
The use of personal digital assistants in the health sciences: results of a survey

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Objectives: The purpose of this study is to determine how personal digital assistants (PDAs) are used on an academic health sciences campus to define the level of training and support the library can provide to the students and faculty.

Method: A Web-based questionnaire was developed. A total of 1,538 health sciences faculty and residents were sent an email message requesting participation. Data from the returned surveys were analyzed with SPSS.

Results: Sixty-one percent of survey respondents used PDAs. The address book, date book, and calculator were the most common uses reported for PDAs. Residents also reported a high use of drug databases on their PDAs. Most survey respondents indicated they would like to learn more about clinical resources for PDAs.

Conclusions: Many opportunities exist for librarians to provide training and support for PDAs, in addition to evaluation and promotion of clinical software for PDAs.

INTRODUCTION

The use of personal digital assistants (PDAs) in medicine and the health sciences has rapidly increased. Health care professionals are using PDAs for patient tracking, medical reference, and drug dosage, as well as personal use. Librarians across the country, especially those in health sciences environments, have noticed a rising use of PDAs among patrons. Some of the resources currently available for use on PDAs have traditionally been provided by the library (Harrison's Principles of Internal Medicine, 5 Minute Clinical Consult, and the Physicians' Desk Reference). It is therefore important that the use of these resources is understood and that proper training and support be made available to health sciences library users.

Librarians at the University of Illinois at Chicago (UIC) see students, staff, and faculty use PDAs in various settings. UIC is a large urban academic research center with an enrollment totaling over 25,000 students. Approximately 5,500 are enrolled in health sciences colleges [1]. The Library of the Health Sciences—

Chicago campus provides liaison services to medical center residents and six health sciences colleges in the university: applied health sciences, dentistry, medicine, nursing, pharmacy, and public health. Due to the increased popularity of PDAs on campus, librarians have begun to offer basic PDA training sessions. However, librarians are concerned that library users' training needs are different for PDAs, and instruction should be tailored accordingly.

Since staff of the Library of the Health Sciences began offering PDA workshops in the winter of 2002, we have noted that participants have a wide variety of skills related to PDAs. For instance, someone from the college of medicine may come to a class with their own PDA loaded with clinical software and want to learn details about the use of the software. At the same session, a participant from the college of public health may come expecting to gain information to make an informed decision about purchasing a PDA. Repeated contact with individuals from the various health sciences disciplines on campus has reinforced the librarians' belief that awareness, use, and knowledge about PDAs varies widely among the colleges. Therefore, we

are seeking to determine the various PDA training needs of the different health sciences students, faculty, and professionals to provide focused instruction to meet the wide range of needs. We hope that this study will offer insight and guidance for other health sciences librarians planning PDA instruction.

HISTORY AND LITERATURE SEARCH

PDAs have been on the market since the early 1990s. The Cumulative Index to Nursing and Allied Health Literature (CINAHL) has had a subject heading for PDAs ("Computers, Hand-Held") since 1997 [2]. The National Library of Medicine added the term "Computers, Handheld" to Medical Subject Headings (MeSH) in 2003 [3]. The use of PDAs in health care may also be inferred from a PDA Bibliography Web page created by Stoddard focusing on articles in health care journals [4]. As reflected by this Web page in June 2003, PDAs were the subject of more than 650 articles since 1985. Discussions in the early articles focused on the theory of informatics and technology. Recent articles have been more practical, indicating that PDAs are in wider use.

Authors described various uses for PDAs and explained how particular institutions have supported the use of PDAs. Examples of this were found in titles such as Huffstutler's "The Use of Handheld Technology in Nursing Education," Levine's "Avoid the Paper Chase," and Binder's "Inside Pandora's Box—The Development of the First PDA Library Portal for Academic Libraries" [5–7]. Huffstutler described how PDA technology was introduced into a pharmacology nursing course. Levine discussed how the use of PDAs could help save time for physical therapists. Binder wrote about the processes his library undertook to develop a PDA library portal. Galganski et al. informed the reader about misguided assumptions about how patrons learn to use PDAs [8]. Morgen shared ten suggestions for ensuring a successful PDA support program [9]. Health care clinicians have also written descriptive papers about using the PDA at the patient bedside to augment care and improve clinical education [10–13].

Many authors have described how PDAs were used in their institutional settings, but there has been little evidence that PDAs improve patient care [14]. Fischer et al. concluded in their systematic review that "only a small number of articles provide evidenced-based information about the use of PDAs in medicine" [15].

PDA use has risen swiftly, but the use has hardly saturated the health care community, as personal computers have [16]. An article about PDA growth in the nursing profession reported that medical professionals were adopting PDAs faster than the general public [17]. A Harris poll from 2001 reported physician use of PDAs had increased to 26%, while another electronic trend watcher reported that PDA sales could top 60 million in 2008 [18, 19]. As popular as PDAs have become, much of their use has been rudimentary. Many health professionals have been using their PDAs pri-

marily as organizers, address books, and date books [20]. Thus, it might be argued that the uses and potential of PDAs have not been fully maximized. Librarians have an opportunity to become experts on PDA resources, especially library-supported resources, and to offer early instruction to the clinical community.

Thus far, the literature contains little evidence that librarians have taken advantage of the opportunity to provide PDA instruction and support. As of 2001, Stoddard documented that eight major health sciences libraries provided active PDA support [21]. Seven more medical libraries were identified as providing PDA-related services by early 2004 [22–28]. However, more than twice as many health sciences colleges and universities introduced PDA technology to their faculty and students without the support of libraries [29–43]. Although libraries have reported providing PDA instruction and support in their institutions, many health sciences programs that are involved with PDAs have turned to their institutional information technology and system departments instead of their medical libraries [44–47]. While this phenomenon appears to be the case in all major health sciences disciplines, individuals in medicine have been the most prolific about documenting their PDA experiences.

Librarians have begun to write about why it is imperative that libraries provide PDA services and training. For example, John and Tucker address the fact that medical professionals have been adopting PDAs into their clinical practice. They state that "If you make your services easy to use, patrons will become dependent on them (and your library!) early on" [48]. Yet, there has still been little discussion by health sciences professionals and medical librarians about the actual PDA training needs of health sciences professionals.

PDA adoption and knowledge levels vary across the disciplines, and thus instruction must also vary. Physicians have authored most of the health care PDA literature, and it is evident, that as a group, they are very interested in PDA technology. Members of other health care disciplines have also demonstrated interest in using PDAs.

Health sciences PDA literature shows that while PDAs are popular, the ways in which they are used lack depth. Knowing the areas where information and training gaps exist will indicate areas where librarians can play a larger role in training the health sciences community in PDA use.

METHODOLOGY

A survey was designed to measure the level of PDA use in the colleges and the level of training and support required by the colleges. Approval from the institutional review board (IRB) was obtained for the survey. A pilot test of the survey was done, and several questions were changed as a result. The survey was posted on the UIC library server (Appendix). In November 2002, an email message with a link to the survey was sent to all tenured, tenure-track, and clinical

Table 1
Survey response rates and reported use of personal digital assistants (PDAs)

	Total individuals sent an email	Number of respondents	Number of PDA users	Number of PDA owners
Total	1,491	352 (24%)	214 (61%)	242 (69%)
By status				
Faculty (All)	713	232 (33%)	121 (56%)	130 (60%)
Residents	823	124 (14%)	88 (71%)	106 (85%)
By college				
Nursing	67	32 (48%)	19 (59%)	19 (59%)
Medicine	333	100 (30%)	142 (65%)	162 (74%)
Dentistry	133	39 (29%)	22 (56%)	23 (59%)
Applied health sciences	34	21 (62%)	8 (30%)	9 (43%)
Pharmacy	91	23 (25%)	15 (65%)	16 (70%)
Public health	57	17 (30%)	8 (47%)	11 (65%)

Note: Not all respondents answered all questions; percentages are based on number of respondents to question.

faculty and residents on the health sciences campus requesting their participation in the survey. The message explained the importance of the information the participants would supply, the reasons the survey was being conducted, that participation was voluntary, and that anonymity was assured. A total of 1,538 individuals were sent an email requesting participation; 823 were sent to medical residents and 715 to health sciences faculty (133 dental faculty, 67 nursing faculty, 34 applied health sciences faculty, 57 public health faculty, 91 pharmacy faculty, and 333 medical faculty). A second request was sent 3 days after the initial request, and a third request was sent a week after the second request. Data from the returned surveys were analyzed with SPSS.

RESULTS

Of the 1,538 initial emails sent, a total of 47 emails requests were rejected (incorrect addresses or expired addresses), so these individuals were no longer considered potential participants and were dropped from the study. This left a total of 1,491 individuals with valid email addresses. Three hundred and fifty-two individuals completed the survey, and five individuals responded directly to the email request saying they did not own a PDA. The total response rate was 24%. Thirty-three percent of faculty who were sent the survey responded, while only 14% of the medical residents responded (Table 1). Of the respondents, 182 (52%) were academic faculty, 34 (10%) were clinical faculty, 124 (35%) were medical residents, and 12 (3%) identified themselves as "other." Table 1 provides the response rates from the individual colleges.

Sixty-one percent of survey respondents stated that they used a PDA, however, 69% stated that they owned a PDA, indicating that not all individuals use the PDAs that they own. The college of medicine (65%) and college of pharmacy (65%) reported the largest number of PDA users.

Of the PDA owners who responded to the survey, 170 (76%) used their PDAs several times a day, 22 (9%) used their PDAs once a day, 5 (2%) used their PDAs

once a week, 9 (4%) used their PDAs 2 to 3 times a week, and 17 (7%) rarely or never used their PDAs. Most respondents used the Palm operating system (178 respondents, 80%), while 22 respondents (10%) used Windows CE. Sixteen respondents (7%) did not know the operating system of their PDAs. One hundred thirty-five respondents (61%) reported using a Palm product; 35 (16%) used a Handspring; 15 (7%) used a Sony; 9 (4%) used a Hewlett-Packard; and 18 (8%) used a brand other than the listed types.

One hundred seventy-five respondents (80%) who used PDAs reported being self-taught. Other methods reported for learning to use a PDA included: peers (91 respondents, 41%), a manual (87 respondents, 40%), Internet guides (16 respondents, 7%), department training (10 respondents, 5%), and attendance at a library session on PDAs (1 respondent, 0.5%). Thirty-four respondents (16%) also indicated they were still learning to use their PDAs.

PDAs use differed by college and affiliation (Table 2). The most common uses reported for PDAs were: the address book (90%), the date book (87%), and the calculator (84%). Respondents from the college of medicine reported the highest use of medical reference software (69%) and calculator use (89%). Respondents who identified themselves as faculty used their PDAs more frequently than the other groups for the following purposes: time management (95%), address book (93%), email access (23%), and Web access (12%). Compared to other groups, residents were more likely to use their PDAs for the following purposes: drug database (82%), calculator (90%), medical reference (51%), patient care (23%), and patient tracking (21%). Clinical professors reported heavy use of the PDAs for the following purposes: time management (80%), address book (85%), drug database (60%), calculator (90%), and patient tracking (20%).

Respondents were asked to report what training sessions would be most beneficial for themselves and their department. One hundred and thirty-nine respondents (48%) reported wanting initial training. One hundred sixty-six respondents (58%) reported that they would like to learn about general resources

Table 2
Reported uses for PDAs

	Time management	Address book	Drug database	Calculator	Medical reference	Word processing	Patient care	Patient tracking	Email	Web access	Other
All respondents	192 (87%)	200 (91%)	131 (60%)	184 (84%)	66 (30%)	35 (16%)	41 (19%)	34 (16%)	30 (14%)	17 (8%)	31 (14%)
By college											
Nursing	19 (95%)	17 (85%)	12 (60%)	17 (85%)	2 (10%)	3 (15%)	2 (10%)	0 (—)	0 (—)	0 (—)	1 (5%)
Medicine	124 (86%)	134 (92%)	100 (69%)	129 (89%)	58 (40%)	22 (15%)	35 (24%)	30 (21%)	16 (11%)	11 (7%)	22 (15%)
Dentistry	18 (82%)	20 (91%)	11 (50%)	16 (73%)	2 (9%)	5 (23%)	3 (24%)	2 (9%)	7 (32%)	3 (14%)	2 (9%)
Applied health sciences	7 (88%)	5 (63%)	2 (25%)	4 (50%)	0 (—)	1 (13%)	0 (—)	0 (—)	2 (25%)	1 (13%)	4 (50%)
Pharmacy	14 (93%)	14 (93%)	6 (40%)	13 (87%)	4 (27%)	2 (22%)	1 (8%)	2 (13%)	4 (27%)	1 (7%)	1 (7%)
Public health	9 (100%)	9 (100%)	0 (—)	4 (44%)	0 (—)	0 (—)	0 (—)	0 (—)	1 (11%)	1 (11%)	1 (11%)
By affiliation											
Faculty	96 (95%)	94 (93%)	40 (40%)	78 (77%)	13 (13%)	18 (18%)	16 (16%)	10 (10%)	23 (23%)	12 (12%)	13 (13%)
Clinical	16 (80%)	17 (85%)	12 (60%)	18 (90%)	3 (15%)	4 (20%)	3 (15%)	4 (20%)	3 (15%)	1 (5%)	3 (20%)
Residents	73 (79%)	82 (89%)	75 (82%)	83 (90%)	47 (51%)	11 (12%)	21 (23%)	19 (21%)	3 (3%)	3 (3%)	13 (14%)

Note: Not all respondents answered all questions; percentages are based on number of respondents to question.

such as word processors, spread sheets, and the address book. In addition, 214 respondents (75%) indicated they would like to learn about clinical resources for the PDA (Harrison's, PDR, Patient Tracker, drug resources). These training needs varied by department. In general, those in nursing, medicine, and dentistry were more interested in learning about clinical resources for PDAs, while those in public health, applied health sciences, and pharmacy thought initial training and learning about general PDA resources was more important.

Survey respondents were asked to indicate the specific resources they would be interested in learning more about. Respondents were most interested in training on: medical texts such as Harrison's Principles Internal Medicine and 5 Minute Clinical Consult (69%), drug resources (65%), and patient tracking tools (47%). The specific training and information needs of respondents in various colleges are reported in Table 3.

DISCUSSION

Participation in the survey varied greatly across colleges and by academic affiliation. As with any type of survey study, it is quite possible that those who chose to participate varied greatly from those who did not participate. It is possible that a 69% PDA ownership rate does not reflect entire health sciences community at this institution. It is quite possible that PDA owners were more likely to answer the survey than non-PDA owners, and, therefore, PDA ownership and use may be much less on the campus than reflected in the survey. This possibility would not negate the training and information needs suggested by this study. The study probably reached the early adopters who use this new technology.

Results of this survey provide evidence of the varied needs and uses for PDAs across the disciplines. Most respondents who used PDAs used them regularly. Despite the survey respondents' health sciences setting, many primarily used their PDA for nonclinical purposes. The address book, date book, and calculator were the most commonly used. This substantiates the findings by Criswell and Parchman who also found that the address book and date book were heavily used by health professionals [49]. Nonetheless, clinical faculty and residents, who are assumed to be more involved with direct patient care, were the largest users of the PDAs for purposes directly related to patient care. Residents who responded used drug databases, medical reference books, patient care, and patient tracking programs on their PDAs. Clinical faculty respondents also reported using drug databases and patient tracking software on their PDAs. Despite this, the use of clinical PDA resources was not overwhelming. The clinical faculty and residents reported that they were interested in training to use clinical tools for the PDA such as medical texts, drug resources, patient tracking, procedure tracking, and medical calculators. As suggested in the literature, the potential of PDAs

Table 3
Reported training and information needs for PDAs

	Medical texts	Drug resources	Patient tracking	Evidence-based medicine resources	Word processing	Document readers	Web browsers	Current awareness products	Types of PDAs	Creating PDA Web pages	Creating databases	Procedure tracking	Medical calculators	Email
All respondents	205 (69%)	193 (65%)	140 (47%)	72 (24%)	115 (39%)	86 (29%)	98 (33%)	33 (11%)	125 (42%)	78 (26%)	114 (38%)	87 (29%)	101 (34%)	129 (43%)
By college														
Nursing	21 (70%)	20 (67%)	12 (40%)	8 (27%)	17 (57%)	10 (33%)	7 (23%)	4 (13%)	14 (47%)	5 (17%)	15 (50%)	8 (27%)	12 (40%)	13 (43%)
Medicine	136 (75%)	124 (69%)	93 (51%)	47 (26%)	56 (31%)	50 (28%)	57 (32%)	21 (12%)	65 (36%)	50 (28%)	63 (35%)	59 (33%)	72 (40%)	68 (38%)
Dentistry	21 (60%)	27 (77%)	17 (49%)	9 (26%)	19 (54%)	6 (17%)	12 (34%)	2 (6%)	20 (57%)	7 (20%)	12 (34%)	9 (26%)	7 (20%)	18 (51%)
Applied health sciences	10 (56%)	4 (22%)	8 (44%)	5 (28%)	8 (44%)	8 (44%)	10 (56%)	3 (17%)	13 (72%)	8 (44%)	10 (56%)	7 (39%)	5 (28%)	13 (72%)
Pharmacy	13 (62%)	16 (76%)	6 (29%)	2 (10%)	9 (43%)	6 (29%)	6 (29%)	2 (10%)	6 (29%)	1 (5%)	6 (29%)	0 (—)	4 (19%)	8 (38%)
Public health	3 (23%)	1 (8%)	3 (23%)	1 (8%)	6 (46%)	5 (39%)	6 (46%)	1 (9%)	7 (54%)	7 (54%)	7 (54%)	3 (23%)	1 (8%)	9 (70%)

to assist with patient care is not being maximized [50, 51]. Health care professionals may not be aware of what resources with clinical applications are available for PDAs or how those resources can be used.

The four colleges that report the highest use of PDAs (medicine, dentistry, nursing, and pharmacy) also have the groups who are most likely to use clinical software on their PDAs (drug databases, medical reference, patient care, and patient tracking). Respondents from these colleges also report that their information needs are more related to clinical or health sciences software. This suggests some possible roles health sciences librarians should play in increasing the use of these resources. PDA software Websites for the various health sciences disciplines may promote software availability. Demonstrations and training by the librarians may increase the use of PDA software in the clinical setting.

Academic faculty were more likely to use their PDAs for general purposes including time management, email, and Web access. In addition, the information needs of this group were reported to be related to the general uses of PDAs, including word processors, Web browsers, types of PDAs, creation of databases, and email. Respondents from the two colleges that reported the lowest PDA use (public health and applied health sciences) reported their PDA use is related to general purpose software such as time management. The respondents from these two colleges also indicated their training needs would be focused on initial training and general resources.

It is possible that the colleges and academic faculty who make little or no use of PDAs for clinical purposes do so because of low patient contact. As faculty, this also means that they may not be able to discuss the potential of PDAs for patient care with their students. It may also be possible that in some of the health sciences disciplines, few clinical software programs for PDAs exist. For example, a search on the Internet for PDA resources for physical therapists or occupational therapists (applied health sciences) yields few results, and a search for public health resources for PDAs results in a few resources for bioterrorism. Results of this study make obvious that even patient tracking programs are underutilized by the aforementioned disciplines. This suggests that the potential of PDAs in the clinical setting for the applied health sciences and public health field is relatively unexplored at this time.

The results of this study suggest that there are training and information needs related to PDAs that vary among colleges and status (academic faculty, clinical faculty, resident). In addition, the results of the study show evidence that users are not utilizing their PDAs to their greatest potential, particularly in the clinical setting. Librarians have a clear opportunity to offer assistance in terms of evaluating and promoting PDAs as clinical tools for health care providers. Also noteworthy are the opportunities for librarians to provide varied training.

PLANNING FOR PERSONAL DIGITAL ASSISTANT TRAINING

From patient care to research to departmental projects, the library has an opportunity to enhance the way in which PDAs are used with the aid of up-to-date Web pages, training workshops, and individual tutorials. The development of an enhanced PDA Website that will address the clinical software information needs identified in this survey is currently underway at UIC. Although PDA pages linking to PDA resources existed prior to the survey, most of the links have been to resources most relevant to those individuals in medicine. Few links have been provided to resources that could be of benefit to the other health sciences disciplines. Understandably, the nursing and medicine disciplines have different clinical needs from the applied health sciences or public health, and this difference should be reflected in Web pages. Web pages linking to PDA resources for all the health sciences disciplines* are one illustration of ways to increase access to clinical PDA resources.

Efforts must be made to break the barriers that exist between the library and the colleges to promote the abilities and resources of the library. The information services librarians at the institution in this study have offered several PDA workshops. A session that provided hands-on instruction in the basics of using a PDA was well attended. A more advanced class exploring various PDA software programs available for the health sciences had few registrants and, subsequently, has not been offered recently. However, this survey showed a clear need for such a class. Surprisingly, only one survey respondent indicated attending a library PDA workshop, but possibly most of the individuals attending the workshops were not faculty or they did not respond to the survey.

These findings indicate that the librarians need to take a more proactive approach for faculty and residents, which goes beyond offering workshops in the library. Perhaps the librarians need to negotiate time at faculty department meetings or medical resident journal clubs to highlight PDA software available through the library. The fact that the library has recently acquired site licenses for software and programs (InfoPOEMs, 5 Minute Clinical Consult, MDC Mobile) for PDAs may open the doors for this type of promotion and instruction. Peters et al. describe several roles the library has the potential to be involved in, including collection development; demonstration software for "trial, purchase, adoption, and integration"; evaluation and recommendation of products; instruction; and "documentation and tutorials" [52]. These roles appear feasible and necessary given the results of this survey. The information services librarians also have plans underway to develop a PDA users group in addition to a mobile technology workshop.

*The Library of the Health Sciences Web page with resources for personal digital assistants may be viewed at <http://www.uic.edu/depts/lib/lhs/resources/pda/>.

The mobile technology workshop will explore various types of wireless technologies including laptops, PDAs, and tablet PCs.

All librarians in information services departments at health sciences libraries need to be able to provide consistent and knowledgeable PDA support. Uniform competence should be developed to offer training sessions to the various colleges. A more structured program at the library needs to be developed to foster PDA use and expertise by the librarians. The UIC Health Sciences Library has a formal liaison program, where each information services librarian provides outreach services to a specific college. Liaisons who are knowledgeable PDA users will more likely provide updated services and instruction to their respective colleges. As librarians continually develop their knowledge about PDAs, it will also be possible for them to keep up to date with the latest clinical resources in the various health sciences disciplines. If the UIC health sciences community's knowledge about PDAs reflects what has been written in the literature thus far, then the research presented here provides evidence of ample opportunities for librarians to offer bibliographic instruction about and services for PDA uses and resources to health care professionals.

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APPENDIX

PDA (personal digital assistant) needs assessment

Part 1: personal use

1. Please indicate your college
 - Nursing
 - Medicine
 - Dentistry
 - Allied health sciences
 - Pharmacy
 - Public health
 - Other (Please specify)
2. What best describes your status at the University of Illinois at Chicago?
 - Assistant, associate, or full professor
 - Clinical faculty
 - Resident
 - Other (Please specify)
3. Do you own or have access to a personal digital assistant (PDA)?
 - a. Yes
 - b. No (if no, please skip to part II)
4. Do you use your PDA?
 - a. Yes
 - b. No (if no, please skip to part II)
5. How often do you use your PDA?
 - a. Several times a day
 - b. Once a day
 - c. Once a week
 - d. 2-3 times a week
 - e. Rarely
6. What operating system does your PDA use?
 - a. Palm OS
 - b. Windows CE

- c. Don't know
 - d. Other (Please specify)
7. What brand of PDA do you use?
- a. Palm
 - b. Handspring (Visor)
 - c. Casio
 - d. HandEra
 - e. Hewlett-Packard
 - f. Samsung
 - g. Sony
 - h. Don't know
 - Other (Please specify)
8. How did you learn to use your PDA (Check all that apply)?
- a. Peers
 - b. PDA manual
 - c. Internet guide
 - d. Department training
 - e. Library training
 - f. Taught myself
 - g. I am still trying to figure my PDA out
 - h. Other (Please specify)
9. Do you have project(s) in your department that require(s) the use of a PDA?
- a. Yes
 - b. No
- If yes to question 9, check each group (if any) involved in the project(s):
- a. Faculty
 - b. Residents
 - c. Staff
 - d. Students
 - e. None (personal projects)
 - f. Don't know
 - g. Other (Please specify)
10. Do you use a wireless service for your PDA?
- a. Yes
 - b. No
11. Please indicate the ways you use your PDA (Check all that apply).
- a. Time management (date book)
 - b. Address book
 - c. Drug databases
 - d. Calculator
 - e. Medical reference (Harrison's Principles of Internal Medicine, 5 Minute Clinical Consult)
 - f. Word processing
 - g. Patient care

- h. Patient tracking
 - i. Email
 - j. Web access
 - k. Other (Please specify)
12. Please list what health sciences resources you use on your PDA (Examples: Taber's Cyclopedic Medical Dictionary, Harrison's, PDR, Merck Manual, 5 Minute Clinical Consult, ePharmacopoeia, ePocrates, etc.)?
- 1.
 - 2.
 - 3.
13. Please list PDA programs and/or applications that you would recommend for purchase by others (Examples: word processors, medical reference resources, patient trackers, entertainment programs)
- 1.
 - 2.
 - 3.

Part II: information/training needs

14. What training sessions would be beneficial to you or your department with regard to PDAs (Check all that apply)?
- a. Initial training in using PDAs
 - b. General resources for PDAs (word processing, spread sheets, address book)
 - c. Health sciences resources for PDAs (Harrison's, PDR, Patient Tracker, drug resources)
 - d. Other (please specify)
15. What type of resources would be beneficial for you or your department to learn about (Check all that apply)?
- a. Medical textbooks (Harrison's, Washington Manual, PDR)
 - b. Drug resources
 - c. Patient tracking databases
 - d. Evidence-based medicine resources
 - e. Word processing software
 - f. Document readers
 - g. Web browsers
 - h. Current awareness resources
 - i. Types of PDAs available (Visors, Palm, Casio, Palm OS, Pocket PC)
 - j. Creating PDA-friendly Web pages
 - k. Database creation
 - l. Procedure tracking
 - m. Medical calculators
 - n. Email
 - o. Other (please specify)