CREATING CHANGE BY Translating Research INTO Practice

Research findings that sit in dusty journals on a library shelf do little good. Similarly, advances in medical technology are of limited use unless new tools and techniques are readily available where and when they are needed. One area where foundations and corporate giving programs have made their marks as change agents has been in bridging this gap between science and practice.

Translating research into practice has tremendous potential in health care. Despite the considerable resources spent on biomedical research, relatively little attention has been paid to ensuring that research findings are applied at the bedside, in physicians' offices, or in community settings. And when the transfer does happen, the pace can be slow. According to one estimate, it takes about 17 years for new knowledge from a controlled clinical trial to be incorporated into the daily practice of clinical medicine (Burroughs Wellcome Fund 2004). Similarly, findings from health services research and program evaluation are only infrequently made available to policymakers and other decisionmakers in the design of health programs and policies.

EFFECTIVE STRATEGIES FOR TRANSLATING RESEARCH INTO PRACTICE INCLUDE:

- provider reminder systems,
- computer decision support systems,
- institutional commitment to evidence-based practice,
- financial incentives, and
- involvement of users in development of tools.

Source: AHRQ 2001.

A number of system-level barriers make it difficult to bridge the gap between the literature and the real world. Health professionals have limited time to stay up to date and face an overwhelming amount of new knowledge. Consider that more than 4,800 biomedical journals are indexed in MEDLINE and thousands of citations are added each week. Health professionals may also lack the skills to interpret research findings (particularly when findings of several studies conflict) that would enable them to make informed judgments about changes in their day-to-day practice. The structure and financing of clinical research also creates a barrier to translation. Pressure to obtain research grants and advance in one's career reinforce the imperative to develop new knowledge, rather than apply findings in real-world settings. Moreover, financial pressures on institutions are requiring a change in the balance of patient care and research duties for many physicians engaged in clinical research.

OPPORTUNITIES FOR GRANTMAKERS

Foundations are uniquely positioned to bridge the gap between research and practice, creating dialogue between the two communities and facilitating the adoption of evidence-based techniques. An historical anecdote illustrates the pivotal role that philanthropies can play. In 1923, Dr. George N. Papanicolaou first discovered that cervical cancer could be diagnosed before symptoms were present. His findings were dismissed by many in the pathology field who could not believe that cancer could be detected in individual cells. Years later, Papanicolaou wrote, "I found myself totally deprived of funds for continuation of my research…At a moment when every hope had almost vanished, The Commonwealth Fund…stepped in." The Commonwealth Fund's support for Dr. Papanicolaou's work proved crucial to the development and eventual acceptance of the Pap smear, now regarded as a routine diagnostic technique for detecting cervical cancer (Council on Foundations 2005).

There are several strategies for grantmakers to facilitate the translating of research into practice.

➤ ***Supporting health care professionals in the adoption of evidence-based practices*** – Health grantmakers can help fund development of tools and training opportunities that help busy clinicians learn about what works and how to apply new knowledge in daily practice.

The Colorado Clinical Guidelines Collaborative (CCGC) is a coalition of health plans, physicians, hospitals, employers, government agencies, quality improvement organizations, and other entities working together to implement systems and processes, using evidence-based clinical guidelines, to improve health care in Colorado. It was created by these stakeholders to eliminate the confusion and inefficiencies created by various health plans, medical societies, and government agencies having conflicting guidelines.

Two Colorado funders, the Caring for Colorado Foundation and The Colorado Trust, have provided significant support to CCGC. In 2004, Caring for Colorado Foundation funded the CCGC to train rural health care

providers on techniques to help adults quit using smokeless tobacco. Matching funds were also obtained from the American Legacy Foundation. The foundation also supported a project to implement the collaborative's depression guidelines in the Denver metro area and rural northeast Colorado. The Colorado Trust is funding promotion of evidence-based adult and pediatric flu immunization guidelines, and the development of evidence-based guidelines for cardiovascular disease and stroke.

Similarly, The Henry J. Kaiser Family Foundation (KFF) played a pivotal role in developing and making available guidelines for the use of antiretroviral therapies for adults and adolescents with HIV. KFF partnered with the federal government to convene the panel on Clinical Practices for the Treatment of HIV Infection. The guidelines were constructed as a living document so they can be updated by the panel as new data emerge (as often as every several weeks.) Initially the guidelines were available in hard copy and on the Internet. Now downloads are also available for personal digital assistants to allow ready reference by physicians in exam rooms.

The California HealthCare Foundation, with its emphasis on health information technology, has helped fund the development of several decision support tools for California physicians. The *Prescription Drug Information Project*, a collaborative effort with researchers at the University of California at Davis, aims to provide accurate, coherent information on effectiveness, side effects, and costs to help clinicians and patients select the best drug or treatment at the best price. University researchers conducted scientific reviews of the treatment options for six common health conditions: gastroesophageal reflux or GERD (heartburn), osteoarthritis, hypercholesterolemia, depression, asthma, and allergic rhinitis (hay fever). Summary conclusions were then vetted by a scientific review panel consisting of doctors and pharmacists from the University of California and by nationally recognized experts in the condition-specific areas. Information was then presented in a scientific reference guide meant to be used by busy professionals. The foundation is now exploring the feasibility of creating partnerships to develop consumer materials based on the scientific summaries for lower literacy and non-English speaking populations.

➤ ***Funding translational research*** – Among its various biomedical research initiatives, the Burroughs Wellcome Fund is focusing on the critical role that physician-scientists can play in fostering the development and sharing of new knowledge and techniques from the bench to bedside and back again. Translational research sits in the gap between basic biomedical research (funded by the National Institutes of Health and other private funders) and the commercialization of new drugs and devices, which is primarily financed by private industry. The fund's *Clinical Scientist Awards in Translational Research* are meant to foster the productivity of independent physician-scientists at the mid-career level who will be the champions for translational research in academic health centers, both by conducting their own research and by mentoring the next generation of physician-scientists. Awards are provided for studies focused on the etiology, pathogenesis, and mechanisms of disease (particularly those with direct application to disease prevention and treatment); clinical knowledge, improved diagnosis, and biomedical informatics; and disease management and limited small-scale clinical trials involving novel approaches or interventions that provide evidence for effectiveness of therapy.

Partnerships offer the opportunity for foundations with limited resources to make important commitments to translational research. Recently, the Cardinal Health Foundation announced a partnership with Abbot Laboratories to fund the *V Foundation-American Association for Cancer Research Grants in Translational Cancer Research*. These grants will support scientists at National Cancer Institute-designated cancer centers, universities, and freestanding research institutions for studies translating basic cancer findings into a new preventive strategy or therapeutic application for cancer, including improved survival or quality of life. Of the $2.4 million awarded, Cardinal Health contributed $150,000.

➤ ***Encouraging the use of evidence in community-based interventions*** – Evaluations of community-based interventions rarely reach the gold standard of evidence associated with controlled clinical trials. Still, there is merit in making sure that any health intervention be based on what is known, not just what it is intuited. The Robert Wood Johnson Foundation's *Active for Life* initiative is designed to adapt and translate evidence-based physical activity programs for individuals over the age of 50 into practice in community settings. The initiative is focusing on two previously tested program models for further examination. The first uses facilitated group-based problem solving methods to integrate physical activity into everyday living. The second emphasizes participation in individually selected activities that are facilitated with ongoing, brief telephone and mail follow-up delivered to the home. An interactive learning network is under development to help grantees as well as other health, research, wellness, and public health professionals address issues, contribute to the development of programs, and share information related to science-based information and initiatives on aging, physical activity, and nutrition.

This article is part of GIH's portfolio, Agents of Change: Health Philanthropy's Role in Transforming Systems. Each article focuses on an approach grantmakers are using to promote systemic or social change. The entire portfolio is available on GIH's Web site www.gih.org.

SOURCES

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