

Foundations are an increasingly significant source of funding for health research and demonstrations in the United States, providing opportunities to encourage wider dissemination and utilization of innovations emerging from foundation-supported activities. A literature review and informal interviews with the communications and program officers for ten foundations suggest that foundations are increasingly engaged in dissemination and communications activities but less involved to date in active utilization programs. Moreover, they appear to have few strategies for developing utilization programs. The survey does indicate that many foundations may be interested in developing such strategies and the article includes suggestions for expanding knowledge utilization activities of foundations.

Knowledge Utilization and Foundations Supporting Health Research and Demonstrations

Initial Explorations

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Foundations currently support a significant amount of health research and demonstrations. In 1989, the 475 largest American foundations awarded \$563 million for health-related research and demonstrations, representing 17.3 percent of their total grant awards (Foundation Grants Index 1990). Extrapolated to the total of \$7.9 billion in grants awarded by all foundations, an estimated \$1.3 billion in private foundation funds supported health research and demonstrations in 1989.

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Constraints on government spending and political influences on the priorities of federal agencies make it less likely that certain health issues, especially those on the cutting edge, will be well explored without research or demonstration support from foundations. Rosenkrantz and Buck (1990) point to the essential role foundations play in assisting or initiating "programs that range from fundamental research on basic life processes to the evaluation of psychotherapy, from building hospitals in small towns to setting up county health departments, from professorships to training grants" (x).

There have only been limited efforts to assess empirically the impact of foundation-supported health research and demonstrations (Carter 1985). Some foundations—the Robert Wood Johnson Foundation is a visible example—regularly evaluate individual grant projects or funding programs, sometimes with major investments in sophisticated evaluation research of both in-process and completed activities. However, as Carter (1985) notes, it is difficult to assemble even good evaluation data into aggregate assessments of impact. One important type of impact is the field application of information or innovations emerging from foundation-sponsored research, or wider replication of sponsored demonstrations. The current and possible future roles of knowledge utilization activities in encouraging such transfer are explored in this article.

Overview of Foundation Knowledge Utilization Activities

"Knowledge utilization" activities are defined here as covering a full spectrum from *dissemination* of information to more active strategies aimed at promoting the actual adoption or *utilization* of innovative programs or technologies in new settings (Backer 1991a). Foundations typically disseminate information about their grant activities through annual reports, and sometimes through conferences, press releases, and other more strategic dissemination or communications activities (Price 1985). However, little is known about efforts that foundations make to promote more active *utilization* through targeted interventions designed to overcome resistance to change, reward involvement with innovation adoption, use strategic planning to guide the adoption effort, and so forth.

Most American foundations include in their mission statements (and tax exempt status requests) some statement of responsibility for creating and promoting the use of information for the public good through research, education, or other processes. Yet a review of the literature on activities of Amer-

ican foundations, and telephone interviews conducted in late 1990 with the Foundation Center in New York, the California Community Foundation in Los Angeles, and several centers that study foundations in the health field (e.g., the New York-based Grantmakers in Health), yielded only a small knowledge base concerned with dissemination, and almost no literature concerned with utilization as defined here. The Kellogg Foundation report, *Increasing the Impact: 1980s* (Price 1985), and a previous Kellogg publication on related topics in 1978 are landmark documents about dissemination activities of foundations. The opportunity—and responsibility—to encourage dissemination of sponsored activities is well summarized by Kellogg Foundation Vice President James Richmond:

Don't reinvent the wheel! That's one of the most common clichés and cautions in American society. But the truth is we don't like to see money, effort, or energy expended unnecessarily or inefficiently. If a funded activity helps people in one neighborhood, community, or town, why not share it with others facing similar problems? (Richmond in the introduction to Price 1985, i)

Most foundations use the term *communications* in describing these activities. An array of approaches intended to enhance the "ripple effect" of successful projects are presented; but again, there is little discussion of the more active behavioral and management science-based strategies of knowledge utilization (Backer 1991a). However, the Kellogg efforts to bring together American foundations around communications issues did have significant impact. In 1978, only a handful of foundations had communications programs, but by the mid-1980s, an array of media was being used by foundations in more systematic ways (see descriptions below), often guided by a communications officer added to the foundation's staff. The largest foundations have entire communications offices or programs.

Other dissemination activities are occasionally reported in the foundation literature, such as the information clearinghouses proposed by Dolan (1989). Such strategies lack a key element for effective knowledge utilization, however, because they stop at information dissemination only, and do not help potential adopters sort through, select, modify, and adopt models that would best meet their needs.

One fairly comprehensive knowledge utilization program was created by the Exxon Education Foundation, under the following rationale:

"Build a better mousetrap and the world will beat a path to your door." This simple statement illustrates a theory of diffusion which is apparently widely believed by most foundations and granting agencies (i.e., "we'll do our good thing and utilization will take care of itself"). In much of its granting over a number of years, the Exxon Education Foundation has been in the business of financing the development of mousetraps in the field of higher education. A

part of our rationale for funding the project of one institution while giving lower priority to another was the favored innovation appeared to meet more general needs, and if successful, would be widely usable by other institutions as well. Only in the early 1970s did we begin to realize that many fine mousetraps seemed to be lying on the shelf, with few other institutions "beating a path to the door" of the innovator we had supported. It was then that we began to question the mousetrap theory of diffusion. (Johnson 1980, 1)

The Exxon Foundation's IMPACT (Implementation of Materials and Procedures Affecting College Teaching) Program was conducted to disseminate and promote utilization of six educational innovations developed by foundation grantees. The targets for adoption of these six innovations were faculty in colleges and universities.

The Exxon Foundation mailed descriptions of the innovations to a broad audience, and directed inquiries to the author of each innovation. Each author produced a packet of materials to send on request. Individuals interested in adopting an innovation submitted a brief proposal to the foundation; potential adopters were invited to a foundation-sponsored workshop where each developer presented information about their innovations. Successful grant recipients were notified following the workshop, and began carrying out their implementation plan. Awards were modest, covering only such costs as purchase and transfer of materials, and consultation with the original innovator. The IMPACT Program was evaluated by Rogers, Rogers, and Lee (1975), using questionnaires and telephone interviews with requestors of information, adopters, and secondary and tertiary receivers of information on the innovations. Findings showed considerable impact in terms of actual adoption of innovations in academic settings. The evaluation identified 178 "spontaneous" adopters of the IMPACT innovations, in addition to the 574 adopters who applied for foundation support to adopt one of the IMPACT innovations. The Exxon Education Foundation later expanded the IMPACT Program to high schools and elementary schools, promoting wider utilization of innovative teacher-initiated programs to enhance learning (Johnson 1983). More recently, the foundation also supported a utilization-oriented forum for educators throughout the country, highlighting the works of educator John Goodlad, and featuring grantee innovations available for wider use (Johnson, personal communication, 1990).

The Knowledge Base on Knowledge Utilization

Federal agencies in the health field have developed a number of strategies for promoting use of new knowledge emerging from research and demon-

strations (Backer 1991b). For example, best practices in medical care fields such as cataract surgery are being identified and promoted for wider use by the Agency for Health Care Policy and Research (Backer 1991a). The National Cancer Institute is continually evaluating and improving a variety of knowledge utilization strategies related to cancer prevention and wider use of treatment innovations (U.S. General Accounting Office 1989). The National Institutes of Health has sponsored "consensus development conferences" to promote wider adoption of validated medical practices since the 1970s (Backer and O'Hara 1989). The National Institute on Drug Abuse has launched a program which includes "technology transfer" conferences and preparation of multimedia learning packages based on research (Backer 1991b). The Maternal and Child Health Bureau provides technical assistance on knowledge utilization to grantees in their Emergency Medical Services for Children National Demonstration Program (Backer and O'Hara 1989).

Some of these agencies also sponsor research on the effectiveness of knowledge utilization strategies. A large body of work, including many empirical studies, is now available concerning the ways in which new knowledge is transferred, adopted, and utilized (e.g., Backer 1991a, 1991b; Dunn 1983; Glaser, Abelson, and Garrison 1983; Greer 1988; Rogers 1983; Yin 1978). Methods for promoting utilization through continuing medical education (Kanouse and Jacoby 1988), strategies for adoption of innovations by physicians in practice (Institute of Medicine 1985), and use of innovative communications technology and marketing approaches to reach health professionals in institutional settings (Sechrest, Backer, and Rogers forthcoming) are among the topics specific to health care that have been studied intensively. Taken together, this programmatic and research knowledge base offers a valuable resource for developing more active knowledge utilization efforts by foundations.

Context for Knowledge Utilization Activities in Foundations

In the past twenty years, foundations have evolved from family-run, board-controlled organizations toward professional management (Joseph 1989). Foundation leaders often see themselves as agents of social change (Van Til 1988), able to use their funding priorities aggressively to manage the change process in given areas of societal need (Langfitt 1989). Ultimately, the work they sponsor competes with other public and private sources of innovation and policy direction (Pifer 1984).

Foundations today are especially active in the health policy arena (Rosenkrantz and Buck 1990). Following World War II, foundation leaders were concerned that activities in the public policy arena might be confused with legislative influence attempts, but more recently foundations are increasingly seen as sources of important policy guidance. For example, before government gave significant support to research on health, foundations supported considerable research in this area, such as the Rockefeller Foundation's support of research on infectious diseases in the 1930s. After seeing the potential demonstrated by such foundation efforts, the federal government established the National Institutes of Health (Bowers 1975).

At the individual project level, foundations have long supported the same general goals as those underlying knowledge utilization. Rogers (1975) suggested that foundations often fund projects that provide visibility for a particular health or social issue, hoping that the very act of financial support will increase attention to this issue. For instance, some foundations have made heavy investments in developing and replicating health and educational programs in the underdeveloped countries of Latin America, Africa, and Asia, where the foundation's funds have great "leverage effects" in improving health care and reducing mortality (Sai 1975).

Foundations operate with only the broadest kinds of social controls, by comparison with federal government agencies that have to answer to Congress and to the voters (despite occasional efforts to restrict their actions through tax legislation; see, for instance, Morrison 1975). Such freedom may encourage foundations to take on "riskier" cutting edge research and demonstration activities.

At the same time, foundations exist in a conservative, low-risk-taking culture in which caution and a low profile are regarded as desirable (Van Til 1988). Slow movement and an active desire to avoid public scrutiny are characteristic of this culture, reflecting the values of the wealthy individuals who initiated the foundations to begin with.

Thus, increasing professional management, desire for policy influence, use of foundation funds to leverage visibility for selected issues, and freedom to operate flexibly are all factors that ought to provide a nourishing context for knowledge utilization activities by U.S. foundations. Yet our preliminary literature review and contacts with institutions that study foundations revealed little evidence of activity in this area in terms of strategic applications of knowledge utilization approaches. The conservative, low-profile culture of the foundation world seems a likely factor in this finding. To learn more, some telephone interviews were conducted with foundation officers.

Interviews with Foundation Officers

A telephone interview procedure was designed to learn about dissemination and utilization activities of ten foundations, selected informally on the basis of the authors' personal knowledge and nominations by two expert informants (Charles M. Lewis, M.D., UCLA Medical School, who has advised foundations for thirty years; and Everett M. Rogers, Ph.D., University of Southern California, Annenberg School for Communication, a knowledge utilization scholar). Small, medium, and large foundations concentrating on providing support for health research and demonstration were included. All are grant-making foundations; no corporate or community foundations were included in the sample.

One person was interviewed at each of the ten foundations; five were *communications* officers and five were *program* officers responsible for health-related grant portfolios of the foundation. The telephone interview content was based on concepts from the knowledge utilization literature (Backer 1991a; Dunn 1983; Muthard and Felice 1982).

All interviews were conducted by the second author during a one-month period. Most interviewees also sent reports, newsletters, or other informational material to supplement the interview.

Theme analysis of interview protocols was conducted by both authors independently to achieve consensus on themes in three broad categories: (1) characteristics of the foundations and programs the foundations support, (2) foundation dissemination and utilization activities, and (3) future plans related to knowledge utilization.

Interview Findings

Characteristics of Foundations and Programs Supported

Of the ten foundations surveyed, four focus solely on health; six provide support in other areas as well. All foundations included in the study had been supporting work in the health field for at least fifteen years (average age of the foundations selected was fifty-four years). The foundations studied represented a range of sizes in terms of total assets (\$32 million to \$3 billion) and amounts awarded to grantees in the previous year (\$6 million to \$135 million). The foundations were located in various areas of the country.

The surveyed foundations support a wide variety of programs ranging from local services and demonstration projects to theoretical and basic

research. A broad range of health issues—access to health care, training of primary providers, AIDS, care for the elderly, and so forth—are included. Many of the foundations studied see their work as being on the "cutting edge," and define utilization of grant project findings in part as whether social consciousness is raised or new laws are passed.

Dissemination and Utilization Activities

Four principal types of dissemination activities were reported by foundations.

Press Releases

One foundation has a 4,000-name mailing list, and may issue press releases to all or to a subset of that group. Another foundation plans press releases and briefings to coincide with other public events or professional conferences to gain maximum exposure. Both foundations gauge interest in their work by the number of telephone calls received following press releases.

Networking

Grantees conducting research in the same area of study for one foundation meet periodically to assess implications of their work and to share information and recommendations. Another foundation supports large multisite trials and demonstrations. These sites develop communication networks with each other, and sometimes represent such a large segment of the nation's efforts in their area of study that they can set new national standards and research agendas. Then others, outside of the network, must become familiar with the work to remain up-to-date.

Another foundation establishes networks and invites key researchers working in a given field to share ideas and research findings within the networks. Network members may individually implement aspects of the network's studies in their own institutions, and they may informally discuss the ideas developed within the network with colleagues at professional conferences. Because professional researchers hesitate to publish their work prior to the completion of the studies, networking is particularly important in disseminating ideas in early stages of the work.

Publications

Foundation annual reports typically include descriptions of funded research and demonstration programs. Three of the foundations surveyed also

publish newsletters that describe studies and findings of grantees, or highlight a particular topic.

Reports on major programs included in foundations' annual reports are sometimes reprinted as separate booklets for targeted distribution. Two of the foundations interviewed supported local scholars who produce books about research topics, and one foundation regularly informs publishers of grantees who will have works ready for publication in the near future. All of the foundations interviewed have at one time or another published booklets and information brochures for distribution to the public and interested agencies. These are all in addition to book or journal article publication conducted directly by grantees.

Meetings and Conferences

Five of the foundations interviewed convene special meetings of groups interested in the areas of their research as dissemination vehicles. One foundation supported development of entire training modules to disseminate programs. Two foundations have large programs for training advanced students in the health policy and research field, and these students develop skills in professional publication as part of their training programs.

The term *knowledge utilization* was not familiar to any interviewees. Most of the larger foundations have a staff member in charge of communications or publications, but their emphasis is on dissemination, not on utilization. There is an assumption that information presented will be used, if the recipients choose to do so. Foundations also have not taken an active role in teaching their grantees the principles of knowledge utilization, such as overcoming resistance among potential information users, helping information recipients adapt or incorporate new knowledge to meet their own needs, establishing linkages and identifying idea champions among target audiences for their information.

Among foundations supporting demonstration projects, new models, and other service programs, there was some knowledge utilization activity, but it was not so labeled. For instance, grantees are asked to develop local sources of support for continuation of those programs after the period of grant funding, and many grantees worked with community agencies who wished to replicate their programs.

One foundation does consider dissemination an important topic for their grantees to learn about, and sends a booklet on dissemination and a brochure on media relations to each grantee at the end of the first year of work. This foundation will also award dissemination grants, which enable grantees at the end of a successful project to undertake targeted dissemination activities.

Another foundation specifically develops programs to disseminate information and recommendations from grantee activities, and yet another requires each grantee to have a dissemination plan as part of the grant application. Again, these activities do not encourage more active utilization strategies.

All interviewees indicated that the dissemination of information was important, but there was a range of responses concerning foundation *board* satisfaction with the current level of dissemination activity. Program officers interviewed tended to see dissemination activity as a lower priority for their board members than did communication officers.

Future Plans

Five of the foundations studied already have communications officers who have professional backgrounds in communications or related fields, and these interviewees expressed interest in learning more about knowledge utilization strategies and about ongoing professional work in this area. The program officers interviewed seemed less interested in learning about knowledge utilization. Yet program officers must actively support knowledge utilization activities if these strategies are to be effective, so their lack of interest may constitute a barrier to such activities. Unlike dissemination, knowledge utilization cannot be totally delegated to a communications officer. The knowledge utilization process must begin early in the grantee's work, and needs encouragement and support from program officers throughout the grant period.

Future Directions

Results from this initial exploration suggest that foundations and their grantees may be increasingly active in disseminating research and demonstration products through publications, press releases, networking, meetings, and conferences. However, foundations do not seem to be significantly involved in promoting targeted knowledge utilization of the output of their sponsored projects, nor do they tend to encourage such activities among their grantees. Because this was an exploratory study, no generalizations can be made about foundations outside the health fields, and even within the health research and demonstration area these findings are still preliminary.

Overall, there is considerable similarity between responses of those interviewed for this exploratory study in late 1990 and statements found in the report of the Kellogg Conference (Price 1985). Generally, foundation representatives in both time periods assume that disseminated information will be

used, even though there is some awareness of the need for more active interventions if institutional change and/or public policy change is to result (Boggs 1985; Piasente 1985). Communications staff note that replication may follow dissemination activities (Smith and Warren 1985), but they usually leave such replication to chance.

Despite lack of attention to the "utilization side" of knowledge utilization in the foundation literature and in the current activities of the small sample of foundations interviewed, there are some positive signs from this exploratory study. From the literature, we learn that the Council on Foundations has recently attempted to persuade foundations that it is in their self-interest to communicate more effectively with the multiple publics having a stake in the work that foundations sponsor, and to place more emphasis on communications in annual reports (Joseph 1989). The Council on Foundations has an active special interest group, the Communications Network in Philanthropy, whose members are communications staff of major foundations (Joseph 1989).

This emphasis on communications or dissemination can set the stage for more receptiveness to learning about and incorporating more active utilization strategies. And the communications officers interviewed in this study *did* express interest in learning more about knowledge utilization.

Several events which have occurred since this exploratory work was undertaken are also encouraging. The authors were invited to present findings from this study to the October 1991 meeting of the Communications Network in Philanthropy, because of this group's increasing interest in knowledge utilization. The study findings also were presented in January 1992 to the staff of the E. M. Kauffman Foundation in Kansas City, which is now developing a major program of dissemination and utilization activities to support their operating programs in the areas of youth development, substance abuse prevention, and entrepreneurial leadership. The Kauffman Foundation also has expressed an interest in sharing what they learn with other foundations, to encourage further growth and exploration.

Williams (1991) reports that the Pew Charitable Trust, one of the largest foundations, has recently undergone a "wrenching reorganization" and is now on a "broader, more open and progressive path." Interest in knowledge utilization activities is one aspect of this new direction, as the first writer learned during a February 1992 consultation with this foundation; already one survey study of possible approaches to knowledge utilization has been commissioned by this foundation.

What could be done to stimulate further exploration and action by foundations to promote active utilization of results from their sponsored health

research and demonstrations? The authors would like to suggest some possibilities:

1. Perhaps the most obvious suggestion would be to conduct an expanded and more rigorously designed *study of knowledge utilization activities* of U.S. foundations in the health area, including attention to developing interests and priorities of boards, program officers, communications officers, and grantees. Special attention could be given in such a study to the distinctive culture of foundations and how this might necessitate adaptation of knowledge utilization approaches. The findings from this exploratory study could contribute to the development of such a study. For instance, the Exxon IMPACT Program was effective despite giving only very small grants, which seemed to serve as incentives for leveraging other resources—a strategy other foundations might be most interested to learn more about, given the lean economic times of the 1990s.
2. *Articles* could be written about principles and practices of knowledge utilization for the two key publications in the foundation world, *Foundation News* and *Chronicle of Philanthropy*. Case examples based on developing initiatives such as those of the Kauffman Foundation and the Pew Trust, as mentioned above, could form a central segment of such articles.
3. A *conference* could be convened to explore current and future directions that foundations might wish to take in adapting knowledge utilization principles and practices to their own activities and those of their grantees. The 1978 and 1985 Kellogg conferences on communications/dissemination activities could provide a useful model for such a conference, which might include as speakers experts on knowledge utilization activities sponsored by the federal government, experts from the commercial technology transfer field, and those in the foundation world already experimenting with such approaches. Alternatively, conference events could be scheduled as part of major meetings in the world of philanthropy, such as the annual Council on Foundations conference.
4. A *training program for foundation staff* could be created, perhaps through an appropriate organization such as the Council on Foundations, Indiana University Center for Philanthropy, Grantmakers in Health, or the Aspen Institute.
5. *Technical assistance to foundation staff and grantees* could be provided through an independent organization, a university, or a foundation-related entity such as the Council on Foundations; or, more narrowly, an individual foundation could support a grantee technical assistance program.
6. *Evaluations* of foundation programs could provide supplemental support for dissemination of grantee project findings identified as worthwhile by the evaluation, or for replications of grantee programs in new settings. The experiences of the Exxon Education Foundation's IMPACT Program could guide such an effort (Johnson 1985). Foundation evaluation activities were discussed in relation to dissemination in the 1985 report of the Kellogg Conference (Butt 1985; Carter 1985).

At some point, it might be desirable to establish a *center for study of knowledge utilization in foundations* in a university or independent "think tank" setting. Such a center could conduct studies such as those mentioned above. It also could provide foundation staff with training and technical assistance consultation on knowledge utilization.

The foundation context issues discussed earlier will influence efforts to proceed with activities such as those suggested above. Operating flexibility and desire for public policy influence will be facilitators; the foundation culture of caution and desire for a low profile will be inhibitors. Low awareness about and very limited use of more active knowledge utilization strategies by foundations, as reported in the present study, will be an inhibitor, as will the disparity in valuing of such activities between communications and program officers. Even in the Exxon Education Foundation, where the IMPACT project's knowledge utilization activities have been systemic and quite successful, there has been an uphill battle to maintain this program (Johnson, personal communication, 1990).

Change is inherent in the knowledge utilization process, and the challenges of change will also affect progress in adapting knowledge utilization to the grant activities of foundations in health care. For instance, researchers supported by foundation grants may resist spending time contacting and helping others understand and adapt the new knowledge they have developed. Grantees may feel threatened if their work is subjected to the scrutiny of others to determine potential for utilization. And foundations themselves present barriers, as discussed above.

Planning and support for the process of introducing the full spectrum of knowledge utilization to the foundation world will be needed to overcome such barriers. Knowing where, when, and how to actively promote change based on research or demonstration outcomes is a challenge to all foundations supporting health research and demonstrations. Only a few of the many alternatives for meeting this challenge have been described here, and much further study and experimentation will be needed to determine how to best adapt knowledge utilization strategies to the activities and culture of foundations. Failure to meet this challenge can extract a heavy price, however: "A foundation supported program whose lessons are never detailed and communicated, whose successes are never duplicated, whose failures are never published as a cautionary tale—is this program's impact as equivocal as the unwitnessed crashing of the philosopher's tree?" (Weisfeld and Karel 1985, 21).

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