in print by fewer than half (41%).

Respondents reported using journals and textbooks more heavily in print than online (70% and 68% in print, respectively, versus 61% reporting using online journals and 41% reporting using online textbooks) although the disparity between print and online journal use was not as great as that between print and online textbook use.

Over half of respondents (52%) indicated they had used a professional association web site for information. About as many respondents reported using online sources for CME as print sources (44% and 42% respectively).

Respondents reported finding patient information, guidelines, and evidence-based resources online (indicated by 49%, 47%, and 45% of respondents, respectively) more than they used print resources. Fewer than one third of respondents (28%) indicated having obtained patient information in print, 21% used guidelines in print, and only 9% used print resources for evidence-based information.

Location(s) where online information resources were used

Respondents were asked at what locations they looked for online clinical information during the past month, checking all that applied. Access online while in their office or while working from home were highly favored with 92% reporting they had looked for information while in their office and 79% reporting they did this while working from home. Only one quarter reported using online information while in the exam room, and 11% while at a hospital library. One percent reported they do not use online resources.

Portable devices used to access information

This question also instructed respondents to “check all that apply.” Two thirds (67%) of respondents reported using a laptop computer to access clinical information, with approximately half (54%) reporting using a PDA for that purpose. Twenty percent reported use of a tablet computer, and 7% a Palmtop.

Types of information typically searched for using online clinical resources

Respondents were asked to rank the types of information typically searched for according to frequency of use. A table and bar graph of these responses is included in Appendix A. Questions about medications

and drug interactions were ranked at “most frequently” or “frequently” by 74% of respondents, followed by questions about diagnosis and treatment with 68% ranking at either “most frequently” or “frequently.” Fifty-nine percent said they searched for best evidence on a topic either “most frequently” or “frequently” with another 28% searching for this type of information “occasionally.” Patient education information was sought by 37% of respondents either “most frequently” or “frequently” and 30% of respondents reported using online algorithms, decision trees or calculators either “most frequently” or “frequently.”

Limitations to using online information for patient care and answering clinical questions

Respondents were asked to rate limitations to the use of online information using Strongly Agree, Agree, Disagree, Strongly Disagree, or No Opinion. Limitations were categorized as Content, Efficiency, Skills, Availability, and Cost, with varying numbers of questions included in each category.

Content

According to respondents, the biggest limitation in this category was inability to obtain full text of journal articles (31% strongly agree and 39% agree), followed by inadequate level of detail found or inappropriate to question (10% strongly agree and 41% agree). A little more than one-third (37%) agreed or strongly agreed that preferred resources were not available online, and 21% agreed with a lack of confidence in the reliability of sources as a limitation to using them.

Efficiency

Just over half of respondents (55%, with 43% agree and 12% strongly agree) indicated that it takes too much time to find answers online, and a similar percentage (53%, with 42% agree and 11% strongly agree) felt it was easier to ask a colleague for information. Forty percent agreed (31%) or strongly agreed (9%) it was easier to look information up in their personal books and references.

Skills

Forty-four percent of respondents agreed (39%) or strongly agreed (5%) that difficulty articulating questions using online resources was a limitation. Thirty-three percent of respondents agreed (29%) or strongly agreed (4%) that not knowing how to use online resources very well was a limitation. Similarly, 31% agreed (26%) or strongly agreed (5%) that they did not know how or where to start searching for answers.

Availability

Only 18% of respondents agreed or strongly agreed that availability of a computer was a limitation.

Cost

About one third of respondents (9% strongly agree and 25% agree) indicated that online resources were too expensive. Few respondents (5%) agreed or strongly agreed that computers were too expensive for their practice.

Needs for clinical information

Question 16 asked respondents to share (via an open ended response) anything they feel is important regarding their needs for clinical information in providing patient care. The largest number of responses indicated that full text articles should be accessible; and many also specified they should be free. Ease and speed of access to information and ease of use of clinical information were also named by a number of respondents. A number of respondents listed specific resources or web sites; the most frequently requested was access to UpToDate. Another need, mentioned more than once, was access to “reliable” information, both for clinical decision making and for patient use. A number of respondents indicated they need education on *how* to search, and *what* to search, to get “credible” information, and/or information for patients.

Familiarity with NLM Resources

Respondents were asked whether or not they used several free resources available from the National Library of Medicine. PubMed (62% used) and MedlinePlus (43% used) were indicated as being used by the most respondents, with only 10% for PubMed and 20% for MedlinePlus being unaware of the resources. However, only 13% of respondents indicated they used ClinicalTrials.gov, with 44% indicating they were not aware of this resource. TOXNET was listed as used by 3% of respondents, with 56% indicating they were not aware of it.

Interest in training about NLM Resources

Respondents were asked to indicate their interest in receiving training about the same four resources listed in the previous question. Interest was high among respondents for receiving training in all four resources, with 74% of respondents either very interested or interested in both PubMed and MedlinePlus, 71% interested or very interested in ClinicalTrials.gov, and 63% interested in TOXNET.

In answer to the question of when respondents would attend training if it were offered, early weekday mornings (23%) and weekday evenings (34%) were favored. However, 45% of the 48 respondents who specified “Other” indicated that online training would be favored over training offered at a specific day and time.

Discussion

Opportunities for hospital librarians

Respondents indicated in large numbers that they used online resources to find information about drugs and medications, as well as to find diagnosis and treatment information. Online evidence-based information was also used by many respondents.

Many of the limitations that participants agreed with pertain to level of skill in using online resources, rather than to any lack of access to computers or the internet. These include not knowing where to start looking for information online or how to do it, finding it easier to ask a colleague or to look up information in books, having difficulty articulating questions in order to use online resources, and feeling that using online information takes too much time. When coupled with the results indicating that most respondents have been in practice for at least 11 years (74%, with nearly half of respondents, 45%, indicating they have been in practice for more than 20 years) it might be that this group of respondents may not have had as extensive training in online information seeking, and the kinds of information available online, as do physicians who began practice more recently. It may also be that this group of respondents displayed an interaction of age factors with information technology comfort levels. Given that most respondents also indicated they have access to a hospital library or librarian, this could indicate an opening for hospital librarians to provide further skill building opportunities for physicians to learn to use online resources more easily and efficiently.

Bearing in mind that most respondents have access to a hospital librarian or library service, many indicate that their access to full text journal articles is limited. This may present an opportunity for librarians to continue to promote and publicize the depth and breadth of resources they make available to their constituents, as well as to creatively promote the variety of available document delivery options.

Opportunities for RML

The RML works to ensure that all physicians and other health professionals in the Northwest have access to information sources essential to quality patient care. Promoting and supporting librarians in hospital and other clinical settings is a key strategy. Librarians develop collections of print and electronic resources tailored to the unique needs of their users and provide expert consultation in clinical, educational, and research domains. Every hospital librarian serves the physicians of his/her hospital and many also extend their services to others in the community or to those who practice in settings without specialized health libraries.

Seventy-two percent of respondents reported they have access to a medical library and/or to a medical librarian. Therefore, sharing the results of this survey with network member librarians is imperative. Findings (which materials physicians use, how and where they use them, preferences and frustrations) can inform policies and services of network member libraries. Since respondents are not personally identified, librarians may also wish to follow up with a more localized survey.

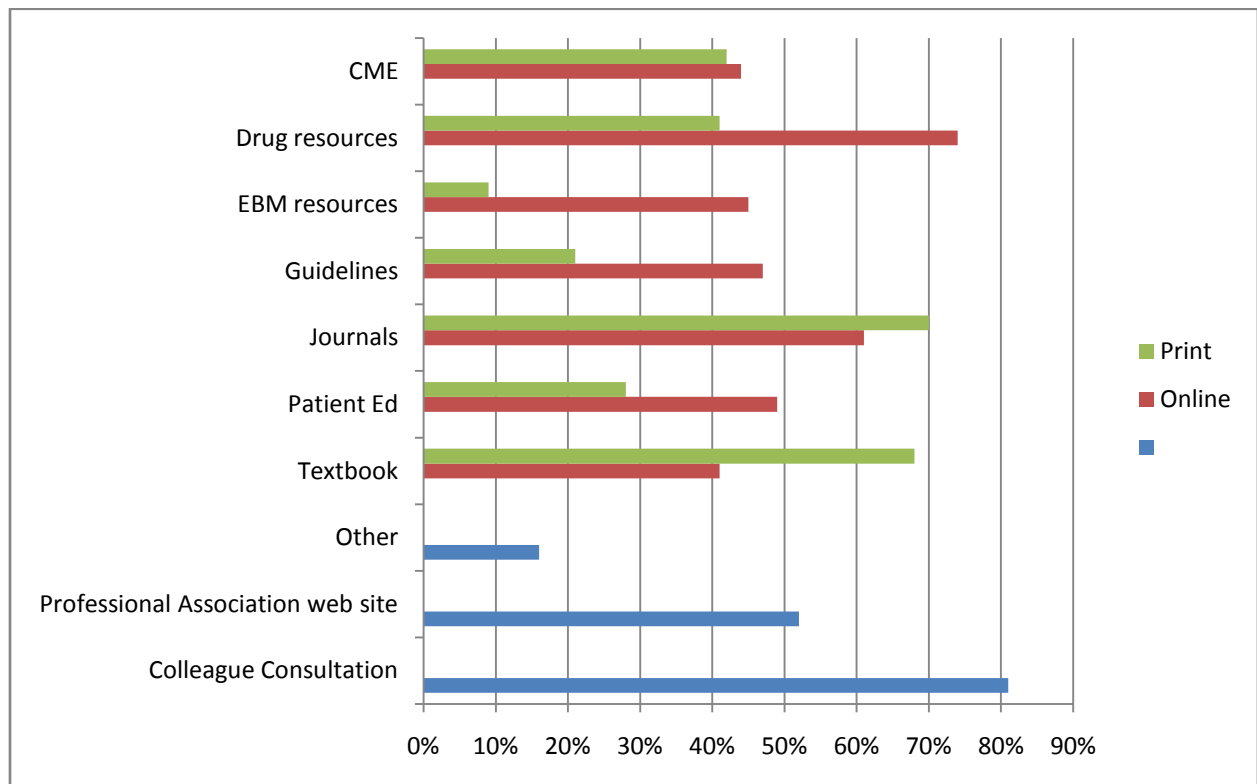
Many respondents (44%) indicated they had difficulty articulating questions using online resources. Thirty-one percent admitted not knowing how to start searching for answers to clinical questions, and 34% admitted not knowing where to search. Hospital librarians can provide instruction in basic principles of evidence-based practice, especially formulation of well-structured clinical questions (patient/problem, intervention, comparison, outcome). The most frequently mentioned limitation to use of online resources (70% agree or strongly agree) is access to full text of journal articles. Librarians need to be sure their physicians understand options for getting articles, and the RML can assist with instruction on LinkOut for Libraries and Loansome Doc for affiliated as well as unaffiliated users.

Although NLM products are heavily used (PubMed 62%; MedlinePlus 43%), seventy four percent of respondents are interested in training on these systems. RML staff can work with hospital librarians to be sure they have tools to provide this training. In areas of the State without local hospital libraries, RML staff can provide training and/or offer incentives (e.g., training awards) to encourage network members to conduct sessions. Training can also be offered at meetings of county or specialty medical societies or via distance education formats.

Appendix A

Question 1 – Information Resources Used

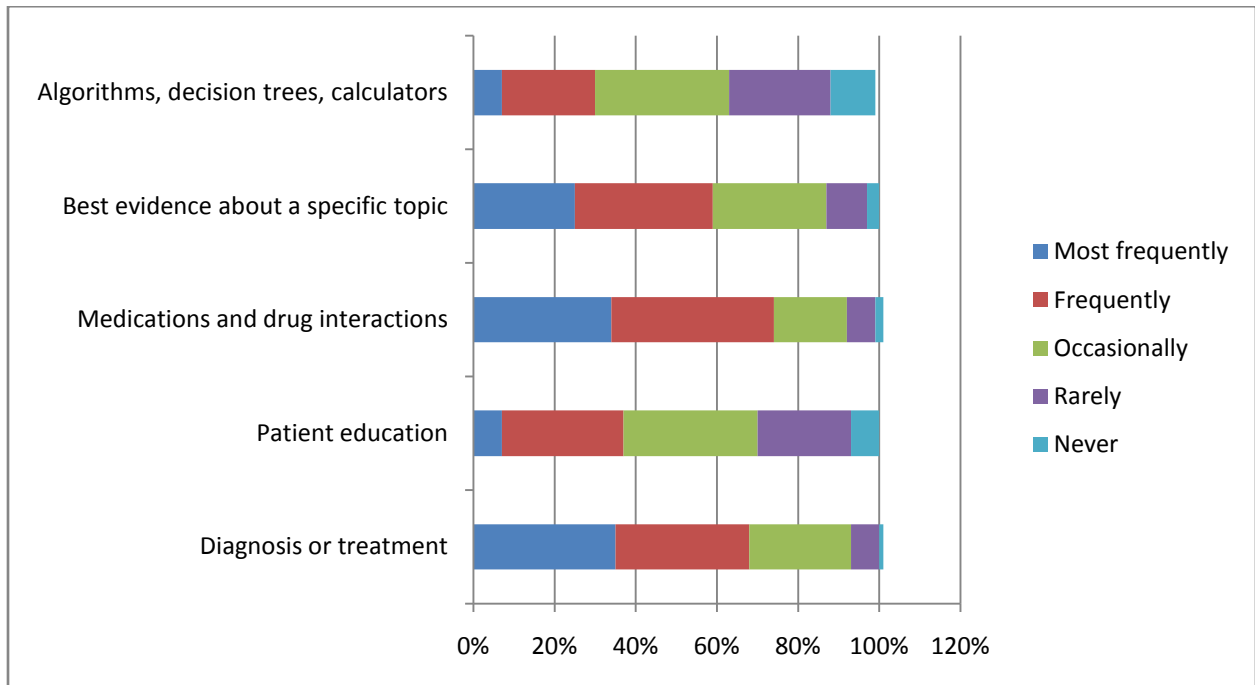
Type of Resource	Online	Print
Textbook	41%	68%
Drug resources	74%	41%
EBM resources	45%	9%
Journals	61%	70%
Guidelines	47%	21%
Patient Ed	49%	28%
CME	44%	42%
Colleague Consultation	81%	
Professional Association web site	52%	
Other	16%	



Question 4 - Types of Online Resources and Frequency

Type of Resource and Frequency

Type of Resource	Most frequently	Frequently	Occasionally	Rarely	Never
Diagnosis or treatment	35%	33%	25%	7%	1%
Patient education	7%	30%	33%	23%	7%
Medications and drug interactions	34%	40%	18%	7%	2%
Best evidence about a specific topic	25%	34%	28%	10%	3%
Algorithms, decision trees, calculators	7%	23%	33%	25%	11%



Appendix B

Open-ended Responses to Question 13, Top 5 Resources Used

Respondents could name up to 5 resources, including online or print resources. Out of 336 responses, the resources that are named more than once, with numbers of responses, include:

- AAFP (24)
- Online or Online Journals (13)
- AAP (12)
- ACP Online (10)
- CDC (9)
- ACOG (8)
- American Family Physician (7)
- AAOS (7)
- ACC (5)
- AAO (3)
- Campbell's Urology (3)
- ACCP (2)
- AHA or AHA Online (2)
- ASCRS (2)
- American Academy of Ophthalmology (2)
- Annals of Internal Medicine (2)

Appendix C

Open-ended Responses to Question 14, Top 3 Online Resources Used

Respondents could name up to 3 resources. Of 304 responses, the online resources that are named more than once, with numbers of responses, include:

- Up to Date (15)
- MD Consult (7)
- Google (7)
- AAFP (6)
- eMedicine.com (6)
- Pubmed (6)
- MedlinePlus (4)
- Familydoctor.org (3)
- Web MD (3)
- Mayo Website (3)
- AAOS (2)
- CDC (2)
- Cochrane data (2)
- Epocrates (2)
- Medscape (2)
- Webmd.com (2)

Appendix D

Open-ended Responses to Question 19, Location of Practice

Anacortes (3)	Mercer Island (1)
Bainbridge Island (1)	Moses Lake (5)
Bellevue (14)	Mountlake Terrace (1)
Bellingham (12)	Mt. Vernon (9)
Bonney Lake (2)	Newport (1)
Bremerton (6)	North Bend (1)
Brewster (1)	Okanogan (2)
Burien (1)	Olympia (17)
Cashmere (1)	Omak (2)
Centralia (6)	Pasco (2)
Chehalis (1)	Port Townsend (1)
Chelah (1)	Poulsbo (1)
Clarkston (1)	Pt. Angeles (2)
Cle Elum (1)	Redmond (1)
Eastsound (1)	Renton (8)
Edmonds (4)	Richland (4)
Ellensburg (1)	Seattle (35)
Enumclaw (2)	Selah (1)
Everett (16)	Shelton (1)
Federal Way (5)	Silverdale (5)
Forks (2)	Spokane (39)
Gig Harbor (1)	Sultan (2)
Issaquah (2)	Tacoma (23)
Kennewick (2)	Tonasket (2)
Kent (1)	Tumwater (1)
Kirkland (4)	Vancouver (15)
Kitsap Co (1)	Walla Walla (7)
La Conner (1)	Wenatchee (12)
Lacey (1)	White Salmon (1)
Lakewood (1)	Yakima (7)
Marysville (1)	Other Responses:
	“WA” (1)
	Viet Nam (1)
	8632 (1)

Appendix E

Zoomerang Survey Results: WSMA Clinical Information Needs Questionnaire

1. Which of the following information resources have you used during the past month to help you do your job better? (Check all that apply)

Textbooks: online	156	41%
Textbooks: print	257	68%
Drug resources: online	280	74%
Drug resources: print	153	41%
Evidence-based resources (e.g. Cochrane, Clinical Evidence): online	169	45%
Evidence-based resources (e.g. Cochrane, Clinical Evidence): print	33	9%
Journals: online	228	61%
Journals: print	264	70%
Clinical practice guidelines: online	176	47%
Clinical practice guidelines: print	79	21%
Patient education resources: online	183	49%
Patient education resources: print	104	28%
CME materials/programs: online	165	44%
CME materials/programs: print	159	42%
Consultation with colleagues	306	81%
Professional associations' web sites	196	52%
Other, please specify	61	16%

2. At what location(s) were you when you looked for online clinical information during the past month (check all that apply):

Information online in the exam room	93	25%
Information online in your office	344	92%
Information online while working at home	296	79%
Information online at a hospital library	41	11%
I don't use online resources	5	1%
Other, please specify	24	6%

3. Which of the following portable devices do you use to access stored/archived clinical information? (Check all that apply):

Palmtop	24	7%
PDA (Personal Digital Assistant)	174	54%
Tablet computer	63	20%
Laptop computer	215	67%
Other, please specify	39	12%

4. What types of information do you most commonly search for using online clinical information resources, and how frequently do you use each type??

Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Most Frequently	Frequently	Occasionally	Rarely	Never
Questions of diagnosis or treatment	128	120	91	27	2
	35%	33%	25%	7%	1%
Patient education materials	25	107	120	8	27
	7%	30%	33%	23%	7%
Questions about medications and drug interactions					
	124	147	68	25	6
	34%	40%	18%	7%	2%
Best evidence about a specific topic	90	123	102	38	12
	25%	34%	28%	10%	3%
Algorithms, decision trees, calculators	27	84	121	93	41
	7%	23%	33%	25%	11%

5. What are the limitations to your use of online information for patient care and answering clinical questions?

CONTENT:					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Lack of confidence in the reliability of sources	5	72	139	131	19
	1%	20%	38%	36%	5%
b. Preferred resources are not available online	32	103	108	99	23
	9%	28%	30%	27%	6%
c. Can't get full text of journal articles	112	144	53	44	13
	31%	39%	14%	12%	4%
d. Inadequate level of detail found or inappropriate to the question					
	36	149	109	52	20
	10%	41%	30%	14%	5%

6. What are the limitations to your use of online information for patient care and answering clinical questions?

EFFICIENCY:					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Takes too much time to find the answers	45	158	119	47	2
	12%	43%	32%	13%	1%
b. Easier to ask a colleague	42	154	114	53	6
	11%	42%	31%	14%	2%
c. Easier to look up in my personal books and references	32	114	132	83	8
	9%	31%	36%	22%	2%

7. What are the limitations to your use of online information for patient care and answering clinical questions?					
SKILLS:					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Don't know how to use online resources very well	15	107	111	135	6
	4%	29%	30%	36%	2%
b. Don't know how/where to start searching for answers	19	98	126	128	3
	5%	26%	34%	34%	1%
c. Difficult to articulate questions using an online resource	19	145	114	86	7
	5%	39%	31%	23%	2%

8. What are the limitations to your use of online information for patient care and answering clinical questions?					
AVAILABILITY:					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Computer is not readily available when I need it	15	51	133	165	5
	4%	14%	36%	45%	1%

9. What are the limitations to your use of online information for patient care and answering clinical questions?					
COST:					
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.					
	Strongly Agree	Agree	Disagree	Strongly Disagree	No Opinion
a. Computers are too expensive for my practice	2	15	131	206	20
	1%	4%	35%	55%	5%
b. Online resources are too expensive	33	95	129	94	22
	9%	25%	35%	25%	6%

10. Please indicate your familiarity with the following <u>free resources</u>*** available from the National Library of Medicine:				
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.				
	Currently Use	Don't Use	Not Interested	Not Aware of Resource
PubMed	231	101	4	39
	62%	27%	1%	10%
MedlinePluss	159	133	5	76
	43%	36%	1%	20%
ClinicalTrials.gov	50	146	12	164
	13%	39%	3%	44%
TOXNET	12	134	18	205
	3%	36%	5%	56%

11. Please indicate your interest in training about the following <u>free resources</u>*** available from the National Library of Medicine:				
Top number is the count of respondents selecting the option. Bottom % is percent of the total respondents selecting the option.				
	Very Interested	Interested	Not Interested	Undecided
PubMed	137	130	74	17
	38%	36%	21%	5%
MedlinePlus	136	131	64	28
	38%	36%	18%	8%
ClinicalTrials.gov	112	143	71	35
	31%	40%	20%	10%
TOXNET	107	119	79	57
	30%	33%	22%	16%

12. If a training session on one or more of the topics above were to be offered in your vicinity, <u>when</u> would you <u>most likely attend</u>? Choose <u>one</u>.		
Early morning, weekday	82	23%
Lunchtime, weekday	69	19%
Evening, weekday	122	34%
Saturday	40	11%
Other, please specify	48	13%
Total	361	100%

13. What are the top 5 resources you use (online, print, any other format) to find information for patient care? (For example: PubMed, Harrison's, PDR, MDConsult...)
336 Responses

14. What are the 3 favorite web-based resources you use to find patient care information?
304 Responses

15. Do you have access to the services of a <u>medical librarian</u> or a <u>medical library</u>?		
Yes	265	72%
No	101	28%
Total	366	100%

16. Is there anything else you believe is important for us to know about <u>your needs</u> for clinical information in providing patient care?
146 Responses

About Your Practice

17. What is your specialty?		
Family Practice	95	25%
Internal Medicine	58	16%
Pediatrics	37	10%
Other, please specify	204	55%

18. How many years has it been since completion of your residency or training?		
1-5	50	14%
6-10	44	12%
11-20	109	29%
Over 20	167	45%

19. In what city (and state if not Washington) is your practice located?
355 Responses

Thank you very much for your time and for providing this valuable input!

"A complete list of NLM databases is available at <http://www.nlm.nih.gov/databases/>. Please contact your librarian or the Regional Medical Library if you have questions about any of these tools. If you have privileges at a clinic, hospital, or university with a medical library, the library has most likely made many other excellent clinical resources available to you.