

**TRANSLATING RESEARCH INTO PRACTICE:
LESSONS FROM THE IDSRN PROGRAM**

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TRANSLATING RESEARCH INTO PRACTICE: LESSONS FROM THE IDSRN PROGRAM

Background. To better understand techniques and challenges in moving research knowledge to practice, we evaluated the first four years experience of the Agency for Healthcare Research and Quality's (AHRQ) Integrated Delivery Systems Research Network (IDSRN) program, an early attempt by AHRQ to foster public-private collaboration between health services researchers and complex delivery systems.

Methods. We reviewed program documents, analyzed the projects funded through the program in its first four years, conducted in-person and telephone interviews with AHRQ staff and with each of the nine IDSRN partner organizations and their collaborators, and developed case studies of four IDSRN projects judged promising in supporting translation.

Results. Participants perceived that the IDSRN's structure was valuable in creating closer ties between researchers and those involved in operational delivery of large health systems. A variety of organizational models were used to support such ties. Projects funded by the IDSRN varied substantially in the way research related to practice and had mixed results in terms of supporting operational use of research findings. Projects viewed as most successful in this area were responsive to user needs, benefited by ongoing support over multiple projects, and developed applied products that helped users see their operational relevance. Experience also illustrates the many competing demands on potential users of research limit their capacity to implement change that may be associated with research findings. Successful translation is resource intensive and participants had different views on where priorities should lie.

Conclusions. Forging stronger partnerships between researchers and operational delivery systems, as IDSRN seeks, has potential to support operational applications but these benefits could be enhanced by more clarity and focus in program objectives. Because resources are scarce and competing needs exist, trade-offs are inevitable. The health services research community will be better positioned to consider such trade-offs and set priorities if there is more dialogue within it, and with users, to identify areas and approaches where such partnerships may have the most promise. Though it has unique features, the IDSRN experience is relevant to translation in diverse settings.

BACKGROUND

Relevance of Interest in Translating Research to Practice

Applied research aims to provide answers to “real world” questions. Whether that research actually gets used in the real world and is useful in encouraging innovation and change, however, has typically not been a major focus of attention in the research community. This situation is now beginning to change. In the United States, the Agency for Healthcare Research and Quality (AHRQ)—which is a major supporter of health services research—has redefined its mission to involve both the production *and use* of health services research “to improve the quality, safety, efficacy, and effectiveness of health care for all Americans” with research findings that are “used by health care decision-makers, including policymakers, private sector leaders, providers, clinicians, and patients/consumers” (Clancy 2004). In Canada, research organizations are studying how to transfer knowledge to decision makers (Lavis et al. 2003) and are seeking to listen more to potential users of research in establishing priorities for health services research studies (Lomas et al. 2003). In England, the government is funding researchers to synthesize work across multiple disciplines to better support the use of that research in modernizing its National Health Service (Greenhalgh et al. 2004). Such initiatives draw in different ways upon a variety of perspectives on how organizational change is promoted and integrated into health care (Berwick 2003, Fitzgerald et al 2000; Hage 1999; Strang and Soule 1998; Wejnert 2002).

While it is beyond the scope of this paper to review the history and content of programs established in response to these interests, it is important to note that an increasingly diverse array of programs exist to support interests in translation as reflected in the cross-national initiatives referenced above. In the United States, which we are most familiar with, programs like Translating Research into Practice (TRIP), sponsored by AHRQ, involved evaluations of diverse implementation strategies in converting clinical research findings in practice to identify ones that

were sustainable and reproducible (AHRQ 2001). These build on what some have termed “translational research” designed to move bench science into practice. Other programs, particularly more recently, go beyond *researching implementation* to structure support for ongoing partnerships between researchers and diverse users of research in a variety of areas. Often the focus is on moving beyond specific systems to encourage more broad-based adoption that is scalable and supports demand-driven research that is responsive to the way users perceive their needs. Within AHRQ, examples of such programs include the Primary Care Based Research Network, Integrated Delivery Systems Research Network (IDSRN), Partnerships for Quality (PFQ), the Partners in Prevention Program, and the Centers for Research and Education on Therapeutics, among others. Often programs aim to “shake up” current ways in which research is conceived and their form may be ambiguous—critical outcomes may be defined in vague terms and well-defined program logic models may not be articulated in an effort to provide flexibility for innovation. Such characteristics complicate traditional evaluation, yet some form of evaluation of such efforts remains essential to understanding what can be learned from current investments so that future efforts may be refined and more clearly articulated.

This paper aims to contribute to knowledge on the general topic of translating research to practice, by examining the experience of one initiative that is so focused—AHRQ’s Integrated Delivery Systems Research Network (IDSRN). As described in more detail later, IDSRN encourages formal partnerships between organized delivery systems and researchers that support work on operationally relevant studies or do other work useful in generating results that operational systems can and do use to improve their care and systems. We were asked by AHRQ to assess the IDSRN several years into its operations to assess its success in providing an infrastructure for translating research into practice and provide recommendations on potential program changes to better achieve the program’s translation goals (Gold et al 2004). While

aspects of the program may be unique, its goals are general ones that are relevant in a broad variety of settings and its structure involves generic features and approaches that should be of general interest.

In this article, we describe the IDSRN program and the methods we used to study it, followed by the key evaluation findings and our discussion of the lessons and issues emerging from that experience, which are more broadly relevant to a research audience interested in the challenges of adapting research into practical applications.

Program Background

IDSRN was developed by AHRQ in 1999 to foster public-private collaboration in health services research and operations. The initial impetus was to make data from private sector organizations involved in the financing and delivery of care more accessible to researchers by developing partnerships between researchers and those in operational delivery systems (e.g., health plans, medical systems). Very soon after its start, however, AHRQ's interests evolved and the agency sought to use the IDSRN partnership to develop ways of generating research findings and tools that would be applied in real world settings. IDSRN and its affiliated partners became a "learning laboratory" to conduct different types of projects, often identifying topics on an ad-hoc or opportunistic basis in response to emerging interests (within AHRQ or externally) or funding opportunities. This diversity and diffuse program definition is central to the IDSRN.

In March 2000, AHRQ issued a request for proposals (RFP) soliciting teams of partners and associated collaborators to participate in the IDSRN. Teams were to marry research to practice by having researchers embedded in or collaborating with operational managed care plans, hospital-based integrated delivery systems, large multi-specialty groups, or safety net providers. In September 2000, AHRQ made awards to nine such consortia (see Table 1). Five of the nine were led by organizations with a direct connection to insurance or health services delivery

systems, some with affiliated outside research partners. The other four teams were based outside of the delivery system in universities or research firms whose organizations' primary mission did not involve health care delivery though they were affiliated with such entities.

[insert Table 1 here]

Most of research conducted under the IDSRN is through individual projects awarded on a competitive basis. However, IDSRN also brings teams together for an annual meeting and produces a newsletter to share insights and promote discussion. Funded projects vary as to the specificity of required work that AHRQ gives applicants; in many cases, teams are allowed to structure work on a specific topic in ways that build on the strengths of their systems. AHRQ engages in some dialogue with the teams to gather ideas for topics, although the process is not very structured. Projects also are solicited on topics that arise across AHRQ, or more broadly within the U.S. Department of Health and Human Services (HHS) (e.g., the interest in bioterrorism or racial and ethnic disparities).

During the period FY 2000-2003 (the period of our analysis), AHRQ issued \$14.2 million through 58 separate IDSRN awards that were funded both through core AHRQ funds and through more dedicated sources (particularly in the areas of patient safety and bioterrorism). Projects were expected to produce relatively rapid results, with most contracts spanning 12 to 18 months at most. Awards typically were \$300,000 or less.

The IDSRN projects were diverse and spanned almost all of the areas of interest within AHRQ. Most awards were in five broad areas: quality improvement and patient safety; system capacity and emergency preparedness; cost, organization, and socioeconomics; health information technology; and data development. (Work in emergency preparedness had not been

anticipated when the IDSRN was formed, but its link with operational entities made the funding vehicle appealing to staff at HHS working on this issue after the events of September 11, 2001.)

METHODS

We examined the first four years of the IDSRN over a 12-month period, starting in October 2003. For our evaluation of the IDSRN, we reviewed relevant documents (including AHRQ documents about the program overall, and documents related to individual task orders including proposals and final reports); analyzed characteristics of funded projects; and conducted semi-structured interviews with AHRQ staff (26 total) as well as those involved in each of the nine funded IDSRN partner teams and their associated collaborators (65 total). Because the program was broad in scope with substantial diversity across projects, we found it valuable to categorize projects into diverse approaches to work, as well as subject matter. We also documented the decision “rules” we used to convert interview data and other qualitative information into categorical data for purposes of analysis.

Because program resources were typically allocated on the basis of projects, we used this unit of analysis as a primary one for determining whether IDSRN led to changes in operations; sequentially funded projects were combined into a single project to support the analysis. Three types of change were examined, consistent with the way AHRQ conceptualized program impact:

- ***Influenced actions within the IDSRN partner system.*** This kind of change was operationally defined as a report (from either interviews or documents submitted to AHRQ) that the project had led to *some operational change* in the delivery system, regardless of the type of intensity of change. Solely briefing managers on the work was not sufficient to be counted as a positive report on change. Deciding to stop doing something because it didn’t work was counted.
- ***Influenced actions of other IDSRN partners.*** This kind of change involved another of the core 9 IDSRN partner teams being actively involved in an intervention or changed by it.
- ***Influenced actions external to the IDSRN.*** This kind of change was defined as report that the work had been “used” or at least “considered” by operational entities

apart from the IDSRN partners/collaborators. We did not assess actual implementation because information to do such an evaluation was lacking.

We also made note of whether project results were known to have been disseminated (or pending dissemination) in peer reviewed publications and whether the work received any follow-on task order. The definitions used were relatively generous in terms of assessing influence by projects. (But some projects where we found no evidence could have had an impact since our means for assessing these impacts within the interview format were relatively limited.) Because projects were heterogeneous, we also categorized them by their overall strategy or approach and examined how outcomes varied for projects of different types.

We conducted the majority of interviews of AHRQ staff and partner/collaborator teams in-person, with the remainder conducted via telephone. The interview protocols for AHRQ staff focused on their role in the IDSRN, the underlying rationale for the program, their perspectives on translating research to practice, and their views of IDSRN's successes and challenges. The interviews with IDSRN teams included both researchers and those with management responsibility within the associated delivery systems, the latter of whom were key intended audiences for the program. Protocols for IDSRN participants included questions on their perspectives on the program and rationale for participation, general experience with translating research to practice, and experience with particular projects undertaken as part of the IDSRN. Following each interview, interviewers prepared a written summary of the responses to each item discussed.

To develop a set of four case studies highlighting projects particularly successful in terms of operational impact, we considered our assessment of operational impact and the potential for project reach beyond the IDSRN based on interviews and relevant documents across all projects. We also took into account AHRQ staff's perspectives on projects with the greatest impact. We

ultimately selected four projects reflecting the diversity of work carried out under IDSRN, different collaborator/partner teams, and different funding sources. For these case studies, we reviewed additional documentation related specifically to the project and conducted additional interviews to gather information on exactly how and by whom the research or tool or had been used. The evaluation was limited both by the program's scope and ambiguity in goals and by the inability to collect primary data (outside of interviews) or evaluate program from the conception of the program. While this detracts from the evaluation's rigor, the evaluation remains one of only— at best— a few studies of evolving programs of this sort.

RESULTS

Diverse Models of Partnership

Each of the nine teams involved a lead organization and one or more collaborators that would merge research skills with operational experience. In all but one case, the team was led by an entity whose mission was to conduct applied research. (The exception involved a team led by the CEO of a safety net system). Regardless of their base, these entities depended at least in part on “soft” money and therefore had more incentive than operational staff to promote IDSRN partnerships and to develop fundable proposals. Researchers based in operational systems either supplemented their own staff or not, depending on how they viewed the strength of their internal capacity and also based on historical working relationships.

The IDSRN experience suggests that a variety of models of partnership may be feasible if certain conditions are met, though the challenges associated with developing strong operational links vary across models. More work was required to develop partnerships when pre-existing infrastructures did not exist. The fact that an operational system supported an internal research capacity typically meant that the organization had already made a philosophical and financial

commitment to such a linkage and had pre-existing channels of communication, so as long as that structure remained stable using that to promote IDSRN objectives was easier.

The task of partnership was more challenging for those based outside of operational systems. For such arrangements to work, outside researchers and systems needed to have or develop a relationship of trust, which meant that prior history and time were important. Internal champions also were key. Someone with sufficient senior standing in the organization was necessary to generate commitments for collaboration and access to systems resources. In addition, doing the type of work required by the IDSRN necessitated good knowledge of internal corporate systems and operational characteristics and concerns, and the ability to interpret what these implied for the conduct of research. Typically teams needed someone within the organization who had this skill to help bridge the research and operational concerns and make projects happen.

Partnerships that span more than one operational system take more work to coordinate but in theory present more potential for generating scalable knowledge because data can be merged or interventions tested across systems. While some IDSRN partnerships had more than one system, the IDSRN generally did not benefit from cross-systems work because projects were not funded at a level that would support work in multiple systems and because there were internal constraints to such collaboration, such as incompatible data systems and/or differences in organizational concerns or structures.

Perceived Value of IDSRN Partnerships

IDSRN is structured around delivery systems on the assumption that, at least in part, tying research to systems will make that research more relevant to system objectives and the results more accessible to those outside of the research community. Interviews with executives in participating delivery systems support this assumption; the executives noted that when

researchers are based in an operational system, this opens the door more readily to both formal and informal communications on project needs or implications. Researchers involved in the program also said that they received personal benefits stemming from their ability to contribute to real-world questions and to learn more about operational systems. However, there was some concern that requests for project proposals may not necessarily have been sufficiently well structured to capitalize on the link between research and practice and that goals for immediate use of findings were naïve in light of constraints generated from both the research and operational worlds.

For AHRQ, the IDSRN appears to have provided entry to potentially valuable external links. Through the IDSRN, AHRQ developed stronger ties with both researchers and executives within delivery systems that fall outside the university-based health services research community viewed as a core audience for investigator-initiated grants (the mainstay of AHRQ's research program). Through these ties, research gained access to private sector data for research (an original program goal). Almost all of the IDSRN projects made some use of these data.

In addition, IDSRN provided a base for AHRQ to collaborate with more operationally based entities within HHS. The most prominent example relates to the work on bio-terrorism, which was not originally envisioned to fit under the IDSRN. Links with more operationally based agencies have the potential to improve access to users of research who are outside of that community. Such links also have the potential to generate outside support for the research that operational agencies view as vital to their needs. But AHRQ's ability to capture such outside funding and support was constrained by the limited internal staff available within AHRQ to support the IDSRN.

Diversity in Approach to Translation

Since the program supported such a diverse assortment of work, we classified projects by their approach in an effort to identify subgroups of relatively similar kinds of work that would imply a similar approach to translation, at least implicitly, and generate similar challenges in creating value through the project. The most fundamental distinction was between projects that included work that reflects those traditionally employed in health services research and those that were more expansive in their focus. We also sought to assess whether the projects were ones that took advantage of the IDSRN in the sense of being difficult to do without the IDSRN's partnership between research and operations.

As shown in Table 2, about half of the IDSRN projects employed what we considered to be relatively traditional research methods that were applied to operational settings and needs. In this category, there were three somewhat diverse kinds of work:

- ***Operational data assessment and validation:*** assessing the capacity of delivery systems to develop data and measures; this is one facet in organizational readiness to assess performance or identify improvements. An example is a study intended to validate AHRQ's quality indicators in specific operational settings.
- ***Clinical intervention and assessment:*** implementing clinical interventions based in the delivery system and evaluating their outcomes. An example is testing whether electronic order entry reduces medical errors.
- ***Research using IDS data:*** conducting health services research within an operational organization that is other than evaluation of a clinical intervention. An example is using delivery system data to examine racial differences in health outcomes.

Most of the other projects stretched the boundaries of traditional research to include work that more typically could be considered needs assessment or technical assistance that may not necessarily be viewed as research. However, many projects in these categories explicitly focus on translation in that they push towards operational change. This set of projects included work of two types:

- ***IDS systems analysis:*** assessing IDS operations to identify the need for improvement and appropriate areas for intervention. An example is the study of the reasons for hospitalizations for pneumonia in Evercare patients so as to identify how hospitalizations might be reduced.
- ***Tool development:*** creating new delivery or management improvement tools that provide a way for organizations to take action or change in a specific way. A prominent example is the group of IDSRN projects focused on planning tools to aid in local responses to bio-terrorism events.

A small number of remaining projects either involved research that did not seem to require or benefit by an affiliation with an operational delivery system (though it may have addressed issues of interest to those users) or projects that provided structure to support dissemination of findings without necessarily involving research. While the former category has little to no relationship with translating research, the latter—while not research—does help promote adoption and knowledge transfer of research findings to additional settings.

[insert Table 2 here]

Operational Impact of the IDSRN

IDSRN’s short-term success in moving project research results into practice has been mixed, with widespread diffusion rare at least over the time frame studied. Table 3 shows what the evaluation found about short-term uses of project findings in the real world, including both local and more broadly based use of project results.

[insert Table 3 here]

Of the 58 projects awarded by the time of our evaluation, 50 had been completed so their short-term outcomes could be assessed. Of the 50, we found evidence (generally through our interviews) that 30 had some operational effect or use broadly defined as either 1) influencing actions within a delivery system of the partner/collaborator team, 2) influencing actions of other

IDSRN teams, or 3) influencing actions by organizations external to the IDSRN. Most often, operational impact occurred within the system in which the research had been conducted. Findings from clinically based interventions positioned in systems were most likely to be used locally (within the delivery system), probably because of the immediate relevance of the findings. Both positive and negative results were of interest to delivery, as they illustrated what worked or didn't work. In most cases, the findings in one site did not have more widespread use—some interventions were idiosyncratic to the site though others might have been of interest elsewhere. There was little formal infrastructure in the IDSRN program to support more widespread dissemination, however, particularly outside of the nine teams participating in the IDSRN. Projects that focused on developing tools that might be used for more broad scale application were the most likely to be disseminated to broader audiences where they could potentially be used. These projects included activity designed to move beyond the traditional termination of research in project “findings” by developing user-oriented tools. The research base available to underpin these tools varied and in some cases was relatively limited.

Twenty of the 50 projects we assessed did not have identifiable operational uses. In some cases such use perhaps was not a motivating factor for the study (e.g. studies that did not require systems data). But timeliness and the perception of limited generalizability also were barriers to the use of some study results. When studies were mounted in response to a particular problem, decision-makers often wanted to solve it rapidly and were unwilling to wait for research results. Because IDSRN used a contract task order vehicle (a form of government contract mechanism), the lag in mounting research was much shorter than under the traditional grant mechanism with external peer review (several months versus a year or more). However, this time frame still was not sufficient for many topics or user needs.

Some failure probably is an inevitable part of the risk in programs like the IDSRN. Of the 20 studies that did not result in operational use, 5 led to a peer reviewed publication and one had findings that were judged of sufficient interest to warrant follow up funding. IDSRN teams also found managerial interest in some findings even if they are not immediately relevant. For example, one project that presented findings on the influence of medical group structure, culture, and financial incentives on cost drew a standing-room-only audience at a meeting sponsored by the Medical Group Management Association (MGMA), which collaborates with one IDSRN partner.

Characteristics of Successful Projects

To gain insight into what contributes to findings that are useful in practice, we looked in more depth at four projects for which there was some evidence of strong operational use or adoption. These included:

- ***Bioterrorism Tools.*** Through a series of four task orders supported with HHS bioterrorism funds, researchers at Weill Medical College of Cornell University developed two important new interactive computer models to serve the needs of end users in the public health and emergency response community: the Bioterrorism and Epidemic Outbreak Response Model (BERM), which estimates the minimum staff needed to operate a network of dispensing clinics in the event of an anthrax or smallpox epidemic, and the Regional Hospital Caseload Calculator, which calculates the rate of casualties produced by anthrax or plague releases based on a set of changeable assumptions. These tools have been adopted by many groups outside of the IDSRN, including the New York State Department of Health and government entities in Minnesota, North Dakota, Ohio, Texas, and the Federal Government (CDC Stockpile and others). BERM software is downloadable from the American Hospital Association and AHRQ web sites.
- ***Improving Culturally and Linguistically Appropriate Services.*** With support from the Centers for Medicaid and Medicare Services (CMS), IDSRN researchers affiliated with the Lovelace Clinic (part of the HMO Network) in New Mexico developed guides to help managed care organizations plan quality improvement projects that are focused on enhancing culturally and linguistically appropriate services for enrollees in Medicare managed care. One guide focused on meeting the language needs of members with limited English proficiency, and the other on planning and assessment related to cultural competence. CMS sent copies of the guides to each Medicare plan and the guides also were disseminated via workgroups convened in multiple

locations. In addition, they were used by others within and outside the IDSRN. Initial feedback indicated that the guides (particularly the cultural competence guide) have been widely used and particularly valued by plans with large minority enrollments. A follow-up project gathered information on the use of the guides.

- ***Medication Information Transfer.*** In a two-stage process, RTI worked with Providence Health System (Portland OR) to study how information on medications was transferred over the course of a hospital stay, identify six points of vulnerability, and model the reduction in medication errors that could be achieved using an e-medication list. In a second task order, the intervention was implemented by Providence and its effectiveness evaluated. At least one other hospital is known to have used the study results.
- ***Racial and Ethnic Disparities in Quality.*** Researchers at RAND worked with those in the Center for Health Care Policy and Evaluation at United HealthCare in a two-stage project that used claims and enrollment data from commercial and Medicare plans to investigate racial and ethnic differences in cardiovascular disease and diabetes. Under a second task order, the team developed a tool that health plans can use to graphically display and assess disparities. The tool also is being used to support a new health plan collaborative focused on disparities; the collaborative was formed in mid-September 2004 with a combination of funding from AHRQ and the Robert Wood Johnson Foundation.

When we examined the factors that appeared common to these cases, we found three that seem particularly relevant. First, each focused on a user need that was driven by internal and/or external requirements that meant there were important environmental and/or organizational reasons to make change. These reasons included concern over bioterrorism after September 11, 2001, Medicare's requirements for quality improvement projects related to cultural competence, pending requirements for hospital accreditation related to patient safety, or purchaser concerns with racial and ethnic disparities. Second, each of the case study projects included some follow-on work—through additional IDSRN funding and other means—that was important to the translation process. The follow-on work allowed project teams to take their inquiry to the next level and begin applying their research in more practical, operational ways, such as implementing an intervention or developing a tool. And third, each of the four projects addressed issues that had the potential to be of broad interest and, in most cases, the project work included

support for the development of tools to help users apply them in practice rather than have to determine that for themselves.

Competing Demands on Potential Adopters

While executives in IDSRN-affiliated systems indicated that the IDSRN structure had a number of characteristics that enhanced the relevance and communication of findings, they also said that significant barriers to use of research findings remain. For example, those at the operational level report being overwhelmed with many externally imposed requirements of government, payers and others and constrained by limited funding and by information technology. Frequently there are more ideas for potential adoption than resources to support them. Innovations that can be broken down into steps, have a business case to support them, and address a clear and compelling need, were said to be the most likely to be adopted. Because local systems buy-in was critical for use, those findings that required only incremental change tended to be favored and techniques developed elsewhere (outside the delivery system) may be suspect as not adaptable to the local context. Finally, some organizations are more receptive to the use of research and more likely to have affiliated staff that champion its use. Others may be less likely to make use of research findings even if they are potentially relevant.

The IDSRN experience also highlights particular challenges that exist in promoting the use of findings outside of the system in which they were generated and the importance of defining affinities among users. For example, the IDSRN infrastructure assumed that IDSRN teams would be a natural audience for the project findings and its structure was developed to promote within network sharing. However, IDSRN teams included a diversity of organizations that often did not view many of the others as important reference groups, with even similar seeming organizations making distinctions among themselves (e.g. public versus university based safety net providers). Because use of findings is more likely when they were viewed as relevant in a

particular setting, the advocacy of these findings by operational leaders who are respected by their peers is important in adoption. However the IDSRN's structure provided little means to engage such individuals because IDSRN activity is led by researchers (who naturally have more motivation to pursue such projects) whose audience tends to be other researchers, regardless of their operational base. And because IDSRN funding was tied to projects, there was little flexibility to encourage other routes for dissemination.

Successful Translation is Resource Intensive

The limited amount of funding for projects relative to the program's scope and objectives was the most universally cited limitation of the IDSRN across all participants. One IDSRN participant aptly characterized the IDSRN as having "champagne ideas on a beer budget." Many projects cost substantially more than the funds allocated by AHRQ and went forward only because the partners were willing or able to provide monetary or in-kind contributions in the form of information technology support, overtime work, or external financing of related overhead expenses. The willingness of systems to continue this support could change over time as environmental conditions changed or leadership turned over in organizations. Many said the long run viability of this arrangement was problematic. Because almost all funding was allocated on a project-by-project basis, the structure of the IDSRN also provided a disincentive to fund a stream of work that might ultimately have an impact or for dissemination of work once projects were over. Often completing one project was viewed as an opportunity for AHRQ to support a different area of need. In addition, AHRQ itself was limited in its ability to promote program goals because limited staff resources were available to plan such work and almost no resources were available to execute it.

Lack of Clarity on Program Goals and What Translation Involves

Though participants in IDSRN tended to be positive about the program, there was not a consensus on what AHRQ's goals were or should be for the program nor about what translation means in the context of health services research.

AHRQ staff tended to view program goals in broad terms that related to AHRQ's evolving views of their mission without necessarily having a detailed or consistent sense of what this meant about how the program and its associated projects were structured on the ground. IDSRN partners, in contrast, were much more focused on what specific projects meant for them and on the concrete opportunities presented by funding. Because the program tended to be funded on a project by project basis and projects were so diverse, partners perceived that the program lacked an overall program goal or identity.

Beyond this general distinction between AHRQ staff and partners, those we interviewed also differed in the emphasis they gave to generating results that involved actual use of research findings to make change in organizations. For example, some interviewees (including both AHRQ staff and IDSRN partners/collaborators) viewed the IDSRN as a "laboratory" that embeds research in real world settings so that research is more sensitive to operational concerns and managers have better access to its results. Whether results are immediately relevant in a system was of lesser concern to them than the generation of work that could ultimately benefit the health care system more generally. Others saw the IDSRN differently, viewing the program more as a vehicle "for pushing results out into the real world" and for testing applications on a more "rapid cycle" basis than for conducting operationally relevant new research. For them, the IDSRN was a program to complete cutting edge projects quickly and to get real input from real people in "realish" time. Several interviewees asked "What is 'good enough' research?" but there was little consensus on the answer.

Disagreements tended to be sharpest in evaluating the merits of highly user driven research that might be applicable only in a single setting and supported by, at best, a limited body of available research. Senior executives in the operational systems part of IDSRN teams who were looking for relevant solutions were most likely to hold these views. Yet some researchers based within systems perceived that, in their experience, there were risks in trying to conduct research that is too heavily focused on immediate utility in the system, as such applications were difficult to develop on a real-time basis and more likely to yield results that may be proprietary, hard to share, or unique to a particular system.

Though the level of project funding would need to be altered, there also was substantial interest, both by IDSRN researchers and operational staff, in multi-site tests of interventions that could help move findings “to scale” and provide stronger evidence to address executives’ concerns regarding generalizability of results across diverse settings.

DISCUSSION

IDSRN’s Strengths and Weaknesses

Our evaluation suggests that the IDSRN has helped AHRQ to move beyond its traditional focus on university-based health services research to encompass a broader set of researchers with more applied interests and affiliations and to develop stronger links with operational organizations both outside and inside government. The IDSRN also provided a vehicle for AHRQ to become more “nimble” in its funding and respond to emerging user needs that may stretch traditional research orientations. Given AHRQ’s revised mission statement, these are important goals that have applicability far beyond the specifics of the IDSRN program.

On the other hand, the IDSRN also has weaknesses that detract from its ability to move “research to practice” in concrete terms. These weaknesses are both organizational and conceptual. Organizationally, there has been too little infrastructure available within AHRQ and

the partner teams to help identify priorities for work and support dissemination of findings. Conceptually, there also has been too little time invested in thinking about how best to structure work of the IDSRN so that it is consistent with program goals. For example, a key strength of research involves its cumulative nature, with a diverse variety of studies reported over time. Synthesizing such studies has become an important way of generating evidence-based findings (see, for example, Shojania et al. 2004; Chan, Morton, and Shekelle 2004; Mays, Pope and Popay 2005). The focus of IDSRN work could have been better structured to take advantage of this accumulated knowledge. This idea was reflected in the perception of some IDSRN participants that projects were not always as closely linked to the evidence base in the field as was desirable and our own perception of the vagueness with which project topics were defined. While this allowed work to be responsive to systems and user needs, it also did not necessarily result in projects that focused most heavily on areas where a solid research base existed and could be applied to support translation.

The impact of IDSRN also could have been enhanced by more emphasis on projects that lend themselves to spread in a variety of settings. Because scalability benefits from multiple tests, such projects are likely to cost more and thus allow AHRQ less money to spread around and less ability to support work in the wide variety of areas that the agency's audience advocates. Also, high-level executives on some teams who have been attracted to IDSRN because of its ability to support important internal priorities may become less supportive of the program if they have a harder time gaining support for their projects. But these are the kind of trade-offs that may need to be faced if the goal truly is to use the limited funds available to best support the translation of research to practice.

Implications for AHRQ's Management of the IDSRN

AHRQ has managed IDSRN as a series of mostly independent projects, with limited though increasing potential for follow-on work. But effective translation arguably requires moving beyond single projects to develop longitudinal strategies that take maximum advantage of what health services research has to offer, while converting that knowledge into a form more accessible to users. Although work does not necessarily need to be sequenced in a linear fashion, or supported by the same sponsor, successful translation requires the capacity to identify opportunities where research is relevant to practice, develop or identify findings from research that are relevant to those areas, generate tools and other vehicles for making findings relevant to practice, and work interactively with the practice community to make these tools both accessible and accepted by those in practice.

Taking into account the insights from this evaluation, AHRQ is now in the process of retooling IDSRN in ways that they hope will make a new version of the program—to be called ACTION or Accelerating Change and Transformation of Organizations and Networks—more useful. In its request for proposals, AHRQ notes that ACTION builds heavily on the IDSRN model but refines it to build in more infrastructure for user input to support demand driven research at a program wide level as well as within individual teams, an emphasis on projects that have broad applicability and potential scale, and the potential for drawing in external resources and sequencing task orders to allow sequenced work that is geared to priority areas (AHRQ 2005). The solicitation also makes explicit the assumption that ACTION seeks to involve partners who will be invested in and contribute to the work. Despite its new name and structure however, we perceive that ACTION is likely to face many of the same challenges and trade-offs inherent under the IDSRN

Broader Implications for Researchers Interested in Translation

Researchers need to ponder the potential mismatch between real world problems, which tend to be complex and multi-dimensional, and the parsimony inherent in research which encourages simplification. It may be that the most important real world problems benefit less from the insights of any single study or body of work than from creative synthesis of that work across multiple bodies of work, disciplines, and approaches in ways that address practical questions, rather than particular research questions. Regrettably, the development of such syntheses are still very limited, especially outside of the clinical arena, though there is growing interest in them (Sheldon 2005; Gold, Kuo, and Taylor 2006).

CONCLUSIONS

From our experience with both with IDSRN and other efforts at translation, we conclude that there are important underlying tensions and issues in translating research to practice that are difficult to address. These questions are as fundamental as: What is the mission of health services research? How should its success be measured? To what extent should translatability into practice be considered in identifying the priority of a given project or body of work? Is the measure of a study's worth the utility of its findings and if so, when and to whom? The findings from this study suggest that even those actively engaged in programs that seek such translation have very diverse views about the answers to these questions.

Because available funds for health services research are tight throughout the world and the costs of translating research into practice are not trivial, it could be useful to create a dialogue around these questions. We need to address not only the importance of translating research but also what is being learned about alternative approaches to doing so on a broad scale, what may be reasonable to expect, and where the important priorities lie. To support this dialogue, it is vital that we learn as much as we can from existing experience with translation in all its forms.

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TABLE 1
IDSRN PARTNERS AND MAIN COLLABORATORS

Led by Operationally Based Partner

- The HMO Research Network, a longstanding network of research affiliates of large integrated and prepaid systems^a
- Denver Health, a large integrated safety net provider system
- Weill Medical College/New York Presbyterian, a large urban medical system
- Marshfield Clinic, a rural group practice (with Project Hope)
- United Healthcare, a major national health insurer (through their Center for Health Care Policy and Evaluation and a subcontract with RAND)

Led by Others

- Abt Associates (with Geisinger Health Systems)
 - Emory University's Center for Health Outcomes and Quality (originally based at Aetna, with whom it continued to collaborate)
 - Research Triangle International (RTI) (with multiple provider systems)
 - University of Minnesota's Division of Health Services Research and Policy (with Blue Cross Blue Shield of Minnesota, the Medical Group Management Association and others)
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^aSee Vogt et al. (2004) for more information on the HMO Research Network.

TABLE 2

IDSRN AWARDS FY 2000-FY 2003, BY TYPE

Type of Project	Description	Total Projects	Total Funding	Examples	Potential Link between Research and Practice	Challenges That Influence Value
Research Linked to Operational Settings						
Research Using IDS Data	Take advantage of IDS administrative, claims, or other data to carry out applied health services research	12	\$3,191,558	Racial differences in care outcomes; impact of payment policies on care in provider group with diverse characteristics; medication errors	Enhances the knowledge base for understanding how health systems work; gives access to data not otherwise available for research	Identifying questions for research that have potential for ultimate operational value; ability to generate findings that build on evidence base and are taking the "next step"
Operational Data Assessment and Validation	Assess the capacity of systems to provide specific data, develop specific measures	4	\$1,083,674	Capacity to conduct studies of race, ethnicity; operational validation of hospital quality measures; private sector data for national quality reporting.	Assesses one facet of infrastructure readiness to determine need for or make operational improvements	Uniqueness of individual systems; ability to move beyond assessment to make changes or take appropriate action
Clinical Intervention and Assessment	Patients in the IDS are involved in intervention; outcomes assessed	12	\$2,769,120	Electronic order entry; otitis media practice guidelines; falls management tool	Identifies promising delivery interventions that work in practice	Evidence base for interventions; ability to generalize or bring to scale results
Stretching Traditional Research Boundaries						
IDS Systems Analysis	Prospectively analyze IDS systems and flows to identify performance, needs, or potential areas for improvement	8	\$1,958,126	Modeling link between care transitions and iatrogenic injury; assessing factors that influence diffusion of IT; assessing reasons for pneumonia hospitalization by Evercare patients	Uses delivery base to better understand problems or constraints and ways of intervening	Ability to generalize beyond a single system or point in time; follow-through on findings to identify and test improvements

Type of Project	Description	Total Projects	Total Funding	Examples	Potential Link between Research and Practice	Challenges That Influence Value
Tool Development	Develop web-based or other tools for care delivery or public health improvement	17	\$3,957,230	Electronic order entry; otitis media practice guidelines; falls management tool	Identifies promising delivery interventions that work in practice	Evidence base for interventions; ability to generalize or bring to scale the results
Other						
Organizational Studies Using Data Outside of IDSRN	Projects that take advantage of IDSRN vehicle and participants to study issues relevant to IDS but not otherwise built on IDSRN unique qualities	3	\$643,863	Quality provisions in MCO contracts; hospital-volume link; nursing home policies and quality	Addresses research questions that shed light on health care delivery organizations	Does not necessarily capitalize on IDSRN capacity
Dissemination Infrastructure	Projects that aim to support infrastructure in various ways to encourage dissemination	2	\$594,310	National network of medical group practices; leadership conference on patient safety	Improves channels of communication to get information out	Strategic importance of particular effort; relevance of infrastructure to other IDSRN work, AHRQ, or field

Source: Authors' classification based on awards information provided by AHRQ.

TABLE 3

IDSRN TASK ORDER OUTCOMES BY PROJECT TYPE, FY 2000-2003

Type of Project	Impact of Task Order on Delivery System*						Other Outcomes	
	No. Awards	No. Complete	None ^a	Local	Other IDSRN Teams	External	Peer-Reviewed Paper ^b	Follow-on Task Order Awarded by AHRQ
Total	58	50	20	19	1	10	12	9
Tools	17 ^c	15	3	4	1	6	1	4
Research with IDS data	12	11	8	2	0	1	5	1
Clinical Intervention	12	9	2	7	0	1	1	0
IDS Systems Review	8	7	2	3	0	1	3	1
Data Capacity	4	4	2	2	0	0	0	3
Research, no IDS data	3	3	3	0	0	0	2	0
Dissemination Vehicle Support	2	1	0	1	0	1	0	0

Source: MPR Analysis of available information

*We classified impact based evidence of that task order has some operational impact (broadly defined) in the following settings: 1) locally within the delivery system in which the task order occurred, 2) among other delivery systems within the IDSRN, or 3) external to the IDSRN. In cases where a task order has an impact in multiple settings, we classified as highest setting (e.g., those with local and external impacts were classified as external).

^aReflects projects where there was no explicit evidence of impact. Because site visit time was limited, we could verify many but not all the outcomes for each task order with IDSRN partners/collaborators.

^bNumber of tasks with 1+ publication. Only publications that are known to be published or accepted for publication are included.

^cThe 17 task orders reflect 12 separate bodies of work. The 17 include two sets of projects with an initial and follow-on task order and one set of four sequential projects.