
Promotion of health information access via Grateful Med and Loansome Doc: why isn't it working?*

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Information gathered from Grateful Med and Loansome Doc outreach projects, including one involving seven health centers in rural southwest Alabama, raises questions about the effectiveness of such programs. This paper presents a review of the literature on Grateful Med as well as of information access and usage behaviors of physicians, an overview of the Alabama project, and data from other projects. Analysis of the responses and observations of the researchers reveal some strategies for enhancing the outcomes of such projects and improving access to medical care literature by health care professionals at rural sites.

INTRODUCTION

The promotion of the use of Grateful Med by health care professionals has been viewed as an answer to the problem of poor access to medical information. However, results of a recent Grateful Med training project in Alabama, as well as reports from other Grateful Med trainers, reveal problems in the utilization of the software following training. Following a review of the literature on information access and end-user searching, this paper reports on findings of Grateful Med training projects and presents strategies for successful training and software utilization.

LITERATURE REVIEW

In a 1993 article, Professor Herbert White [1] contends that Grateful Med and Loansome Doc pose a serious threat to the medical library profession. The findings of the Alabama and other outreach projects suggest otherwise, indicating that librarians are essential, at

least in terms of supporting the continuing utilization of these products. Pifalo [2] notes that "insuring utilization of health information by remote health professionals may be characterized as a Sisiphean task." Shaughnessy [3] echoes this assertion, saying, "research literature is infrequently used by primary care clinicians even when computer access is provided."

Literature relevant to the lack of usage of Grateful Med and Loansome Doc concerns the information-seeking behaviors of clinicians, most specifically those engaged in family practice. The findings of various researchers show that practicing physicians use resources that are clinically applicable and readily available, even if the resource might not provide the most current or reliable information available. [4-7]. Clinicians use resources that may be tapped while the patient is in the waiting or examination room. Such sources include colleagues as the first choice, medical meetings, available text sources, and personal journal holdings [8]. Connelly [9] differentiates between "information-seeking behavior" and "knowledge-gathering behavior." The former he characterizes as fulfilling an immediate need, and the latter as adding to the practice knowledge base for future use. Physicians frequently describe medical meetings, continuing medical education (CME) offerings, and da-

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tabase searches as information sources, but they fall into the knowledge-gathering category [10–13].

Rural physicians in particular seem to conform to these behaviors. Ely [14] and Dee [15] report that the obstacles of isolation and practice demands, among other factors, reduce the number of information resources used. Ely notes further that rural physicians ask fewer questions than do other clinicians, and that the questions asked are overwhelmingly related to pharmaceuticals. Rural isolation further inhibits reliance on journal articles that are unavailable through local sources and in medical libraries, for the same reason [16–18]. Dee [19] and Rafuse [20] point to the need for pre-synthesized information to save the clinician valuable time. Two sources of such information stand readily available to rural clinicians: colleagues, either in the same practice or available by telephone, and the *Physician's Desk Reference*. Wake-man [21] reports similar findings in examining nurses' information-seeking behavior, with colleagues and ward-based resources being the main sources of patient care information.

Both Rafuse [22] and Dee [23] suggest some ways to satisfy these information needs with reliable resources. Rafuse, reporting on physician advocates of evidence-based medicine, quotes Dr. Brian Haynes recommending Scientific American Consult and the Oxford Database of Perinatal Trials, two computer-based sources of easily accessible and comprehensive clinical information. Dee goes further, recommending that groups of textbooks be made available online, and that an expert system geared to the clinician be made available through the National Library of Medicine (NLM). She also suggests that information retrieval could be delegated to nonclinical staff.

Promoting usage of Grateful Med involves not only the marketing of a resource, but also efforts to change health professionals' perceptions of information needs and their information-seeking behavior. Two projects described by Dorsch [24] and Robishaw [25] achieved positive results in increasing usage. Robishaw reports an increase of 18% in Grateful Med usage by practitioners. Trainers provided on-site installation, pre-activated search codes, and on-site as well as telephone troubleshooting. Robishaw notes that while "the physicians' traditional sources of medical information—their personal journal or book collections, and colleagues—did not change," their perceptions of database searches as an "adjunct to diagnosis and treatment options" did change after they participated in the training. Dorsch reports a 53% increase in database usage during the trial period. The trial periods, however, were limited to one-month periods in which a computer bought through the project was left at each site for practice. Dorsch does not give post-trial usage statistics but notes that site administrators felt the project increased awareness of electronic infor-

mation access and directly affected patient care. Pifalo [26], who trained forty-seven participants, reports eighty-two search attempts in a five-month period during which a site computer was provided.

Personal contact with the coordinator or other liaison seemed the most important factor in promoting the use of electronic searching and document retrieval. Pifalo [27] reports that only health professionals having direct contact with the trainer took advantage of document delivery services. Dorsch [28] notes that the "level of document requests may have been higher where liaisons acted as intermediaries."

METHODS

In September 1993, the University of South Alabama (USA) Biomedical Library was awarded an Information Access Grant by NLM. The grant underwrote Grateful Med training at seven health care centers, including six hospitals and an Indian health clinic in rural southwest Alabama. In addition to initial training, each site was provided with a copy of the Grateful Med software, free follow-up service via telephone, free search time for the month following the training, and 100 free articles via Loansome Doc through the Biomedical Library. Only one site had a medical library, which was small, although other sites had small collections of medical texts. Eleven sessions were presented to sixty-two attendees during the eighteen-month grant period.

The majority of the identified participants in the USA training project were nurses, with physicians the second largest category. When asked about current use of a personal computer, the majority indicated some usage, with staff showing the greatest access to a computer. The majority of the participants accessed computers on a daily basis, again with staff accessing most often. The majority of the participants also indicated access to both a computer and a modem.

When asked about information resources consulted occasionally or more often, the largest number of participants used personal collections of journals and textbooks, with CME and consultation with colleagues also often used as information resources. The medical library was ranked as the fifth most often consulted resource.

Initial reception to the training was enthusiastic, as evidenced by participants' response during the training sessions and classroom evaluations. However, when follow-up questionnaires (see Appendix A) were sent to each participant, responses showed little or no independent usage of the software. Because of this lack of independent usage, a survey of other Grateful Med trainers was undertaken to ascertain whether they had observed a similar response (see Appendix B). In addition to responding to questions regarding training and database utilization fol-

lowing training, Grateful Med trainers were asked to note what methods they found successful in promoting the sessions, what methods they found successful in encouraging database usage following training, and what portions of the projects should be changed.

Survey results indicated that librarians conducting other end-user training projects observed a lack of usage that was similar to that found in the Alabama project. On a more positive note, however, analysis of the responses on the additional questions and observations from the Alabama study revealed some suggestions for improving outcomes and thereby enhancing access to the medical care literature by health care professionals at rural sites.

Participants in the USA training project were surveyed before taking the classes to obtain information about the use of computers and avenues for information access, including the frequency of access to MEDLINE. Participants were also surveyed three months after the training and again six months later. All surveys were anonymous. Data from these questionnaires were analyzed and compared.

Names of individuals involved in Grateful Med training grants sponsored by NLM were then obtained. A questionnaire was sent to these librarians with questions concerning the discipline and make-up of the training sessions, methods used to promote the training sessions, methods employed to encourage usage of the Grateful Med software, and data on usage following the training. A request was also posted on the OUTLIB-L discussion group on the Internet asking for volunteers to participate in the research, and questionnaires were sent to responding individuals. Data from all responses were analyzed to obtain an overview of the projects. Surveyed projects that reported higher usage were compared to projects that reported lower usage. Finally, suggestions for ways to promote the classes, foster software usage, and otherwise improve projects were analyzed.

RESULTS

Grateful Med end-user training results

Evaluations immediately following the USA training sessions indicated that the majority of participants felt that the classes were well organized, written materials were helpful, audiovisuals and demonstrations were used effectively, and the length of the course was appropriate. Participants also felt that the instructors were knowledgeable, well prepared, and responsive to questions. Participants indicated that the course met their expectations and that they could search the medical literature effectively.

A survey of participants conducted after three months revealed that most respondents were either physicians or nurses. As expected, the majority of the

respondents were hospital-based. The majority indicated that they had taken the Grateful Med course to meet a need for medical information. When asked what sources were used to obtain medical information in the previous three months, 37% indicated reliance on colleagues or conferences, with fewer than 6% using references retrieved from a database search. Eighty percent had relied on a drug representative or the *Physicians' Desk Reference (PDR)* for pharmaceutical information. Eighty percent of the respondents had not searched the journal literature since the training session, and of those who had conducted a search, 67% had searched less than once a month. Database searches were conducted most often to answer patient care questions, with the majority of those questions relating to diagnosis. Most had not searched due to a lack of a modem or computer, although 22% indicated that no information was needed or other sources had been consulted, and 14% noted a lack of time.

Ninety-four percent reported no usage of Loansome Doc, although request data obtained from the sites showed a larger percentage of non-utilization. Most respondents indicated that additional instruction or assistance in either Grateful Med or Loansome Doc was not needed.

At six months, the survey of participants indicated that more than 30% had used conferences, colleagues, and product literature to acquire information, and 19% had consulted textbooks (see Figure 1). Fewer than 25% relied on the journal literature and fewer than 3% searched a database to access that literature. Forty-seven percent had accessed the literature through either their personal files or a colleague's collection. As before, more than 80% had relied on either the *PDR* or a drug representative for pharmaceutical information. More than 77% had not used the software since the training, and of the respondents who had used the program, 67% had searched less than once a month. By the six-month point, 50% of the post-training database access was for educational purposes.

Fifty-five percent of respondents indicated no searching activity due to a lack of access to either a computer or a modem, and 18% noted that additional training was needed, with 11% indicating that a designated person was needed for the searches (see Figure 2). Fifty percent had not requested journal articles since the training session. Thirty-one percent indicated that inadequate staffing was a barrier to information access, while 23% blamed inadequate technology (see Figure 3).

Grateful Med trainers' experience

Questionnaires were sent to eighty-seven librarians who had participated in a Grateful Med training pro-

Figure 1
Methods used to acquire information

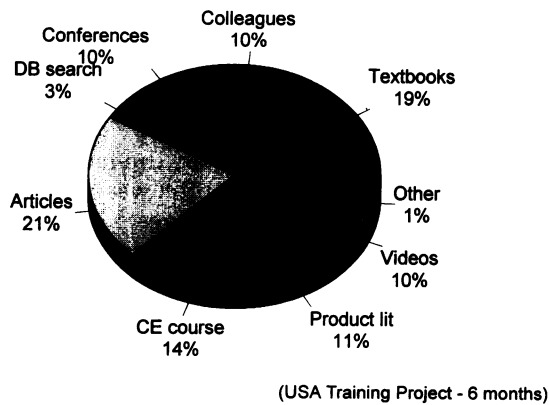
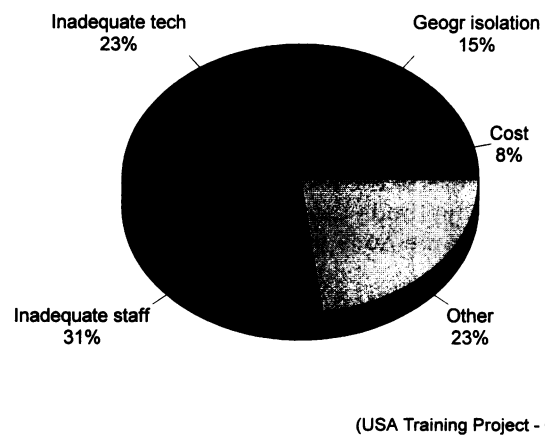


Figure 3
Barriers to information access



ject. Seventy-one were returned, sixty-nine of which provided data relevant to this research, for a response rate of 82%. It should be noted that many of the following results are based on respondent observation and not on hard data. The majority of the training projects were conducted for one year, provided more than ten training sessions each, and served more than 100 participants each. A large number of participants in the training sessions were physicians, with the second largest number being registered nurses. Other participants were librarians, social workers, physical therapists, and dentists. The majority had chosen to attend the training sessions, as opposed to having been sent by administrators. Methods used to promote the training sessions included posters or flyers, information sent to administrators or participants, newsletters, work with a site coordinator (e.g., the

director of education or medical staff secretary), orientation of new employees, presentations at department head meetings, and exhibits. Most conducted evaluations immediately after the sessions.

To encourage software usage trainers used various methods, including follow-up, free documents via Loansome Doc, free search time, free copies of Grateful Med, a second training session, work with a site liaison, and one-on-one work with individuals. The free search time ranged from two hours to one year and cost \$20.00 to \$40.00. Projects included up to twenty-five free documents via Loansome Doc. Follow-up included a second training session, librarian installation of the software, access to libraries' resources, and on-site support.

The majority of the trainers monitored the software usage following the training with assigned codes, questionnaires, and telephone follow-up. This monitoring revealed that the majority of users accessed

Figure 2
Reasons for non-utilization

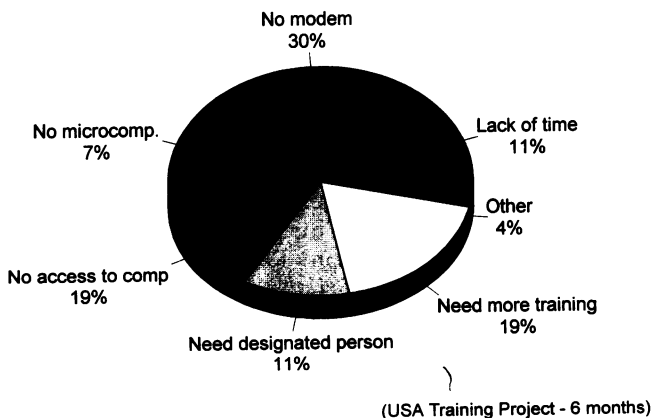


Figure 4
Grateful Med training projects success predictors

- train one-on-one
- provide a variety of follow-up interventions
- change information-seeking behavior
- focus on patient care
- stress education/CME
- provide \$\$\$ for computer equipment
- identify and cultivate a site liaison
- use variety of promotion methods

Grateful Med less than once a month or not at all, with 30% of trainers indicating that the average participant had not used the software at all. Only 8% of the projects reported software usage more than three times a month by the average participant. A comparison was then made of projects where the average training participant had searched less than once a month and those where participants had searched once a month or more. There did not seem to be any strong differences in the way individuals were chosen to attend, the methods used to promote the training sessions, or the methods used to encourage software usage.

Trainers were asked for suggestions on promotion of the sessions and methods to encourage usage of Grateful Med. Some librarians said the educational or CME benefits should be emphasized as a means of promoting the training sessions. Others used newsletters, flyers, and exhibits. Several indicated the importance of personal contact, a site liaison, and support from their institutions.

Several techniques were suggested for promoting usage of the software following the training sessions. The need for follow-up and point-of-use assistance was listed by several trainers. The use of examples relevant to site-specific needs was advanced as a way of encouraging usage. Finally, the need for a contact person or site liaison was emphasized.

The trainers were also asked what changes they would have liked to make in their training project. Several listed the need for more follow-up and available user support. Many had not provided hands-on training and felt it would have encouraged more usage. Several suggested preparing for the unexpected. Problems with technology and telecommunications can create havoc and the trainer must be prepared to deal with many different situations. Finally, it was suggested that Grateful Med be presented as a segment of the complete information access package.

DISCUSSION

The USA training project was not limited to physicians but rather focused on the health practitioner (including nurses and pharmacists) in the clinical setting. The survey of trainers from other outreach projects reported similar participant groupings. It should be noted that nonclinical staff were included in the pre-training surveys and participated in the USA training sessions and in most of the other projects surveyed as well. Survey results and evidence from the literature suggest that the Alabama findings on information-seeking behaviors may be applicable to health professionals in general.

The pre-training surveys in the USA training project reported high usage of personal computers, but by support staff rather than health professionals. In

addition, the most common reason given for not utilizing Grateful Med was the lack of a computer with a modem. Few of the health professionals trained were computer literate, and they usually lacked the time and resources to acquire computer skills. Technical difficulties were often reported as obstacles in post-training USA surveys and in the outreach projects reported in the literature [29, 30].

The second most cited reason for the lack of database usage in the USA training project was "No Need/Other Resources." This result suggests that, while adding to the information resources available to the participants, the trainers did not succeed in changing information-seeking behaviors. The project encouraged participants to use Grateful Med and Loansome Doc by offering free articles and search time. This incentive approach was used by other trainers surveyed and was one of the many suggestions for promotion. The trainers repeatedly noted the legal and professional reasons for seeking the up-to-date information through database searching. They also pointed out that clinical guidelines and other pertinent clinical information were available online.

Suggested ways to increase database usage predictably involved increased follow-up, emphasis on the economical nature of the software, point-of-use assistance, provision of examples relevant to site needs, a contact person at the site, more hands-on training, small classes, and incorporating Grateful Med into an information services package. These ideas echo the literature and the USA post-training survey findings, which point to individual contact as a major factor in utilization. Another selling point would be the availability of online literature on specific drug information. Clinicians are described in the literature repeatedly as using descriptive literature such as the *PDR* but not seeking comparative studies or alternate therapies described in online journal databases. The majority of questions raised by clinicians are about pharmaceuticals, according to the literature reviewed, the trainers surveyed, and the participants surveyed in the USA training project.

CONCLUSIONS

An important aspect of the clinician's need for information is the need for pertinent information to be gleaned from the literature and synthesized to answer specific questions. This is especially true for pharmaceutical information. Rafuse [31], quoting a physician, says that clinicians "don't have time to locate the articles and assess the findings, so they are more likely to be more influenced by drug companies than by medical literature." The emphasis on additional follow-up and point-of-use assistance in the trainers' surveys was not incidental, nor was the need

expressed by 11% of the USA training participants for a delegated member of the staff to conduct searches. Additional evidence of the need for assistance was provided by 31% of respondents who at six months cited "inadequate staff" as a barrier to information access. In the project reported by Dorsch [32], it was noted that "physicians lacked the time to search for themselves." Pifalo [33] describes increased effectiveness in participants' information use when a circuit librarian was available to act as a filter for information access.

With Grateful Med, NLM indeed has enabled user-friendly access to the medical journal literature through database searching. Numerous testimonials by health professionals in nursing, education, and medicine advocating the use of this software can be found in the medical literature. Unfortunately, the software does not meet the information needs of clinical practitioners, particularly those in rural areas, who require immediately accessible, synthesized information relevant to specific clinical questions. Unless these needs can be met, usage of this software by this population will continue to be low. The HSTAT database (Health Services and Technology Assessment), which does provide full text of guidelines and other clinically relevant materials, has been added to the MEDLARS family. It was not available during the time period covered by the USA training project, however, so its impact on usage could not be determined.

Figure 4 lists eight suggestions for improving success rates based on the experiences gained during the USA training project, and the results of the survey of other Grateful Med trainers. One-on-one promotional contact and training works best; classes should be kept small, limited to no more than five participants, and include hands-on training. Follow-up should include both telephone calls and in-person contact, including a full second session. Classes at the site should be kept short for the benefit of busy physicians but should be detailed enough for liaisons or staff who will be doing the majority of the site's searches.

Physician users can best be reached at medical meetings, with offers of CME credits. Consideration should be given to the types of information-seeking behavior reported earlier, and the training should be geared to changing the focus from the use of local resources only to the use of more current and reliable medical literature. Examples should draw heavily on patient care and demonstrate resources that meet local needs. If at all possible, funding should be provided for working equipment to be left at each site at least temporarily. A site liaison who can be responsible for search mediation should be identified, if possible, and cultivated. Promotional activities should include the appointment of a site coordinator; publicity through the site institution's newsletter; ex-

hibits; continuing education activities; and presentations at meetings, such as those for department heads, medical societies, and employee orientations.

Some information needs remain unmet, however. Professor White's perceived threat to medical librarianship, and the corollary loss of efficiency in information retrieval, is unlikely to come about, due to programs such as Grateful Med outreach. Instead, the vacuum established by the lack of pre-synthesized, clinically relevant material is likely to be filled by commercial companies with a stake in influencing clinical decision-making. A consortium of pharmaceutical companies already sponsors "free" access to MEDLINE and other information sources replete with advertising for their products. Quite pointedly, this service is not "free" to medical librarians. Little wonder that one suggestion from trainers, echoed here in closing, is that Grateful Med would be most effective if offered as part of a comprehensive information services package.

Unfortunately, the motivation for creating such packages for rural physicians and their clinics is sadly lacking. This motivation can come only from national goals and standards endorsed by the Medical Library Association, the American Hospital Association, and the American Medical Association, with enforcement by the latter two. With clear goals and a mandate from accrediting agencies, the National Institutes of Health could focus grant activities more precisely and bring the rural health centers the mechanisms needed to achieve information equality.

REFERENCES

1. WHITE HS. The GRATEFUL MED program and the medical library profession. *Bull Med Libr Assoc* 1993 Jan;81(1):73-5.
2. PIFALO V. Outreach to health professionals in a rural area. *Med Ref Serv Q* 1994 Fall;13(3):19-26.
3. SHAUGHNESSY AF, SLAWSON DC, BENNETT JH. Becoming an information master: a guidebook to the medical information jungle. *J Fam Pract* 1994 Nov;39(5):489-99.
4. CONNELLY DP, RICH EC, CURLEY SP, KELLY JT. Knowledge resource preferences of family physicians. *J Fam Pract* 1990 Aug;30(3):353-9.
5. DEE C. Information needs of the rural physician: a descriptive study. *Bull Med Libr Assoc* 1993 Jul;81(3):259-64.
6. DORSCH JL, LANDWIRTH TK. Rural Grateful Med outreach: project results, impact, and future needs. *Bull Med Libr Assoc* 1993 Oct;81(4):377-82.
7. ELY JW, BURCH RJ, VINSON DC. Information needs of family physicians: case specific clinical questions. *J Fam Pract* 1992 Sep;35(3):265-69.
8. DEE, OP. cit., 261.
9. CONNELLY, OP. cit., 354.
10. IBID., 357.
11. DEE, cit., 261.
12. DORSCH, op. cit., 381.
13. ELY, op. cit., 268.

14. IBID., 268.
 15. DEE, op. cit., 259.
 16. IBID., 268.
 17. DORSCH, op. cit., 377.
 18. ELY, op. cit., 268.
 19. DEE, op. cit., 263.
 20. RAFUSE J. Evidence-based medicine means MDs must develop new skills, attitudes, CMA conference told. *Can Med Assoc J* 1994 May 1;150(9):1479-81.
 21. WAKEMAN M. Nurses—their information needs and use of libraries: the views of some librarians. *Health Libr Rev* 1993;10(2):85-96.
 22. RAFUSE, op. cit., 1480.
 23. DEE, op. cit., 263.
 24. DORSCH, op. cit., 380.
 25. ROBISHAW SM, ROTH BG. Grateful Med—Loansome Doc outreach project in central Pennsylvania. *Bull Med Libr Assoc* 1994 Apr;82(2):206-13.
 26. PIFALO, op. cit., 22.
 27. PIFALO, op. cit., 25.
 28. DORSCH, op. cit., 379.
 29. IBID., 381.
 30. ROBISHAW, op. cit., 209.
 31. RAFUSE, op. cit., 1479.
 32. DORSCH, op. cit., 399.
 33. PIFALO, op. cit., 24.

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APPENDIX A

USA project follow-up questionnaire

1. What is your specialty?

<input type="checkbox"/> Physician	<input type="checkbox"/> Nurse (RN)
<input type="checkbox"/> Intern/Resident	<input type="checkbox"/> Nurse (LPN)
<input type="checkbox"/> Pharmacist	<input type="checkbox"/> Physician's Assistant
<input type="checkbox"/> Medical Records	<input type="checkbox"/> Administrative
<input type="checkbox"/> Nutritionist	<input type="checkbox"/> Other (please specify)

2. Type of practice:

<input type="checkbox"/> Hospital-based	<input type="checkbox"/> Group private practice
<input type="checkbox"/> Clinic-based	<input type="checkbox"/> Solo private practice

3. Primary reason you took the Grateful Med Training Class:

<input type="checkbox"/> Need for health care information	<input type="checkbox"/> Interest in electronic information
<input type="checkbox"/> CME/CE credit	<input type="checkbox"/> Other (please specify)

4. In the past three months, what materials have you used to gain needed health care information? (check all that apply)

<input type="checkbox"/> Textbooks	<input type="checkbox"/> Database search
<input type="checkbox"/> Conferences	<input type="checkbox"/> Hospital/clinic library
<input type="checkbox"/> Personal journal collection	<input type="checkbox"/> Other (please specify)
<input type="checkbox"/> Colleagues	

5. What methods do you use to keep current in pharmaceutical information?

<input type="checkbox"/> PDR	<input type="checkbox"/> Database search
<input type="checkbox"/> Drug company representative	<input type="checkbox"/> Drug company mailings
<input type="checkbox"/> Other (please specify)	

The Grateful Med Training Class included instructions on accessing MEDLINE and other databases offered by the National Library of Medicine.

6. Please check all databases you have searched yourself or had someone search for you since the training class. (check all that apply):

<input type="checkbox"/> MEDLINE	<input type="checkbox"/> BIOETHICSLINE
<input type="checkbox"/> CANCERLIT	<input type="checkbox"/> HEALTH
<input type="checkbox"/> AIDSLINE/AIDSTRAILS/AIDSDRUGS	<input type="checkbox"/> Other (please specify)
<input type="checkbox"/> None	

If none are checked, skip to Question 12.

7. Please indicate the frequency of your searches by checking one of the following:

<input type="checkbox"/> Less than once a month	<input type="checkbox"/> 1-2 times/month
<input type="checkbox"/> 3-5 times/month	<input type="checkbox"/> more than 6 times/month

8. Please indicate whether you searched the database(s) yourself or through another individual.
 I searched myself Someone else searched for me
 If someone else, please indicate position, i.e., librarian, nurse, secretary, etc.
9. Please check the reason(s) you accessed the database(s) covered in the training class (check all that apply):
 Research Education
 Patient care Paper presentation
 Learning a new field Current awareness
 Administrative Other (please specify)
10. If for patient care, check the reason(s) accessed (check all that apply):
 Help select or apply diagnostic test(s) Identify treatment options
 Help interpret diagnostic results Confirm choice of treatment
 Help establish differential diagnosis Determine need for treatment
 Proper use of chosen treatment Information on prognosis
 Learn about new or alternative treatment Locate specialist for referral
 Information on monitoring procedures Provide information to patient/family
 Other (please specify)
11. If you accessed the databases yourself, please indicate where the searches were done:
 On an institutionally owned computer On a personally owned computer
 Other (please specify)
12. If you have not accessed any of the databases covered during the class, please check the reason(s) why (check all that apply):
 Too expensive No need/Used other sources: (please specify)
 Terminology difficult Too difficult
 No modem Lack of time
 Other hardware problems (please specify) No microcomputer
 Software problems (please specify) Other (please specify)
13. Since the training class, did you use the Loansome Doc module of the Grateful Med program to obtain journal articles?
 Yes No
- If you answered no, please skip to question 15
14. Please indicate the frequency of your Loansome Doc requests by checking one of the following:
 1-2 times/month 3-5 times/month
 more than 6 times/month Not at all
15. If you have not used the Loansome Doc module, what other method(s) did you use to obtain journal articles? (check all that apply)
 Personal visit/call to the library/librarian Telefacsimile
 Electronic requests Other (please specify)
 Did not request articles during this time period
16. Do you feel you need additional instruction/assistance in accessing MEDLINE using the Grateful Med Software Program?
 Yes No
17. Do you feel you need additional instruction/assistance in using the Loansome Doc module of the Grateful Med Software Program?
 Yes No

APPENDIX B

Questionnaire Sent to Grateful Med Trainers

1. All Grateful Med training was conducted during the following time period: (check one)
 <one month 7-12 months
 1-6 months >one year

2. How many sessions were held during the training? (check one)
 1-3 sessions 7-10 sessions
 4-6 sessions > 10 sessions
3. How many individuals participated? (all sessions) (check one)
 <25 participants 51-99 participants
 26-50 participants > 100 participants
4. Please check the disciplines of the participants. (check all that apply)
 Physician Nurse (RN)
 Intern/Resident Nurse (LPN)
 Pharmacist Physician's Assistant
 Medical Records Administrative
 Nutritionist Other (Please specify)
5. What type of practice: (check all that apply)
 Hospital-based Group private practice
 Clinic-based Solo private practice
6. Did the participants self-select to attend or were they chosen by the administrator? (check one)
 Self-select to attend Combination of both
 Chosen by the administrator
7. What techniques were used to promote the training sessions? (check all that apply)
 Poster/flyer at site Press release sent to local media
 Information sent to each participant Category I CME credit
 Information sent to administrator Other (please specify)
8. What type of evaluation was conducted following the sessions? (check all that apply)
 Evaluation immediately following session
 Questionnaire sent out to participants following session—at what time interval?
 Questionnaire sent out to site administrator following session—at what time interval?
 Other (please specify)
9. What methods were used to encourage usage of Grateful Med following the training sessions? (check all that apply)
 Free search time—for what time interval? Free follow-up training, phone consultations, etc.
 Free copy of Grateful Med Other (please specify)
 Free documents via Loansome Doc
10. Was Grateful Med usage monitored following the training sessions?
 No
 Yes If yes, what methods were used?
 follow-up by mailed questionnaire
 follow-up by telephone
 monitor usage of assigned codes
11. If monitored please note findings:
 average participant did not use Grateful Med following training session
 average participant used < once a month following training session
 average participant used 1-2 times a month following training session
 average participant used 3-4 times month following training session
 average participant used 5-6 times a month following training session
 average participant used >6 times a month following training session
 Other (please specify findings)
12. Are there any techniques you would suggest to promote training sessions? (use the back of this sheet if necessary)
13. Are there any techniques you would suggest to increase use of Grateful Med following training? (use the back of this sheet if necessary)
14. What details, i.e., overall program, promotion, participants, follow-up, etc, would you change concerning your Grateful Med training sessions? How? (use the back of this sheet if necessary)