

An Electronic Mail List for a Network of Family Practice Residency Programs: A Good Idea?

Jodi Summers Holtrop, PhD, CHES

Assistant Professor and Residency Network Director
Department of Family Practice
Michigan State University

Abstract - The use of an electronic mailing list as a means of communication among faculty in a network of university-affiliated family practice residency programs was evaluated. Faculty were automatically subscribed to the list by the list owner. Messages were tracked for one year and a written evaluation survey was sent. Ninety two messages were sent, with 52% of the messages being posted information. While most (65%) survey respondents reported reading 61% or more of the messages, with only 33% ever actually posted at least one message to the list. Given that faculty were automatically subscribed and that there were only 84 total members, the list may have failed to reach a critical mass of active participants. It is concluded that an email list for network faculty did not function as an online discussion group, although it was extremely beneficial as a way of posting information to affiliated residency faculty.

Key words: computer communication networks, internship and residency, family practice

The use of electronic mail (email) has grown exponentially in recent years. One use of email is an electronic mailing list, commonly called a listserv. Actually LISTSERV is a trademark for a software program available through Lsoft (<http://www.lsoft.com>). An email list is a way to send a message to a large number of individuals (via their email account) simultaneously. An individual's reply to a message sent through the list may also be distributed to all members of the list. Thus, a list has the potential to function as an online discussion group.

Email offers a method of communication that is easy to use, often at no cost to the user, and leaves a written record.¹ Advantages and disadvantages of list participation are described in the literature.²⁻⁷ Advantages include access to a number of individuals sharing a common interest all at once, which can be extremely resourceful and time-saving. List participation also provides the opportunity to read the discussions among colleagues, which can be enlightening in revealing trends on important issues. Lists are generally faster than working through the web. Disadvantages include the potential lack of understanding of syntax and commands for the list (including how to subscribe and unsubscribe), the time taken to sort, read and delete messages, and the hassle of coping with the continual flow of messages — many of which may not be of high interest. Information gleaned from the list may not be reliable, as not all

sending a message may be an expert on the topic of discussion. There is also the possibility of accidentally sending a personal communication to a multitude of readers, which can be embarrassing.

Email lists are currently used in medicine and medical education for online discussions among colleagues, students, or residents.^{1,8-14} FAMILY-L (<http://www.mc.uky.edu/familypractice/FamilyL.asp>), for example, is a popular list for family medicine educators and Med-Ed (<http://www.aamc.org/meded/software/start.htm>) is a discussion list of the American Academy of Medical Colleges. After a review of the related literature, the author could not find any articles that described the use of a list for faculty in a network of residency programs.

The purpose of this study was to determine the volume and type of messages sent and by whom during the first year of the initiation of a family practice residency network email list for network faculty. Overall use of email, participation in other lists, respondent background and demographic information, rating of perceived benefits and drawbacks of the list, and evaluation of the online newsletter were also studied.

Methods

The Michigan State University (MSU) Family Practice Residency Network (Network) is a collaborative group of the nine family practice residency

programs affiliated with MSU. The goals of the Network are to improve family practice education in Michigan through sharing of resources, collaborative projects, and educational programs. The Network consists of approximately 90 faculty members, including residency faculty at the nine community residency programs and the on-campus faculty at the medical school. Establishment of the electronic list was initiated to improve communication and resource sharing among faculty within the Network.

List Establishment - A survey conducted in the fall of 1998 provided the names and email addresses (if available) of the faculty in the MSU Network. The Residency Network Director initiated the Family Practice Residency Network (FPR-NET) list in January of 1999 and became the list owner (i.e. individual who manages the list). The list was established as an unmoderated, private list using the University electronic mail list resources, the LISTSERV[®] program, version 1.8c. The list was open to all faculty within the MSU Network. A specific decision was made to exclude resident participation in the list, as discussions may center on evaluation of resident performance.

A message was sent to the email accounts of faculty in the Network notifying them that, unless they declined, they would be signed up for the list. Instructions for use were provided and the list implemented in February of 1999. Members were sent an email message that provided instructions on how to send messages, unsubscribe from the list, and other related functions. Information on use of the list could be obtained by contacting the Network Director or by visiting the Department of Family Practice website (www.familypractice.msu.edu). An electronic newsletter named FPR-NET ONLINE was developed and sent monthly to encourage list activity among the list members and provide a regular source of information to members. This online newsletter was developed by the Network Director and the departmental editor/webmaster. Reminders were provided regarding the list as residency faculty meetings. No other measures were taken to promote the list.

Evaluation - Human subjects approval was sought and received by the University Committee for Research Involving Human Subjects.

Two methods were used to evaluate the list. First, all messages sent through the FPR-NET for a one year time period (February 1, 1999 through January 31, 2000) were archived in a database by the list owner. Messages were then sorted into the following *a priori* categories:

Message which:

- Ask a question
- Answer a question
- Post information (includes sub-category of on-line newsletter and list issues/info)
- Reply to posted information

These categories were adapted from the original categories determined by Schoch (1997).¹⁵ Frequencies of the types of messages sent and by whom were determined. To check for the accuracy of categorization of messages, the messages were categorized by both the list owner and by the departmental editor/webmaster. An inter-rater reliability assessment was conducted and a high degree of consistency in the categorizing was found ($\kappa = .86$)

Second, a two-page survey was developed to assess respondent background and demographic information, use of email, email lists and the FPR-NET, rating of perceived benefits and drawbacks of FPR-NET, and evaluation of the FPR-NET ONLINE newsletter. Survey questions relating to number and percent of messages read and the list activities in which they participated were taken from a previous list evaluation.¹⁵ All other questions were developed by the list owner and reviewed by three family practice faculty with expertise in lists and survey development.

Surveys were distributed in residency faculty meetings between September and November of 1999. Individuals not in attendance or not completing the surveys were sent a second survey and a self-addressed, stamped envelope in December of 1999. Although it seems natural to conduct the survey over the FPR-NET, it was determined that surveys distributed in this manner would increase the response rate and include all those in the network (including those without email addresses).

The data for this study were entered into the SPSS program and analyzed using descriptive and summary statistics.

Results

Of the 85 faculty contacted to be a part of FPR-NET, all but one approved of being enrollment. Activity on the FPR-NET revealed that 92 messages were sent in the one year time period (February 1999 through January of 2000). Of these messages, 48 (52%) posted information, 26 (28%) replied to posted information, 11 (12%) answered a question, and 6

(7%) asked a question. Nine messages coded as posted information were issues of FPR-NET ONLINE. Most of the messages posting information were sent by the list owner (30 of the 48 messages). Nineteen (21%) of the total messages were personal replies. Replies were defined as personal when the response was intended for an individual and accidentally sent to the entire list. A review of messages for the calendar year 2000 also revealed a low number of messages posted to the list (n=43).

Ninety-six faculty (85%) returned the survey. Most of the respondents were community based faculty (n=70; 73%) and physicians (n=66; 69%). On average, they had been in practice for 15.1 years (SD=8.18) and in medical education 11.16 years (SD=7.94). Most were men (n=56; 58%) with an average age of 45.19 (SD=8.04)

Of the respondents, 78 (81%) used email. Of the email users, only 60 (77%) were self-described members of FPR-NET. The list owner checked the list of FPR-NET members at the time of the survey and found two individuals who identified themselves as being on the list, but who were not. There were also five who were on the list and thought they were not. The reason that most individuals were not on the list was because they lacked an email address. Of those with email, access to email was rated as good to excellent by 66 (65%; n=78). Respondents checked their email "once a week or less" 8 (10%), "several times a week" 17 (22%), "daily" 17 (22%), or "more than once a day" 30 (31%). When asked if the respondent was a member of another list, (n=78), 11 (14%) said "yes" FAMILY-L, and another 31 (40%) said "yes" another list. Of those who were FPR-NET members (n=60), most appeared to read the messages posted to the list (65% said they read 61-100% of messages), although only some were active members (i.e. members actually sending a message to the list). Respondents identified using the list to, answer a question (22%), forward a message (22%), reply to a discussion (20%), post information (10%), ask a question (5%), and initiate a discussion (3%). Lack of list use was not related to frequency of email use (Kendall Tau b r = .157, p = .148, n = 59).

Table 1 lists the usefulness of the FPR-NET on various dimensions. Reviews of the list were fair with scores of mid 3's on all the evaluation and usefulness. The only exception was the use of the list as a "forum for stating my position" which received an average score of 2.91 (SD = 1.1).

Seventy-two percent (n=60) said they read the ONLINE newsletter. Of those who said "yes" they

read it (n=42), the ratings (in means and standard deviations) were 3.67 (.75) for relevance, 3.81 (.71) for quality, and 3.74 (.86) for ease of reading. These were all scored on a 5 point continuous scale with 5 being excellent and 1 being poor.

FPR-NET members reported disadvantages to being on the list as too many messages, lack of time to use, not enough messages, personal replies, and lack of relevance to one's work. Suggestions for improvement of the list included: curtailing the personal replies, making the ONLINE newsletter shorter, keeping the content on the list relevant to family practice residencies, and posting information periodically on how to use the list.

Discussion

The results revealed a definite pattern of using the list primarily for posting information. This was particularly useful as a way for the list owner to send information to most of the faculty in the Network. Although list members made use of the list by reading the posted messages, there seemed to be a fairly high amount of passive participants. Passive participants, individuals who read the list messages, but do not participate by sending messages to the list, are often called "lurkers." Lurking is common for most lists.²

In reviewing these results, one may be disappointed by the low use of the list for sending messages. However, one should not be surprised by these findings. Lists often suffer from the "public goods dilemma incentive structure." The content of a sent message is available to all members of the forum regardless of who contributes to it and there is little incentive to contribute messages. So, many enjoy the benefits of other members' contributions without contributing himself or herself. However, if everyone did this, there wouldn't be any messages sent for anyone to read.² Research on list participation in other fields have found that a small number of users account for a large percentage of messages contributed.¹⁶⁻¹⁷ Mavis and Brocato¹⁰ note that a critical mass of subscribers is needed to maintain an ongoing and thoughtful discussion. In their pilot study of the DR-ED list, it was found that twenty-one subscribers was not a critical mass, whereas the 540 subscribers described in their evaluation reached critical mass. Perhaps FPR-NET with 84 members does not have enough members who are willing to actively post messages, rather than simply lurk to achieve this critical mass needed for active online discussions. A key difference in our case was that the list members did not actively subscribe to the list on his/her own,

but were subscribed by the list owner. This may have been a preamble to demonstrating the lack of interest in the list.

function to reply to the sending individual instead of the list (to eliminate the personal replies problem) and shortening the ONLINE newsletter. The Network may also consider other electronic messaging sys-

Table 1
Ratings of FPR-NET Usefulness

Rating Item	Mean (SD)	N
General FPR-NET evaluation^a		
FPR-NET is a useful service	3.55 (.75)	58
Messages on FPR-NET are of interest to me	3.23 (.85)	59
I know how to send a message through FPR-NET	3.54 (1.21)	57
Degree of benefit from FPR-NET membership^b		
Updates on residency education topics	3.93 (.88)	55
Updates on family practice topics	3.76 (.98)	55
Way to find out about what is going on at other programs	3.67 (.86)	55
Forum for requesting information/asking a question	3.67 (.98)	55
Forum for connecting with colleagues	3.64 (.82)	55
ONLINE newsletter	3.61 (.96)	51
Forum for providing information to others	3.47(.85)	53
Sources for resources	3.42 (.94)	52
Opportunity to "lurk" and read what others say	3.38 (1.16)	55
Way to have input on Network topics of interest	3.29 (.85)	55
Way to find out what is going on a MSU on-campus	3.18 (.95)	55
Forum for stating my position	2.91 (1.1)	53

^aRated on a scale of 1-5 with 1 being "strongly disagree" to 5 being "strongly agree"

^bRated on a scale of 1-5 with 1 being "not a benefit" to 5 being a "great benefit"

FPR-NET members stated that reasons for lack of participation include the time it takes to check and reply to email or the lack of relevance to one's everyday work. Perhaps this type of discussion does not fulfill a vital need for residency faculty? Perhaps faculty already have their information and discussion needs met through other lists, other sources, or within their own residency program. Several respondents noted their apprehension of sending a message "out there." Not knowing the other list members and knowing their messages may be saved in an archived record may make individuals feel that their messages are in the spotlight which may make some uncomfortable. Perhaps there is a lack of comfort with email use for this purpose. Email communication has been "likened to speech and to writing and has been considered to be both and neither simultaneously."¹⁸ It may be worthwhile to explore these issues in future study.

As suggested by Mavis and Brocato,¹⁰ plans have been made to make the following changes to the FPR-NET: include introductory messages and information on list members, and regularly post information on how to use the list. Other changes, as a result of this investigation, include: changing the reply

tems such as an electronic bulletin board. This would eliminate the problem of clogging one's email box with many messages, but there needs to be an active role on the part of the member to dial up the website, find the bulletin board and review responses. Another method would have been for the list owner to send mass messages to faculty directly, which would have been easier than establishing a list and subscribing members.

Limitations of the study include the self-report nature of the survey, in which participants may report from memory incorrect information or respond in a socially desirable manner. Also, the survey, although developed from previously used instruments, was not tested for reliability.

In summary, this email list for this family practice network was not successful in functioning as an online discussion group. However, this list was particularly helpful for the network director as a way to easily disseminate information. Further research to understand lack of list participation in this context is recommended.

References

1. Goodman K. Electronic roundtables for medical ethics. *Kennedy Institute of Ethics Journal*, 1992; 2(3):233-251.
2. Rojo A, Ragsdale RG. A process perspective on participation in scholarly electronic forums. *Science Communication*, 1997;18(4):320-341.
3. Montgomery CH, Keenan P. Facilitating faculty communications using an electronic bulletin board to store and organize listserv messages. *Bulletin of the Medical Library Association*, 1995;83(2):234-237.
4. Carter K. Electronic mailing lists: An instant community. *Technology and Learning*, 1999; 19(5):52.
5. Ulthman E. To serve of listserv. Stresses from the field. *Clinics in Laboratory Medicine*, 1999; 19(2):433-51.
6. Prasad S. Internet mailing lists: A primer. *Journal of the Royal College of Surgeons of Edinburgh*, 2000;45(2):122-6.
7. Goldsborough R. Internet mailing lists offer targeted discussions. *Link-Up*, 1999;16(3):6.
8. Baldwin FD. "Fam-Med": An internet list for small practices. *Pennsylvania Medicine*, 1999; November:22-23.
9. Letterie GS, Morgenstern LL, Johnson L. The role of an electronic mail system in the educational strategies of a residency in obstetrics and gynecology. *Obstetrics and Gynecology*, 1994;84(1):137-139.
10. Mavis BE, Brocato JJ. Virtual discourse: Evaluating DR-ED as a computer mediated communications network for medical education. *Journal of Educational Computing Research*, 1998;19(1):53-65.
11. McLauchlan GJ, Cadogan M, Oliver CW. Assessment of an electronic mailing list for orthopaedic and trauma surgery. *The Royal College of Surgeons of Edinburgh*, 1998;44:36-39.
12. Worth ER, Patrick TB. Do electronic mail discussion lists act as virtual colleagues? *AMIA*, 1997;8280(97):325-329.
13. Gilas T, Schein M, Frykberg E. A surgical Internet discussion list (Surginet): A novel venue for international communication among surgeons. *Archives of Surgery*, 1998;133(10):1126-30.
14. Thomas RE, James SD. Informal communications networking among health professionals: A study of gp-uk. *Health Informatics Journal*, 1999;5(2):74-81.
15. Schoch NA. Communication on a listserv for health information professionals: Uses and users of MEDLIB-L.* *Bull Med Libr Assoc*, 1997;85(1):23-32.
16. Rafaeli S, LaRose RJ. Electronic bulletin boards and "public goods" explanation of collaborative mass media. *Communication Research*, 1993;20:277-97.
17. Robin BR. The influence of conference moderator strategies on the participation of teachers in collaborative telecomputing projects. *Dissertation Abstracts International*, 1993; 54(8):2995.
18. Murray PJ. Nurses' computer-mediated communications on NURSENET: A case study. *Computers in Nursing*, 1996;14(4):227-234.

Correspondence to:

Jodi Summers Holtrop, PhD, CHES
Assistant Professor and Residency Network Director
Department of Family Practice
Michigan State University
B107 Clinical Center
East Lansing, MI 48824
Voice: (517) 353-3544 ext. 432
Fax: (517) 355-7700
Jodi.Holtrop@ht.msu.edu