Is It Time for CONFER, a Computer-Based Conference for Dental Public Health?

Stephen A. Eklund, DDS, MHSA, DrPH

Assistant Professor
Program in Dental Public Health
School of Public Health
The University of Michigan
Ann Arbor, MI 48109-2029

Abstract

The usual methods of information exchange within a specialty, such as journals and newsletters, have deficiencies in terms of speed. Adjuncts to them such as the telephone, traditional correspondence, and meetings have other problems with coverage and cost. Advances in computing and tele-communications provide an additional medium for group communication that can be a complement to the strengths of the other media. By using a computer-based conference, a geographically dispersed group can have an efficient and orderly exchange of information and ideas in a way that makes it easy for all members of the group to participate without the usual time or place requirements. Use of such a facility by those in the specialty of dental public health could provide an important focus for ideas, information, discussion, and group identity.

Key words: **computer, communication, conference**

One of the distinguishing features of a specialty is the information that those within the specialty develop and possess. Another characteristic is some medium to exchange that information, usually a journal. The specialty of dental public health has been and continues to be well-served by its *Journal* and more recently by the *Communiqué*. The dissemination of information, however, is slowed considerably by the process of publication: material must be submitted, reviewed, revised, typeset, proofread, printed, and mailed—a process that can take months. Further, these conventional publications do not support the rapid interchange of comments related to the material presented.

Impediments to rapid discussion are especially dismaying for our specialty because we are so geographically dispersed. It is the rare practitioner of dental public health who speaks to more than one or two others on a daily basis. Many have no one else. When an idea pops into one's head, or a new experience provides something that is worth sharing, that information is all too often not shared with others. The telephone is readily available and is clearly an indispensable tool, but to call more than a few people to discuss something takes considerable time. Telephone contact normally requires that people be available simultaneously. We have all played "telephone tag." Further, it is not always obvious who should be called when we have something to discuss. Informal contacts are seldom as broad as they should be.

A useful adjunct to current methods of information exchange that answers many of the concerns just expressed lies in what is sometimes called computer-based conferencing. A computer-based conference allows a group to share information quickly and to maintain a dialogue without the usual requirements of being in the same place or being available simultaneously. Let me describe it by referring to a specific implementation of the concept. The discussion that follows is an explanation of the hypothetical session shown in Figure 1.

Imagine, if you will, walking into your office one morning. You first look at the phone messages, next at the incoming mail. Then you sit down at the keyboard of your computer terminal and dial the local TELENET* access number. After one ring the network answers and asks for your terminal type and the code for the host computer system to which you want to connect. The host computer responds and you sign on and ask for DENT:CONFER. No more than 15 seconds after you sit down at the terminal, the program is greeting you and it presents a bulletin reminding you to send in your registration for the upcoming annual meeting, tells you that there is new discussion on items 15 and 22, that there are two new items, and that you have one new message. The program then asks "DO NEXT?" and you type "NEW."

The program displays the new message. It is from a colleague in another state to whom you had sent a

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No responses as yet

RESPOND, FORGET, OR PASS: pass

Item 26   12:43 Nov11/83   4 lines   No responses
Vic James
Fluoridation battle heats up. A call for help.

Does anyone know of the existence of a quick reference manual of some sort to help with the answers to the commonly (and not so commonly) asked questions that come up in a fluoridation debate? A lot of relatively inexperienced dentists in our community are willing to help in this campaign, but they are begging for information to be able to answer the questions that they are being asked.

No responses as yet

RESPOND, FORGET, OR PASS: respond
GIVE YOUR CURRENT RESPONSE
Don't despair, there are a couple of very good manuals of the type that you need. I will send off copies of the two that I have today. You may want to get in touch with the authors if you need extra copies.

DO NEXT? stop
You are leaving DENT:CONFER. Enter   SIG $ to leave MTS.
#Execution terminated

message on Saturday from your microcomputer at home. You asked him if he was planning to attend a meeting in a few days, and, if so, could the two of you make plans to meet. He responds that he can, but that he has to check with a few other people before he can select a time.

The new discussion on item 15 centers on the original topic of the item, a pending change in the dental practice act in a particular state. Because you have seen the item itself and earlier responses, you are presented at this time with only the newest responses. The discussion on item 22 concerns possible strategies for dealing with problems in the implementation of a sealant program.

The first of the new items is a call for suggestions from a colleague who has been assigned the responsibility of providing an appropriate definition of oral health, and a plan for reaching it, for the state in which he is employed. You read the item and are interested in the discussion that will follow, so you type "PASS." The program then knows to inform you of any further discussion. The second item is a plea for help from a city dental director who is in the midst of a fluoridation referendum battle. Because you have had some experience in this area, you respond. Your response is appended to the item, and others subsequently signing on to the conference will see what you have said and will have the opportunity to comment further.

After finishing the response, you leave the program because you have seen all of the new activity. You will sign on again later today, or early tomorrow, to see if a date for your dinner meeting has been set, and to check for any new activity on the conference.

This fictional conference is based on a concept and a computer program that are not at all fictional. The idea of computer based conferences has been around for some time. There are several implemen-

tations available today, and indeed as you read this you can be assured that more than a few groups are exchanging information using this medium (1,2).

The particular program on which this article is based is called CONFER II, a program designed by Robert Parnes, of Advertel Communications Systems in Ann Arbor, Michigan (3). The underlying concept is that of a computer program that acts as a housekeeper for a discussion, and the participants in the discussion have access to the computer where this program resides. The usual time and place constraints to discussion are removed. In the case of CONFER II, because it is available on a computer that can be reached by telephone and through GTE's TELENET, access is available from virtually anywhere in the world. The program makes it possible for a widely dispersed group to carry on an organized discussion without having to be in the same place, or participating at the same time. The program keeps track of each participant individually. When our hypothetical participant signed on to the conference, the program knew what he had already seen, what was new since his last sign-on, and of which of these items he had asked to be kept apprised. The methods of information exchange within CONFER that he used are the ITEM, the MESSAGE, and the BULLETIN. The ITEM is intended to be the primary medium for exchange. Items are meant to be seen by anyone who has been given access to the conference. Any participant can enter an item, and when that is done, the program will tell each other participant at the time he or she next signs on that there is a new item. The participant then has an opportunity to look at each new item, and either RESPOND to it, FORGET it, or PASS. If the participant has something to say, the choice is to RESPOND. CONFER prompts for the text of the response, stores it with the item, and the other users will be notified when

FIGURE 1
Hypothetical session on a computer-based conference

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#so dent:confer
#$Run CNFR:Confer t = 5 par = DENT:Confer
#Execution begins
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CONFER II (09/83) — designed by Robert Parnes
    Trademark: Advertel Communication Systems

CONFERence for DENT:CONFER
organizer: Joel Dent, 313/764-5477

Bob Laver   Effective: Nov11/83   Expires: Nov18/83
    Preregistration for the 1984 meeting of the Association will close as of Friday, November 18, 1983. It you plan to attend the meetings, and have not returned your materials, please do so now.

    New responses on items: 15   22

    New items: 25-26

    New message: 6

DO NEXT?   new

6   5 lines   02:01:59 Nov08/83
MESSAGE from: Bill Roberts   16:50 Nov09/83 K8M7:MF
Rolf, I am going to be at the meetings in Cincinnati on Thursday and Friday of next week, and I am wondering if we could arrange to have dinner together one of those days.
    REPLY from: Rolf Phillips   21:42 Nov10/83 K2TA:MF
I am sure that I can, but I must check with a couple of other folks before I can be sure of the day. I will get back to you here.

REPLY, DELETE, OR IGNORE: ignore

Item 15   08:01 Oct07/83   26 lines   17 responses
Bill Green
Proposed changes to a state dental practice act.
    2 new responses.
16) Carl Roberts: From what I can see these proposed changes are so minor that they will have no effect on what goes on in dental practices.
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17) Jim Jones: Well, that might be true for private practices, but they could make it easier for public programs to handle such things as a sealant program. Further, even if established practitioners are unlikely to change, these changes could be embraced by the franchises, and really put on the pressure.

RESPOND, FORGET, OR PASS: pass

Item 22   12:56 Oct30/83   23 lines   22 responses
Steve Chin
Problems encountered in the implementation of a public sealant program.
    1 new response.
22) Jim Jones: One of the most important steps has got to be the preparation that you do with key members of your state board of dentistry. If they do not want to cooperate, they can make things difficult for you. Also, don't make the mistake of thinking that you can fight them head on. You will lose too much in the fight, even if you can win on that one issue. Finding some means to get cooperation is crucial.

RESPOND, FORGET, OR PASS: pass

Item 25   11:00 Nov11/83   5 lines   No responses
Ken Brock
Oral health in the year 2000.

I have been assigned the task of developing a plan for achieving optimal oral health for the citizens of my state by the year 2000. I know that some of you out there have worked on or are working on similar projects, and I would like to use this item as a place to discuss the topic. Of particular importance are such questions as how can we define optimal oral health, should that definition be the same for everyone, are there alternative ways of attaining that goal, and how will we know when we have reached it?

"The benefits to our specialty and profession could be enormous. Those with needs for information or the need to disseminate information will benefit immediately."

they sign on again that there is a new response to that item. The FORGET option is used if a particular participant is not interested in an item, or its discussion. By using the FORGET option, the user will not be informed of further activity on that item. This feature can help individuals to limit their participation to those topics that are of most interest, while still maintaining some idea of what is going on in other areas. The PASS option is used when the participant is interested in the topic of an item and wants to be kept informed of any discussion that may follow, but for the moment does not have anything to add.

Even within a highly specific group such as dental public health, some exchanges of information should not be shared universally. CONFER allows for this with the MESSAGE. MESSAGES are private exchanges between participants, or among specific subgroups of participants. Highly individual information can be exchanged this way, so that it does not clutter the conference for the others who will have no interest. The MESSAGE can also be used for exchanges that are meant to be private. It can be used to try an idea on a few other participants, with the idea later becoming an ITEM after it is more fully developed.

The BULLETIN, also available to all participants, is a one time broadcast of a short piece of information to the entire group. The information transmitted in the BULLETIN is not expected to require discussion, and is usually pertinent for a specific period of time. The BULLETIN has an effective date and an expiration date, so that the first time that a participant signs on to the conference during that time period he or she will be presented with that BULLETIN.

The program keeps a record of the bulletins and items, so that it is possible to go back at some later time and select, for example, all of the items that dealt with a particular topic. Thus an easily cited archive of activity in the conference is available. The program allows for rapid scanning of the accumulated information to locate particular discussions. Individual participants can choose to keep archives of their personal messages for future reference.

This description only scratches the surface of the features of CONFER. Full documentation is available (4,5) and would be provided to each user should a conference be started for dental public health.

The cost to use this program is paid by participants as they use it. The costs may be divided into three components: 1) computer time, 2) long-distance access, and 3) program surcharge. Because the first two can vary widely, it is diffi-

cult to predict the long-term cost for any one participant. Computer time is charged when a person signs on and actually uses the program. Charges change depending on the time of day and day of the week. (The computer is available, for the most part, 24 hours per day.) Further, the computing charges are made up of several components such as actual central processor use, total connect time, and memory use. Long distance access charges will also vary according to the method available to the individual participant. For local users, or those who have access to such facilities as The Federal Telephone System (FTS), there will be no such incremental charges.

For most others, the least expensive method will be through the GTE TELENET network. At the moment, charges for TELENET are $5.50 per hour. TELENET is reached by telephone, and most cities in the US have local telephone numbers that provide access to the network, so that telephone toll charges are usually not involved. The royalty for use of the program itself is $4.50 per hour of use. What this all boils down to is a total of something between $7.00 and $19.00 per hour of use, depending on how and when it is used.

The ideal use of such a conference is, however, frequent access for short periods of time. The amount of time required is also a function of the level of activity in the conference, as well as the way the individual participant takes advantage of such things as the FORGET option. While it can only be a guess, it is reasonable to think that a person could participate on a *daily* basis for a year for a total cost somewhere around $300. If the conference actually provides for the kind of exchange that many think it can, the price is small indeed. The enrichment to the specialty and ultimately the public, because of the increased information exchange, could be substantial. Further, the cost of just the telephone calls and letters that it would replace could well go a long way to covering the costs of participation.

The other requirement, and for some a new cost, is a computer terminal or a microcomputer. More and more of us have access to some such device, and the rest are probably looking for some excuse to get one. Assistance would have to be provided for those getting set up and connected to the network for the first time. Such help is available within the specialty already, and once a person successfully signed on to the conference, further help would be readily available there.

The potential of a conference like this for dental public health is great. It is not a question of whether or not we will use it, but of when are we ready for it. It will provide a method for us to keep in closer

touch with each other and allow us to disseminate important information with the ability to have rapid clarification and discussion. It will allow the geographically isolated practitioner an obvious place to look for help on the problems that arise on a day-to-day basis. Further, it can give the Association a highly visible mechanism to encourage participation by current members and to attract new ones.

Everything that we need to have the hypothetical become a reality is ready and waiting for us. All that we need is that critical mass of people who will sustain the conference in its early going. The benefits to our specialty and profession could be enormous. Those with needs for information or the need to disseminate information will benefit immediately. Newcomers to the specialty will have a way to become introduced to the people and involved with the activities of the specialty. When only one or a few of our colleagues are able to attend a meeting or other session, they can report immediately to the rest of us. Indeed, the exchange can be so rapid that the absent membership could be polled *during* a meeting and the responses used by those actually in attendance. When a particularly interesting or important article appears in a journal, others can be made aware of it and it can be thoroughly discussed by the group. As individuals retire from active positions, many of them will choose to continue to participate, and we will all benefit from this direct access to their accumulated wisdom. The list of useful applications will be limited only by our collective imagination. Are we ready? Everything else is! For a few dollars a week, we can start tomorrow. Should we? I would like to know what you think.

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