The *M*anager

MANAGEMENT STRATEGIES FOR IMPROVING HEALTH AND FAMILY PLANNING SERVICES

Turning Research into Action: The Decision-Linked Research Approach

Editors' Note

For over twenty years, managers of health programs have relied on many types of research to help answer strategic and programmatic questions. Demographic surveys, rapid assessments, operations research, and sociological and economic studies contribute significantly to the manager's ability to formulate appropriate goals, determine strategies, and assess the achievement of program goals.

Such contributions are leading program managers to appreciate research as an important management tool. To use this tool effectively, managers must be able to systematically transform research results into decisions. They will need support from decision makers who understand the implications of research findings, and who are ready to advocate for action.

This issue of *The Manager* presents a process known as "decision-linked research," the goal of which is to establish effective partnerships between researchers and decision makers so that the research findings can be transformed into programmatic actions. The issue focuses on how to formulate these partnerships, how to forge common interests between researchers and the users of research results, how to make research understandable to those who will be affected by the results, and finally, how to transform research results into actions aimed at improving policies, strategies, and programs.

—The Editors

Using Research to Raise and Answer Programmatic Questions

As more countries transform their family planning programs into comprehensive reproductive health programs, the information requirements are becoming increasingly complex, and managers have to focus not only on describing what is happening, but also understanding why things are happening as they are. *For example, in order to design effective interventions to curb the expanding HIV/AIDS epidemic, it is important to understand both how the epidemic is evolving, and how behaviors of different groups affect the spread of the epidemic.*

The new global strategies of reproductive health, the rapid and insidious expansion of the HIV/AIDS epidemic, the explosion of health sector reform around the globe, the changing priorities of donor countries, and many other factors are forcing managers to ask new questions about policies, strategies, program directions, and activities. The information needed to answer these questions can best be obtained through systematic research.

While managers recognize, in principle, that research is important, their ability to effectively use research results, in practice, can be restricted when those who need to be committed to using the results are not interested in or don't understand them. Very often, potential users of the findings do not know what to do with the information. This may happen because they are not experienced in reading tables that present numerical data or interpreting graphic presentations of data. In addition, they might not use the data when the research results challenge or call into question the way things are currently done. In the end, the results of doing good, professional, and scientifically-sound research may be undermined if managers do not build ownership of the process and the results at the outset by those who will be using the results to make needed changes.

In principle, decision-linked research can be conducted at different levels, but it needs to be initiated within the context of a specific program that has funding for research. Some research questions can be tackled by local reproductive health managers and their teams, such as questions dealing with specific programmatic problems affecting the quality of service delivery. Questions concerning problems such as unmet need, service delivery, behavioral change, or the impact of policies on performance, may be more suitable undertakings for managers working at the national level.

In either case, managers must work with people who are experienced and professionally trained to conduct research. Whatever the scale of the research undertaking, managers need to be confident that the research will provide answers that will help them improve performance, and that the research process will lead to the mobilization of a wide range of support to implement the research recommendations.

This issue of *The Manager* describes the process of decision-linked research, the aim of which is to link researchers with decision makers at the programmatic level. The issue presents ten steps for creating and supporting a partnership between researchers and decision makers, and generating results that can be widely used. The ten steps center on establishing a research advisory board that works with the manager and researchers to determine the right questions to ask; make the research questions, methods, and results understandable; and build consensus on using the results to guide subsequent actions.

The decision-linked research approach presented in this issue is adapted from the process used by the World Health Organization (WHO). It was tested by Management Sciences for Health (MSH) in a series of research studies on transforming family planning and reproductive health policy into effective action.

Organized by MSH, the studies began in 1992 under grants from the William and Flora Hewlett Foundation, and continued through 1998 in collaboration with the Arab World Regional Office of the International Planned Parenthood Federation (IPPF). Studies were first conducted in Bangladesh, Ecuador, and Zimbabwe to determine why family planning programs in these countries had reached a plateau and were unable to further increase their population's use of modern family planning methods. The second round of studies in Egypt, Morocco, and Syria were conducted under the auspices of IPPF's Arab World Regional Office and addressed the issue of unmet need. The issue provides a synthesis of the lessons learned about how research can make a difference, using the example of unmet need to illustrate the decision-linked research process.

Bridging the Gap between Research and Program Decision Making

Decision-linked research helps researchers and decision makers work together to identify key questions that will help them understand the factors that influence the performance of reproductive health programs. One of the most important areas for research in many countries is unmet need for reproductive health services, especially family planning. The box on the following page presents some of these questions and highlights those pertaining to unmet need.

Distinguishing Decision-Linked Research from Operations Research

Operations research. The objective of operations research is to improve services and the systems used to deliver services. It is used mostly to evaluate program components, to improve cost-effectiveness, or identify the most effective or efficient service delivery strategy among many. [Reynolds and Gaspari]

Decision-linked research. Decision-linked research focuses on the needs of decision makers at the policy, strategic, and program levels who have the authority to use the findings to make changes to improve program performance. The process requires that researchers and decision makers work together to make sure from the start that the results will respond to decision makers' concerns, and that decision makers will know how to use results to improve program performance.

Research Questions for Unmet Need

Policy Questions for national and regional policy makers and program directors, leaders of civil society, finance and planning ministries, and donors that are developing policies to help reach national reproductive health goals.

- *What laws and regulations are necessary to create greater incentives at the community level to promote more effective use of service delivery points*?*
- Why does the performance of family planning programs stagnate for long periods of time despite strong policies, available resources, and strong demand?
- How can programs turn expressions of demand for services by specific age, sex, geographic, educational, and economic groups into specific action to use available services?
- What lessons learned from past experience in service delivery, behavior change, and improvement of quality are most suitable for orienting services to address unmet need?
- *Can greater coordination and collaboration among public sector and nongovernmental organizations (NGOs) that are involved in reproductive health reduce unmet need*?
- What should be the role of the national, regional, and district levels under a decentralized health system in reducing unmet need?

Strategy Questions for service program managers, NGO directors, heads of large facilities with outreach programs searching for high-coverage/cost-effective strategies.

- What new service delivery strategies can best meet the needs of growing adolescent populations?
- *How can changes in contraceptive procurement and distribution practices reduce unmet need?*
- How can market-based approaches be used effectively to best understand the needs of different groups in the population and address their special needs vis-a-vis access, information, education, and communication (IEC), quality, etc.?
- What is the most effective method mix to encourage long-term continuity with family planning services?
- What non-health-related institutions are most effective in creating positive attitudes toward family planning among adolescents and low-parity couples?
- *How are potential clients influenced by the distribution of providers in clinics and hospitals?*

Programmatic Questions for managers of service delivery points seeking to remove barriers to access for people seeking services.

- What changes are necessary to reduce client waiting time and increase the time spent with service providers?
- How can service delivery points provide privacy and confidentiality when space is restricted?
- *How do attitudes of nurses and doctors regarding their jobs affect the way they deliver services or counsel clients*?
- What is the appropriate pricing and fee-for-service structure for potential clients of a specific service delivery point?

* The questions in italics have been the subject of recent studies in Egypt, Morocco, and Syria under the Hewlett-supported research grants.

As the preceding box shows, there is a broad range of questions concerning policy, strategy, program implementation, and evaluation that decision-linked research can help to answer. These questions are often the starting point for bringing researchers and decision makers together in a process to ask more specific questions and find answers. By asking a broad range of questions, it is easier to identify all the people who need to be educated and informed about research results and who may be influential in helping to carry out actions based on the research results.

Overcoming the Obstacles to Using Research Effectively

There are three obstacles that researchers and managers encounter in attempting to use research to influence programmatic change: 1) researchers and decision makers usually do not share common interests; 2) the research methodology and the results are often not well understood by the decision makers; and 3) there is a lack of clarity as to how the results can be put into effective action. These obstacles are described in the following box.

Common Obstacles to Using Research Effectively

Researchers and decision makers often do not share common interests. There are many professional differences between researchers and decision makers that make mutual comprehension and close collaboration difficult. If the two groups do not understand one another's language and cannot continually communicate, the ability to use results will be greatly compromised. Their professional styles are often different and their interests are certainly different. The researcher is interested in the questions being asked, the methodology that is used to answer the question, and the answers. The decision maker may be more interested in who will be affected by the results, the political acceptability of the recommendations, and the costs of implementing them.

Research methodology and results are not easily understood by the decision makers. Research is intimidating. It can be too scientific for the average person to understand. Research reports may produce table after table of data that are difficult to follow and digest. Sometimes, the questions that the researcher addresses are not clear, or they are phrased in ways that the lay person cannot quite understand. Often the research issues themselves are complex, with layers of questions that seek to establish or ascertain a variety of different associations. Other times, the results are not clear or the numbers are hard to interpret. The lay person may not understand the meanings of statistical significance, and, in some instances, even researchers may misinterpret statistical significance or use research methodologies incorrectly, which can significantly undermine or call into question the validity of the research findings.

Researchers and decision makers do not know how to transform research results into action. The very questions formulated by the researcher may not be of interest to the decision maker at the community, district, or national level. Further, the answers themselves may not be directly related to the kinds of strategic or programmatic changes that may be necessary. Often it is hard to find clear connections between the results and recommendations, or to see how the recommendations can be implemented. There may also be larger policy and political implications of the results, requiring the consensus of many stakeholders before action can occur. If researchers do not understand the way important program decisions are made, then taking action on the basis of the research findings may be difficult, or indefinitely delayed.

The decision-linked research approach helps to overcome these obstacles by helping:

- researchers to incorporate the attitudes, perceptions, realities, and responsibilities of decision makers and program managers into their studies;

- decision makers to use research findings in a timely fashion and act more on the basis of solid evidence than on their own intuitions or biases.

How Decision-Linked Research Helps to Overcome Common Obstacles

Helps researchers and decision makers develop common interests. When decisions makers participate in the formulation of research questions, the likelihood increases that the findings will respond to their interests. In a decision-linked research environment, researchers and decision makers explore together key strategic and programmatic issues, determine priority problems, and identify areas where there is a lack of knowledge which would prevent informed decision making.

Helps decision makers understand the research methodology. When there is a continuous dialogue between researchers and decision makers, the latter are more likely to understand the types of decisions the findings can support, and the limitations of the new knowledge. Researchers and decision makers review research methods, including sampling, data collection techniques, and analysis techniques. They learn how the methodology suits the key questions and how it will help provide answers to the questions.

Helps both groups transform the results into action. Bringing decision makers into the process at the very beginning of the research initiative builds ownership of the results and commitment to taking action. The process allows researchers and decision makers to explore how research results can be integrated into the decision-making process and turned into actions that help to bring about real programmatic changes. Undertaking decision-linked research helps make the goals and process as clear as possible both on the research side and the action side.

Managing the Decision-Linked Research Initiative

For a decision-linked research initiative to be successful, it must be well managed. As a manager of the decision-linked research process, your role is multi-faceted and is critical in keeping the process going and making the partnership between the researchers and the advisory board function effectively.

To manage the process well, you will need to lead and monitor the process, have the authority to identify and contract researchers, establish advisory boards, fund dissemination plans, and follow up on the research recommendations. Other managers can play significant roles in the decision-linked research process by being part of the advisory board, supporting the implementation of the research activity, carrying out the dissemination plans, and conducting follow-up activities.

Managing the Players in Decision-Linked Research

Managing those involved in the decision-linked process can include negotiating contracts with researchers, developing agendas for meetings between the advisory board and the researchers, and advocating for and implementing dissemination plans. However, the manager's role mostly involves balancing the interests of the players who generally have different agendas and who have different roles in the research process. The players and their roles in the decision-linked research process are described below.

Researchers. Principal investigators who are responsible for implementing the research protocol. They can be health professionals, people from academic and private institutions, or staff from your organization with research and/or information management responsibilities. They should have prior experience or expertise in conducting research.

Decision makers. Persons with direct authority and responsibility for decisions about service delivery programs. Their decisions affect funding, personnel, and strategies. Decision makers can be officials in a program office, members of the government or private institutions, or members of parliament.

Stakeholders. Members of the larger community who could be affected by the research results and whose support and influence would be necessary to implement changes based on the research results. Stakeholders also include specific social or professional groups whose support of the research findings would influence decision makers.

Research advisory board. A group made up of either decision makers, users of the findings, or other stakeholders. The board works with the researchers on the design and implementation of the research activity and facilitates the process for transforming the results into action. Because this group includes a representative group of decision makers, it can significantly influence a wide range of decision makers at the programmatic level.

Facilitating effective communication between the researchers and advisory board members is one of the most important functions of the manager. Developing a firm partnership means helping both groups recognize and respect each others' interests, and encouraging them to think about the implications of the research in terms of programmatic change.

Implementing the Decision-Linked Research Process

The decision-linked research approach presented here consists of ten basic steps or techniques that are organized into three main areas:

- Creating a partnership between researchers and decision makers;
- Making the research methodology and findings understandable;
- Transforming the findings into action.

Decision-Linked Research in Ten Steps

Creating a Partnership between Researchers and Decision Makers

Step 1. Establish a research advisory board.

Step 2. Identify principal researchers.

Step 3. Select the appropriate research questions.

Making the Research Methodology and Findings Understandable

Step 4. Review previous research studies.

Step 5. Determine new data requirements for the research protocol.

Step 6. Implement the research protocol.

Step 7. Organize and interpret the findings.

Transforming the Findings into Action

Step 8. Identify options for taking action.

Step 9. Disseminate the findings and options for action.

Step 10. Assess the impact of the research findings on program performance.

Creating a Partnership between Researchers and Decision Makers

When researchers and decision makers share common interests, understand the purpose of the research, and are committed to using results to improve program performance, the chances for a successful research initiative are greatly increased. Finding this common ground, and developing mechanisms to promote a shared perspective during the course of the research, forms the basis for developing an effective partnership between the researchers and the users of the results. This partnership should be viewed as a long-term undertaking that extends from the design of the research activity to the generation of political and economic support to implement the actions suggested by the research findings.

Step 1: Establish a research advisory board

Establishing advisory boards for research projects is very common. What distinguishes the role of the advisory board in decision-linked research is that its role goes beyond giving advice about research. Its main role comes into play when it is time to educate the public and government officials, promote community action, change legislation, and raise funds. In decision-linked research, the advisory board needs to anticipate the major questions and conditions of research that will lead not only to a good report but also (and more importantly) be a guide to taking action in the real world. The board and researchers must see the research as a means for making critical changes. The manager's role is to make sure that prospective members of the advisory

board and researchers clearly understand this condition.

Another important function of the advisory board is to incorporate different perspectives into the research questions. Although it is not always possible to fill in all the gaps in knowledge with one research activity, opportunities to answer important questions from a broad base of perspectives are often missed because issues are defined from only one point of view. *For example, unmet need is usually assessed as a quantitative measure of clients who express interest in spacing and limiting births and who are currently using contraception. These measures are extremely important. However, the concept of unmet need can be expanded to include a program per-spective in which the unmet needs of a variety of different programs can also be described. Understand-ing these unmet needs at the program level will provide a more practical guide to managers and decision makers on bridging the gap between de-mand for contraception and the use of contraception.*

If you are a manager of a decision-linked research initiative, one of your main functions will be to help organize the advisory board. You will need to determine what kind of members can help the board fulfill their two important roles—working with the researchers to develop the research questions, and advocating for and implementing the findings. The list of potential members can include retired public officials, social scientists and demographers,

university and medical school staff, lawyers, journalists, and members of the media. Sometimes, there may be existing committees with a broad representation of influential persons or health professionals.

If there is strong interest in and commitment to the reproductive health program, the board should be composed of decision makers such as program directors, key health ministry or cabinet officials, legislators, and representatives from the executive office. If there is weak interest in and commitment to reproductive health, a more diverse group who can exercise influence on the decision makers may be more useful in the long run. The latter composition could include a cross-section of influential persons representing NGOs, educational institutions, women's and men's groups, advocacy groups, and service delivery organizations.

In seeking specific individuals, think about people who bring not only their own personal qualities as advisors, but who can also access networks within the larger community to spread the messages of the research findings and to build support for changes in policy, strategy, or programs. *For example, in form-ing an advisory board for a research project dealing with unmet need, it is important to consider people from different sectors of the population who may have insights into why current policy, strategy, and program practices fail to bridge the gap between demand and use of family planning services.*

Criteria for Choosing Advisory Board Members

In forming an advisory board, managers should use the following criteria to help choose the board members and select those who are:

- committed to reproductive health issues;
- influential in society or key organizations;
- available to follow up on research findings;
- known for their volunteer spirit.

It is also important to establish clear terms of reference for the advisory board (see box on next page). Since the members are volunteers, you should be prepared to support them by helping them organize themselves. You can help them nominate

and select a president and secretary to manage meetings and help them schedule the meetings. You can also work with the president to draw up meeting agendas and invite members and researchers to the meetings. You should consolidate, print, and

distribute minutes, and perform many other tasks that will facilitate the advisory board members' participation. You may also join the board yourself. As these coordinating tasks often incur some costs, you should try to include some funds for these activities in the research project budget.

Finally, an advisory board has limited tenure. After the research recommendations are imple-mented, or if the board proves to be ineffective in promoting the program, it needs to be disbanded. Of course, it can be reconstituted when another decision-linked research initiative arises, or a new board can be formed to bring in new ideas and fresh perspectives on the problems and questions that the new research activity will address.

Sample Terms of Reference for a Research Advisory Board

The following can be used as a guide for establishing the terms of reference for a research advisory board. The board members must agree to uphold these terms and values when they join the board. (Note: this example is drawn from the studies conducted on unmet need and therefore focuses some of the responsibilities on that specific research initiative.)

Collaborate with researchers to analyze major research issues. This responsibility involves brainstorming policy, strategic, and programmatic issues related to unmet need, and the gap between demand and use. The advisory board should help the researchers develop a programmatic definition of unmet need in addition to a demographic definition.

Design research activities. This responsibility involves working with the researchers to develop the research questions and give input on the proposed research methods. The advisory board may be able to provide support for researchers by interviewing adolescents or unmarried people about contraception and social and sexual behavior that may otherwise be taboo. Participating in research design activities should be considered part of the training for the board's major role, which is to "lead the charge" to generate action on research findings by people who can influence the process of change.

Represent the general interests of the community. The more the board members represent the community, the greater its potential to contribute to the research initiative. Community members can be especially helpful in raising issues about service delivery that might go unaddressed or unexplored if the client's perspective is not represented.

Examine preliminary results. The board should meet at key intervals in the research process to receive reports from the researchers about their progress, obstacles, and preliminary results. They should provide feedback, asking for clarification, brainstorming about the meaning and interpretation of the findings, and examining ways in which to make the results as accessible as possible to decision makers.

Develop plans for disseminating final results. The board should identify the key messages in the research findings and review their importance and pertinence for different decision makers. They should consider how best to reach these decision makers and share the messages.

Help decision makers use the results to improve program performance. The advisory board should address the practical implications of removing barriers to performance wherever barriers appear. They should examine barriers of all kinds and at all levels that discourage different groups in the population from consistently using services.

Step 2: Identify principal researchers

The other member of the decision-linked research partnership is the researcher. To make the partnership work, the researcher(s) must be willing to enter into the partnership. They must have the appropriate attitude as well as the skills to conduct the research and maintain the partnership over time. Like the board, they need to understand the nature of decision-linked research, be open to regular discussions about the research problems, methodology, data collection, analysis, and interpretation, and share the goal of making the research results as accessible and useful as possible to the decision makers.

Selecting the researchers is as important as selecting the board members. Clinicians, demographers, and epidemiologists generally come to mind when we think about research in health-related fields. You should also consider researchers from non-health-related fields, such as management, education, economics, political science, anthropology, sociology, and psychology, since many of the issues related to service quality, client needs, customer satisfaction, and program performance extend beyond the traditional health fields.

In addressing issues of unmet need, researchers should have experience in using qualitative as well as quantitative approaches, in order to understand why demand for contraceptives may not always lead to use. They need to know when it is appropriate to use large- or small-scale surveys, as well as rapid assessments, to collect population-based data, and when it is appropriate to use qualitative methods such as group interviews, in-depth interviews, and focus groups. In conducting research on complicated issues such as unmet need, several different, but complementary, research methods may be required.

In many countries, there is a wide range of institutions that can be sources of excellent researchers. The institutions range from universities to specialized institutes (such as management and financial institutes), NGOs, public health associations, and private consulting companies. Some service delivery organizations also conduct research as part of their programs. However, unless their personnel have appropriate experience with a wide range of methods, and have mechanisms for supervision and quality control, it may be more useful to find researchers from organizations with special mandates for conducting research.

As with the research advisory board, it is important to establish clear terms of reference for the researchers that will guide them in fulfilling their responsibilities in the decision-linked research process. The terms of reference will indicate expectations about the way the researchers will work and interact with the advisory board, help create an atmosphere that is conducive to developing good relations from the start, and help avoid problems later as research issues become highly technical.

Sample Terms of Reference for Researchers

Having clear terms of reference can make the difference between collaboration and conflict in the relationship between the advisory board and researchers. The terms of reference should stress the common incentives and motivations of both the researchers and the advisory board as well as support the decision-linked research process. The following sample terms of reference for researchers cover the principal responsibilities of the researchers and help to support the ongoing partnership between the advisory board and the researchers.

Participate in advisory board meetings. Researchers should use these meetings to clarify issues and questions related to the research subject, and decide together with the group which program performance problems the research would address.

Prepare and submit a research protocol. The research protocol should be submitted to the advisory board and describe the background of the problem, objectives, the research design, data collection and analysis methods, work plan, and budget.

Conduct the research. Researchers will carry out the research protocols which have been developed and agreed upon with the advisory board, including supervision of research workers.

Conduct data processing activities. These activities include overseeing the quality of data input.

Meet with the board periodically. These periodic meetings should be used to to discuss the implementation of the research protocol, preliminary findings, and dissemination plans, including publication in national and international professional journals.

Prepare and submit a draft final report. The draft final report should be reviewed by the advisory board and other peers, and revised as needed. The report should include decision options about using the findings to improve program performance.

Develop a detailed dissemination plan. This should be developed in collaboration with the board members, and the researchers should participate in the dissemination activities.

Translate findings into practical actions. Work with decision makers and other stakeholders to use the findings to make changes that will improve program performance.

Step 3: Select the appropriate research questions

The third step in the decision-linked research process is to identify the appropriate research questions whose answers are of major interest to decision makers. To do this, the researchers (in consultation with the board) should consider the following factors:
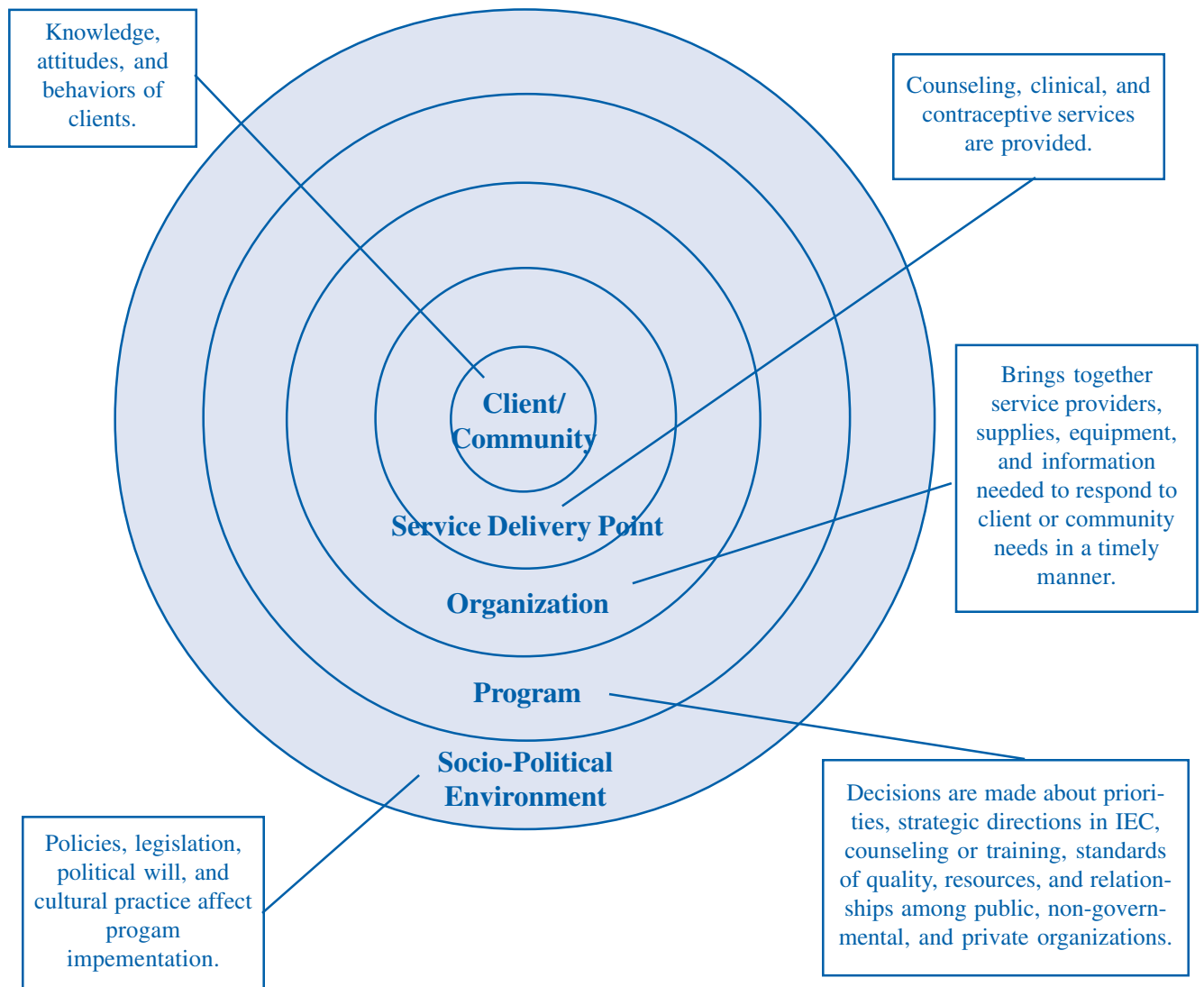
- Are decision makers interested in knowing what, why, or how?
- Are their primary concerns related to policy, strategy, or operations?
- Will the research results mainly be used by program managers, elected officials, organizations, service providers, or community members?
- Are they seeking answers about short-term financial implications, immediate social consequences, or long-term impact on development in different sectors?
- Do they need the research to carry out advocacy activities, make decisions about allocating budgets, or change the program's service delivery strategies?

The advisory board's role here is to help the researchers refine the purpose of the research and ask the questions that best suit the interests, attitudes, and roles of the decision makers who will use the results. In the example of unmet need, understanding the reasons for and seeking solutions to the problem will require that researchers investigate many different aspects of the reproductive health system.

A useful way to think about the influences of the health system on the problem you are addressing (in this case, unmet need) is to view the health system as a set of five concentric circles, as depicted below. Each circle represents a level of the system. Each level influences the performance of the others, with the ultimate impact being on the behavior of the client and his/her use of contraception. You can use this model to examine all aspects of a reproductive health program to determine the factors at each level that contribute to the magnitude of unmet need.

Contributions to Meeting Unmet Need by Level in the Reproductive Health System

Knowledge, attitudes, and behaviors of clients.

Counseling, clinical, and contraceptive services are provided.

Client/ Community

Service Delivery Point

Brings together service providers, supplies, equipment, and information needed to respond to client or community needs in a timely manner.

Organization

Program

Socio-Political Environment

Policies, legislation, political will, and cultural practice affect progam impementation.

Decisions are made about priorities, strategic directions in IEC, counseling or training, standards of quality, resources, and relationships among public, non-governmental, and private organizations.

Using this simple but comprehensive model of the reproductive health system, researchers and advisory board members can expand their inquiry into the many factors that influence unmet need by combining the five levels of the system with key factors that influence contraceptive use: access, demand, policy incentives, management, and culture. By developing a chart, as shown on the next page, the researchers and advisory board can organize their review of major issues and questions according to the level of the health system and the major factors that influence unmet need. This framework helps them "map" all the key questions that the researchers might investigate and link them to the different levels of the reproductive health system. It also helps the researchers link the potential findings to the different decision makers and stakeholders who are likely to be able to implement the findings and changes at the different levels.

Sample Framework for Identifying Research Questions on Unmet Need

Levels of the Reproductive Health System	Program Factors Influencing Unmet Need				
	Access (use, travel time, hours of operation, services offered)	**Demand** (literacy, education, counseling, promotion through mass and printed media)	**Policy Incentives** (laws, regulations, professional conduct, political will, commitment	**Management** (contraceptive supply logistics, information, maintenance, infrastructure, staff training and supervision)	**Culture** (tradition, taboos, religious prohibition, sexual practice, family structure)
Client/ Community	Why do clients bypass the nearest service delivery point?	Do married women of reproductive age (MWRA) have enough and correct information about contraceptives?	Are service delivery points suitable for all population groups, especially adolescents?	Why can't clients get the kinds of contraceptives they prefer?	What impediments do religion and male attitudes play in women's contraceptive behavior?
Service Delivery Point	Are clinic services in urban and rural areas available when women are free to use them?	How do providers (doctors and nurses) view their clinical and counseling tasks?	Are service providers competent to meet the needs of non-traditional clients such as adolescents?	What skills do providers have in addressing issues of client satisfaction?	Are there specific gender issues that affect use of contraceptive services?
Organization	Are service delivery organizations addressing needs equally in urban and rural areas?	Are service delivery organizations adequately marketing the availability of services?	Are service delivery organizations competing for similar populations?	What are organizations doing to improve efficiency in service delivery?	What are the attitudes of the service delivery organizations to their clients?
Program	Is the national program equitably addressing rural and urban needs?	To improve quality, do training programs focus enough attention on counseling and provider/ client relations?	Are the strategies for contraceptive service delivery and available resources compatible with the program's goals?	Has the program been able to directly address clients' contraceptive preferences?	What socio-political influences affect daily decisions made by program managers?
Socio-Political Environment	Is there political will to create service delivery points for currently underserved populations?	Are the messages about family planning and reproductive health reaching all potential clients?	Are there obstacles to implementing more progressive reproductive health policies?	Does the political climate or health sector reform initiatives emphasize management improvement?	Are the values of community-level institutions compatible with the goals of the reproductive health program?

Note: This example was adapted from a study of unmet need conducted by IPPF's Arab World Office in Egypt, Morocco, and Syria.

Once the main research questions have been selected, the researchers will have to develop their protocol by determining:

- what data to collect;
- how to collect them;
- how to analyze them;
- how to present the findings.

There are many excellent publications about developing research protocols and carrying out the research process. The next steps call attention to ways you can link the development and implementation of research protocols to the decision-linked research process in order to bring about greater understanding of how the research will be conducted and what actions will need to be taken based on the results.

Making the Research Methodology and Findings Understandable

A significant reason that many research findings do not result in programmatic change is that the findings are often not well understood. Research reports often end up in desk drawers or on a shelf because few people outside the limited community of academic researchers understand the results and how they were obtained. To make the research results widely accessible to all potential stakeholders and users, it is important to make sure that the research methodology is clearly understood. This can be done by following a process that goes from examining what is already known regarding answers to the basic research questions, to determining what additional information needs to be obtained and what procedures will be used to obtain this information.

Step 4: Review previous research studies

Researchers often refer to existing studies when developing research protocols. Because research can be an expensive undertaking, the researchers should try to use these existing studies as much as possible to answer the research questions. The advisory board should be encouraged to review the previous studies and their results, identify the results that they find most enlightening and would like to see more widely disseminated, and identify subjects about which they would like further information. Involving the board

in these activities at this early stage allows them to help design the protocol and launch the research. It is also an opportunity for the researchers to start a dialogue with the members about the protocols that they intend to use.

By analyzing existing studies in collaboration with the advisory board, researchers can obtain insights into the difficulties that local decision makers have in understanding research methods and results. The advisory board can learn how best to explain what previous studies have shown, why new studies are important, and what kinds of new data are required in order to better understand the causes of the problem being studied.

In addition to learning about what has already been known from existing studies, the researchers can also gather new information by carrying out a secondary analysis on the data that were used in the existing studies. Secondary analysis includes a variety of different techniques such as disaggregating general data by age, economic status, educational level, geographic locality, and any other specific variables that may be of interest.

Secondary analysis can also be done by analyzing existing data from the studies in new ways. *For example, in demographic and health surveys, there are tables that show levels of unmet need for contraception. This kind of table indicates what percentage of the population of women sampled are not using contraception despite interest in using contraception. The table disaggregates the information by age, education, and geographical variables.* For managers to be able to take action, it is important to also know why the unmet need exists. Often the answers can be extracted by re-examining a table describing the degree of unmet need in light of other information presented elsewhere in the reports (such as information on access to family planning services, various determinants of fertility, and access to media and information).

To conduct secondary analyses, the researchers will need access to the protocols that were used to collect the data, and the methods of analysis. It is also helpful if they have access to computers and the software programs were used to carry out the primary analysis.

Step 5: Determine new data requirements for the research protocol

In this step, the researchers and the board have an opportunity to review the protocols and determine where additional qualitative or quantitative data are needed. In many cases, as the research focuses on each level of the reproductive health system (provider, organization, program, and environment), more qualitative data will be required to fully answer the questions. The following table shows how the researchers and the advisory board can identify new data requirements for their research protocol. This example uses the questions relating to unmet need at the program level (from the chart on page 14) and shows what data are already available, what new data are needed, the sources of the new data, and the proposed methods for collecting the data.

Sample Framework for Identifying New Data Needs

Research Questions for Program Level	Available Data	New Data Needs	Data Sources	Data Collection Methods
Access: Is the national program equitably addressing rural and urban needs?	Factors facilitating and impeding the implementation of national reproductive health policy	Success of implementation in rural and urban districts	Local program managers from public and NGO sector Local political leaders and ministry officials	Structured interviews and group discussions in urban and rural districts selected from lists of high- and low- performing districts
Demand: To improve quality, do training programs focus enough attention on counseling and provider/client relations?	Percentage of time service providers spend in counseling Content of training curricula for family planning providers	Provider performance in counseling Percentage of time allocated to counseling as part of service delivery	Direct observations of providers in service delivery settings	Rapid survey of 10% sample of service delivery points, using a checklist protocol on counseling procedures
Policy Incentives: Are the strategies for contraceptive service delivery and available resources compatible with the program's goals?	Descriptive statements of program strategies and program budgets	Annual allocation of and use of resources over the past five years.	Financial reports on resource utilization from public sector and key NGOs	Disaggregation of total funding by service delivery strategy and by urban and rural districts
Management: Has the program been able to directly address clients' contraceptive preferences?	Contraceptive prevalence data by contraceptive, and reasons for continuing and discontinuing contraceptive use	Client satisfaction with contraceptive choice, counseling, and distribution	Clients seeking contraceptive services in the past six months	Rapid population-based survey in high- and low-performing districts on client satisfaction with contraceptive choice
Culture: What socio-political influences affect daily decisions made by program managers?	Policies of anti-and pro-family planning groups	Attitudes and initiatives of religious and secular leaders on reproductive health	National and district religious and secular leaders	Structured interviews and group discussions with religious and secular leaders

By identifying the data that are already available, the researchers and the advisory board can determine if the existing data are sufficient to answer the questions. If they need new data, they should jointly decide on what supplementary data will be most important. The researchers should then suggest how these data can be collected and make sure that the advisory board members fully understand the different aspects of the research methodology that they are proposing. By engaging in these discussions with the advisory board, the researchers set the stage for getting answers to the questions that are immediately understandable, relevant, and useful to decision makers. It also sets the stage for effectively implementing the findings to improve program performance.

Step 6: Implement the research protocol

As a manager of the research initiative, you need to work with the researchers and advisory board to complete the protocol for carrying out the research. In addition to the research design, the protocol should include time and resources for finalizing the research budget, making and settling contractual arrangements, training data collectors, tabulating and analyzing data, writing the report, and preparing the dissemination plans.

In keeping with the spirit of decision-linked research, the researchers and advisory board members should maintain contact periodically to discuss the implementation of the research, identify problems, and identify where the board can facilitate the field research. If changes in board membership occur, it will be important for existing board members and researchers to orient new members as they join.

As preliminary results come in, researchers and board members should meet to become familiar with the data and findings. This is an opportunity, as mentioned previously, to see what data are most striking and most relevant to decision makers. Such periodic discussions also pave the way for interpreting the findings in light of the interests and priorities of decision makers.

Step 7: Organize and interpret the findings

After the data are collected, the researchers analyze them according to the established protocol. Analyzing quantitative data may include calculating averages, presenting frequency tables, carrying out cross tabulations, and testing for statistical significance. Analyzing qualitative data can range from simply recording responses, to a more complex categorization of responses according to different characteristics of the groups interviewed.

The findings should be organized in a chart in the same way the original set of questions were organized—by level in the reproductive health system and by factors that influence the problem. In this way, the questions and answers can be viewed side by side in identical frameworks, which allows you to have a comprehensive overview of the causes of unmet need in direct relation to the research questions. The advisory board and researchers then work together to interpret the findings. The following questions will help in interpreting the findings:

- What difference will it make on the magnitude of unmet need if the program brought about changes with respect to specific findings?
- Will efforts to address a particular finding create opportunities to influence findings at other levels of the reproductive health system or in other key program areas?
- What combination of findings need to be addressed concurrently to have a sustainable impact on reducing unmet need?

Sample Framework for Organizing Research Results on Unmet Need

Levels of the Reproductive Health System	Program Factors Influencing Unmet Need				
	Access	Demand	Policy Incentives	Management	Culture
Client/ Community	Clients bypass nearest service delivery point because physicians are not available.	Married women of reproductive age (MWRA) do not have consistent, detailed information on contraceptives.	There are no specific programs for adolescents, whose needs for reproductive health services are growing.	Despite preferences for longer-term methods, most organizations only offer short-term methods.	Religion and male attitudes play a minor role in women's attitudes and contraceptive behavior.
Service Delivery Point	In rural areas, clinic operating hours do not match women's availability.	Providers (doctors and nurses) do not view counseling as an essential part of their jobs.	Service providers have little experience in dealing with adolescents as clients.	Providers have little training on how to improve quality or meet client needs.	Women prefer female providers, especially in rural areas.
Organization	Service delivery organizations focus mainly on urban areas.	Most organizations use media for IEC that do not reach the majority of the population.	Service delivery organizations have few mechanisms for coordinating services, and so tend to interpret policies and regulations differently concerning service delivery.	Organizations have few plans to improve basic systems such as information, logistics, and maintenance.	Clients' rights are a major issue which most organizations do not respect.
Program	There are plans to focus on rural areas, but the implementation of those plans is lagging.	Training programs to improve quality focus more on clinic methods than on counseling and provider/client relations.	Although program goals include men, services are designed almost exclusively for MWRAs of high parity.	National program distributes only donor-supplied contraceptives, ignoring client preferences.	Religion's main influence is on the provision of long-term methods.
Socio-Political Environment	There is not much support for rapid extension of services in rural areas.	Programs are being designed for a literate minority rather than the semi-literate majority of the population.	Although reproductive health policies are progressive, conservative leaders influence the decision-making process.	Although many reform initiatives include management, they do not establish priorities or allocate resources for management improvements.	Community-level institutions tend to be pro-natalist, thus operating against national family planning policies.

Note: The findings in this table are adapted from the IPPF/AWRO studies conducted in Egypt, Morocco, and Syria.

Transforming the Findings into Action

Once the data have been interpreted and mapped on a chart, the decision-linked research process enters its final phase: transforming the findings into action. This phase has three steps: identifying the options for programmatic action based on the findings, disseminating the results of the research to different stakeholders with options for action, and assessing the impact of research findings on program performance.

> **Step 8: Identify options for taking action**

Once the results have been analyzed and the findings interpreted, the researchers and advisory board can discuss the responses to the findings. By working together, the board and the researchers can form a strong constituency to promote the use of research results for programmatic decision making.

In some cases, appropriate action-related responses will be obvious. At other times, the recommendations will be much more complicated, because a variety of different possible actions could be taken. When there are many potential responses to the research findings (as there are likely to be in a comprehensive study such as one for unmet need), it will be important to determine which are most likely to be effective. To help determine the options for taking action, the advisory board and researchers should consider the following questions:

- If it is a problem that can be solved by adding additional resources, are resources available? If so, then this is a reasonable option.
- If it is a problem that can be solved by introducing a new service, can the new service be introduced in a timely and affordable way? If so, then this is a reasonable option.
- If it is a problem that can be solved by modifying existing strategies, can these strategies be modified without compromising other strategies? If so, then this is a reasonable option.

- If it is a problem that can be solved by introducing new strategies, are there available resources to launch a new strategic approach? If so, then this is a reasonable option.

The researchers and advisory board then need to prioritize the options by systematically considering the implications and potential impact of each option based on a set of criteria. These criteria could include questions such as:

- Does it support policies?
- Does it increase impact of the program?
- Can it be accomplished in a timely manner?
- Are the costs acceptable?
- Are the additional training requirements feasible?
- Can it be done without making major changes to the management systems?
- Is it politically and culturally acceptable?

The results of this prioritization exercise can be summarized in a table such as the one shown on the following page, which states the principle findings, options for action, and the appropriate level that is responsible for implementing the findings.

Once the options for taking action have been prioritized, the board, researchers, and the manager of the decision-linked research initiative can examine these options from the perspective of decision makers, and consider the kinds of resources, collaboration, and political commitment that will be needed to implement the changes.

> **Step 9: Disseminate the findings and options for action**

Once they have prioritized the list of decision options and determined which levels are most responsible for implementing the different findings, the board and researchers can begin to develop the dissemination plan.

Summary of Findings and Decision Options

Key Factors	Principal Findings	Decision Options	Level Responsible for Implementation
Access	Clients bypass the nearest service delivery point because physicians are not available, causing drop-outs because of the added travel burden.	Develop a rotation system for physicians for local clinics with potentially large clientele so that physicians are available at all times.	Service Delivery Point
		Use mass media to make non-medical personnel more acceptable to clients.	Program
		Upgrade training of nurses and provide public certification of local clinics so clients have confidence in their skills.	Service Delivery Point
Demand	Neither nurses nor doctors view their roles as counselors and educators as integral to their jobs.	Include client counseling and education in medical and nursing school curricula.	Service Delivery Point, Program, Organization
		Maintain rigorous monitoring of client counseling and increase supervision of counseling performance.	Service Delivery Point and Organization
Policy Incentives	Public-sector and NGOs services interpret the national family planning policy differently, affecting their delivery systems.	Review policies for clarity and feasibility of application to different sectoral environments.	Program and Environment
		Review laws and regulations related to policies to identify inconsistencies and change as appropriate.	Environment
Management	The national program mainly distributes contraceptives that the donor community makes available, thus missing many opportunities for increasing prevalence because client preferences are ignored.	Introduce social marketing programs to broaden the range of contraceptives to meet preferences.	Program and Organization
		Introduce budget line items for direct purchase of contraceptives not supplied by donors.	Program and Environment
Culture	Community-level institutions tend to be pro-natalist, thus operating against national family planning policies.	Intensify education campaigns at the community level through all community institutions.	Client/Community and Program
		Seek the support of appropriate groups and institutions to form positive attitudes towards reproductive health in the community.	Client/Community and Program

The purpose of the dissemination plan is to educate decision makers, develop support for changes, and change or create new attitudes about what needs to be done to address the research problem. Therefore, it is important to identify the various target audiences for the dissemination plan. The researchers and advisory board members can do this by referring to the five levels of the reproductive health care system and determining, for each level, which key decision makers and constituencies need to be educated, and which ones can help to bring about the needed changes at different levels and in different program areas.

At this point, advocacy becomes the most important role for the advisory board. Everything that has gone before could be considered training, so that the board can take an effective advocacy role in the rest of the decision-linked research process.

Disseminating research results should go beyond distributing reports, publishing articles in professional journals, and making presentations at conferences. These mechanisms are important, but they seldom reach the people who need to take action on the findings. For research results to have the intended impact on policies, strategies, and programmatic practices, they need to be assimilated by both the general public and specific groups who can act as advocates and supporters for the necessary changes. These groups can include parliamentarians, lawyers, women's and men's groups, other civil society organizations, international organizations, and donors. When the findings are explained to them, they can become effective advocates for change.

The dissemination plan should cover national and local audiences, and if possible, include international audiences, as international constituencies can often help bring about change. The more people who are aware of the results and proposed actions, the more the implications will be discussed, generating greater interest in the practical application of results. The table below presents an illustrative dissemination plan.

Sample Plan for Disseminating Research Findings		
Level	**Target Audience**	**Dissemination Activities**
National	National leaders Policy makers in health and other sectors Program managers National NGOs Business leaders Donors Universities Journalists and members of the media Special-interest and advocacy groups	National seminars or symposia for health, legal, and academic communities Ad hoc meetings with top leaders Presentations to parliamentary committees Presentations to national planning ministries or councils Workshops with NGOS, private organizations and professional organizations Special programs on radio and television Press releases
Local	District and local health officials Service delivery managers Health Local development forums Local NGOs and other voluntary groups Training institutions Donors	Distribution of summary reports and pamphlets Local media presentations Presentations by researchers and board members Local conferences to review implications of findings Advocacy by advisory board members
International	Multinational organizations Bilateral donor organizations International conferences	Distribution of short summary reports and pamphlets Presentations by researchers and board members Advocacy visits

As the preceding sample dissemination plan shows, in addition to the more traditional ways to disseminate research findings, the plan should include special presentations to specific interest groups, seminars and/or workshops for other sectors and ministries, special summary reports and pamphlets, interviews broadcast on various mass media, and articles in national, local, and special-audience newspapers.

To make the dissemination process as effective as possible, it should be followed by specific recommendations for action. Here, your role as a manager (along with other program managers) becomes extremely important. Senior program managers and local service delivery managers at the district and service delivery point form the critical link between advocating for change, and making the changes happen. Thus, all types of managers should be included as key audiences in the dissemination plan. They should also be actively brought into the dissemination process as soon as research results are ready, and encouraged to discuss the implications of the findings on planning, organizational development, management systems, and human resources. A successful dissemination plan will mobilize interest in taking action on the findings.

Step 10: Assess the impact of the research findings on program performance

The final step in the process is to assess the impact of the research findings on policy, strategies, and program implementation and performance. In the case of unmet need, the basis for the evaluation would be the areas selected for action (see the "Decision Options" chart on page 21). For examples in relation to unmet need, you might ask:

- Were there changes in coverage, improvements in health indicators, or other performance indicators, such as access and demand?

- Were there discernable changes in strategies for reaching underserved groups, such as adolescents, low-parity women, or men?

- Were there changes in the organization of services leading to better quality and increased efficiency in providing contraceptive services?

- Were there changes in policy with regard to the allocation of resources for purchasing contraceptives?

- Were there changes in staff motivation, technical competence, and management systems?

It is also useful to assess the decision-linked research process itself, to determine if it worked as planned, whether or not it made a positive difference, whether it was worth the cost, whether it could be made more efficient, and whether it could it serve other needs.

In some cases, the decision-linked research process may not work because of the composition of the board, the chemistry between the researchers and the board, or because the process was not well facilitated by the manager. In these instances, even innovative research that makes new discoveries may not produce the desired impact. Conversely, when the process functions well, research that may only confirm what is already known may have a very substantial impact because its leads to greater understanding and commitment to making needed changes. With decision-linked research, it will always be necessary to strike the right balance between creating new knowledge, and creating the right conditions for applying the knowledge gained.

The following box presents the kinds of questions you should ask and answer in order to evaluate the decision-linked process.

Making Decision-Linked Research an Integral Part of Managing Health Services

Research should be seen as more than a supplement to routine information systems. The role of management assessments, service delivery situation analyses, epidemiological and demographic surveys, sociological studies, economic analyses, and a host of other types of studies is quite different from that of routine information systems. Health information systems exist to monitor services along very strict parameters and to identify problems. The purpose of research is to expand vision, challenge conventional wisdom, overcome complacency, and introduce innovation. Decision-linked research can help managers to better understand the problems affecting their programs' performance as well as set the stage for finding and implementing effective solutions.

A well-managed decision-linked research process will strengthen the manager's ability to mobilize support from a wide range of decision makers to make changes that greatly improve program performance. Using research to better understand the complex environment in which family planning and reproductive health programs operate and being able to take action on the basis of new understandings will keep programs fresh and responsive to clients' ever-changing needs. Developing the capacity to manage research to achieve these ends will place managers in the forefront of leadership to guarantee services to all people who need and want them.

Reviewers' Corner

*A forum for discussing additional applications
of the concepts and techniques presented in this issue*

On the advantages of using the decision-linked research approach. . . *One reviewer reflects*, "This is something innovative. Normally an advisory board is not established, and not having such a board creates the first barrier to implementing changes once the research results are available."

Other reviewers responded that the decision-linked research approach would help address problems they had encountered in research activities because:

- "By involving the major stakeholders from the start, the results would not be denied by any major group or become points of conflict among those groups."

- "The process helps to build a common language and create understandable formats for presenting the results in a summarized way, and a way in which managers can then use the information to improve programs. . .this is new and different, and brings to the field an important managerial tool that usually is lacking."

- "The concept of creating a team (representing many different types of professionals) is something new, and, from my point of view, is the key element for implementing the results of the research so that they become part of the programmatic activities and not part of the library."

On determining new data requirements. . . *One reviewer warns*, "This step is crucial. Normally organizations and managers ask for lots of data that are not used when it comes to making decisions. The costs of getting more data can be very high, so it is important to determine which are accurate and useful."

On mapping out the research questions, results, decision options. . . *One reviewer suggests*, "I consider the construction of the map to analyze the data and to identify options for taking action to be a key piece in the decision-linked research process."

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Checklist for Turning Research into Action: The Decision-Linked Research Approach

Create a Partnership Between Researchers and Stakeholders

☐ Determine the criteria for and select members to serve on a research advisory board.

☐ Develop terms of reference for the advisory board.

☐ Identify principal researchers.

☐ Select appropriate research questions.

Make the Research Methodology and Findings Understandable

☐ Review previous research studies and perform secondary analyses on these studies, if appropriate.

☐ Determine new data requirements for the research protocol by reviewing for each question what data are already available, what additional data are needed, as well as the sources of those new data and the proposed methods for collecting them.

☐ Implement the research protocol.

☐ Organize and interpret the findings based on the original set of research questions.

Transform the Findings into Action

☐ Identify and prioritize the options for taking action.

☐ Summarize the options for taking action according to programmatic factors, showing the principal findings of the research, the decision options, and the level of the reproductive health system that would be responsible for implementing each one.

☐ Disseminate findings and options for action.

☐ Assess the impact of the research findings on program performance.

☐ Assess the decision-linked research process—how well it worked and how well it was managed.

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