

Translational Science at the National Institute of Mental Health: Can Social Work Take Its Rightful Place?

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Several recent national reports have noted that there is a 20-year gap between knowledge generated from our best clinical research and the utilization of that knowledge in our health and mental health care sectors. One solution to this dilemma has been the emergence of translational science. Translational science has become a top priority of the National Institute of Mental Health. The goal of translational science in mental health is to speed the use of findings from our best science into usual-care settings and to build partnerships between research and practice constituencies. The purpose of this article is to define translational science for social work, to provide a framework for translational research, and to outline an agenda of activity that will allow social work to become a significant driver in the translational research agenda in mental health services.

Keywords: *translational science; social work; mental health*

Several recent national reports have noted with alarm that there is a 20-year gap between knowledge generated from our best clinical research and the utilization of that knowledge in our health and mental health care sectors (Department of Health and Human Services [DHHS], 1999; Institute of Medicine, 2000; New Freedom Commission on Mental Health, 2003). This means that our health and mental health care practitioners in usual-care settings are lagging almost two generations behind the science that should be informing their practice. One solution to this dilemma has been the emergence of translational science. Translational science has become a top priority of the National Institutes of Health (NIH), including the National Institute of Mental Health (NIMH). The goal of translational science in mental health is to speed the use of findings from our best science into usual-care settings and to build partnerships between research and practice constituencies that will increase the clinical relevance of mental health research (DHHS, 2006). There are two phases to translational science that are elaborated

below. In brief, Phase 1 includes moving knowledge from basic science to more applied clinical usage in human studies including efficacy and effectiveness trials of clinical interventions. Phase 2 translation concerns research aimed at enhancing the adoption of best practices in the community.

Translational science is seen as essential to enhancing the public health in general and specifically to improving mental health service delivery to consumers in usual-care settings; therefore, producing mental health services scientists who are well trained in translational research is a critical national public health need. Social work is ideally positioned to significantly influence the national translational research agenda because of its prominent placement in the human services sector and due to a strong interdisciplinary focus in much of its training and research.

Building a translational science agenda in social work is important for several reasons. Social workers provide the majority of mental health services to consumers in both specialty mental health care settings and primary health care settings in the United States (*Occupational Outlook Handbook 2006-2007*, 2006). This is even more notable when considering two highly vulnerable populations: the severely and persistently mentally ill and the disadvantaged in primary health care settings. Unfortunately, social work is dramatically underrepresented in the ranks of those who are trained

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for mental health clinical services research careers (Austin, 1999; DHHS, 2003). Given that social workers are so highly represented as service providers, one way to close the 20-year knowledge gap between research and practice in mental health services is to train more social workers in translational services research methods in mental health. In addition, social work, like medicine, nursing, and psychology, has a literature on evidence-based practice (Gilgun, 2005). This literature generally provides models for conceptualizing and describing evidence-based practice in social work, how to do it or how to teach it (Bloom, Fischer, & Orme, 2006; Gambrill, 1999; Gilgun, 2005; Howard, McMillen, & Pollio, 2003; Rosen & Proctor, 2003). There is, however, almost no research on how to implement evidence-based practice in usual-care settings or research that assesses its outcomes when it is implemented systematically in practice settings; therefore, missing from this literature on evidence-based practice are crucial aspects of a translational research agenda.

To build capacity in translational research, social work needs an approach to training and research that will bring to fruition its vast potential in translational science and ultimately ensure that service consumers receive known quality care. Developing a translational science agenda for social work is consistent with several critical initiatives laid out in the president's New Freedom Commission on Mental Health final report (New Freedom Commission on Mental Health, 2003), the surgeon general's report (DHHS, 1999), the *NIH Roadmap for Medical Research* (DHHS, 2006), and two NIMH reports (National Advisory Mental Health Council Behavioral Science Workgroup, 2000; National Advisory Mental Health Council Clinical Treatment and Services Research Workgroup, 1999), each of which details the importance of translational science in mental health services. Similarly, it is consistent with two of the highest research priorities at NIMH—to speed the introduction of promising, evidence-based practices into usual-care settings and to train services researchers to develop and participate in interdisciplinary investigative teams. It is also in concert with efforts at NIMH to increase the participation of social workers in NIMH-sponsored research activity (DHHS, 2003; NIH, 2006a, 2006b). In this article, we will detail the need for translational research in human service sectors, outline the domains of translational science and offer a framework for translational science in social work, and finally, propose an agenda of activity that we believe will help social work to take a place of leadership in translational research in mental health services.

Service sectors in need. Social work is prominently placed in three mental health service sectors in need of significant translational research activity. These three sectors are not meant to be exhaustive; rather, they are reflective of the situation in many human service systems.

Mental health services for adults with severe mental disorders. Recent literature in mental health services has identified a serious gap between what is known about mental disorders and their treatment from university-based clinical research and the services that are actually provided to consumers in typical community practice settings (DHHS, 1999; NIMH, 1999; New Freedom Commission on Mental Health, 2003). Among the highest stated priorities in this area is bridging the scientific and service communities in order to transport efficacious interventions into typical-care settings and provide these interventions to larger numbers of consumers (Drake, 2003; NIMH, 1999). Another concern is that when these best practice interventions are implemented in usual-care settings, the adherence to the specifications of the model is inconsistent. Both the president's New Freedom Commission report on mental health and the surgeon general's report advocated that concerted action be taken to ameliorate this gap between what is scientifically known about effective interventions and what is practiced in America's mental health care settings. This represents a call for translational science in mental health settings aimed at enhancing the adoption of best practices in the community.

The problem is acute with regard to people diagnosed with schizophrenia. Schizophrenia is the costliest of the mental disorders in terms of treatment and service expenditures and losses from ongoing functional disability (Rice, 1999). The Patient Outcome Research Team (PORT) study found that fewer than 50% of outpatients were receiving adequate psychopharmacological treatment, but the most glaring problem was in the psychosocial intervention area where typically less than 30% of outpatients were receiving any treatment in recommended areas, exclusive of the quality of the intervention (Lehman et al., 1998; Rosenheck, Desai, Steinwachs, & Lehman, 2000). Similar to the PORT findings, other recent studies have found that a minority of consumers with schizophrenia (in some instances less than 10%) are receiving evidence-based psychosocial interventions that target their functional impairments in work, social, or independent living domains (Torrey et al., 2001). This makes it increasingly difficult to meet one of the stated goals of the president's commission report, which is to promote resilience and recovery among the mentally ill.

Mental health services for adults in general health care settings. The president's New Freedom Commission Subcommittee on Mental Health Interface With General Medicine (Unutzer, Schoenbaum, Druss, & Katon, 2006) has underscored the critical need to transform mental health care at the interface with general medicine, reporting that although medical and mental conditions are highly interconnected, medical and mental health care systems are separated in many ways that inhibit effective care, that is, failure to detect, diagnose, or provide effective treatment. For example, people with chronic or life-threatening physical illness frequently experience significant comorbid depression or anxiety disorders. Failure to effectively manage these mental conditions can negatively affect patients' medical condition, quality of life and functional status, and adherence to self-management of the physical condition, which results in increasing social and health care costs. The evidence base for effective care management for depression is particularly strong; however, equally strong is evidence that effective guideline-level mental health care in the general medical sector is not yet widely implemented (Belnap et al., 2006; Grypma, Haverkamp, Little, & Unutzer, 2006; Rollman, Weinreb, Korsen, & Schulberg, 2006; Upshur, 2005). Critical translational questions focused on addressing patient, provider, and organizational system barriers require further study. These include adaptations for low-income and racial or ethnic minority populations; development and testing of economically sustainable depression care management programs, particularly within the public sector; collaborative care models that integrate depression management with the management of comorbid medical conditions such as diabetes or cancer; optimal ways to identify depressed or anxiety-disordered patients in the primary care setting; responsibilities and desirable qualifications of depression care managers; the location and manner in which care managers interact with patients and primary care providers; costs of services provided by care managers; and the level of supervision by mental health specialists needed to ensure quality care.

Child and adolescent mental health services. There exist numerous alternatives for treatment of mental disorders in children and adolescents (Burns, 2003; Weisz, Hawley, & Doss, 2004). The beneficial effects of many psychotherapeutic and pharmacologic interventions for children and adolescents have been repeatedly demonstrated through clinical trials of treatment efficacy (Weisz & Jensen, 1999). In contrast, the benefits of mental health services that have not been supported by empirical evidence have generally been weak at best (Burns, 2003;

NIMH, 1999; Weisz, Weiss, Han, Granger, & Morton, 1995). Nevertheless, it is the exception rather than the rule that interventions with proven efficacy or effectiveness are successfully implemented in community settings (Aarons, 2005; Jensen, 2003). More commonly, values-driven models (e.g., child and adolescent service system principles) that lack scientific evidence of efficacy or effectiveness are widely implemented (Bickman, 1996). The gap between research and practice is characteristic of health services in general and has been attributed to a number of factors, including limited time and resources of practitioners, insufficient training, lack of access to peer-reviewed research journals, lack of feedback and incentives for use of evidence-based practices, the logic and assumptions behind the design of efficacy and effectiveness research trials, and inadequate infrastructure and systems organization to support translation (Addis, 2002; Glasgow, Lichtenstein, & Marcus, 2003; NIMH, 1999; Schoenwald & Hoagwood, 2001). However, there remains a critical gap in our understanding of barriers and facilitators of the dissemination and implementation of evidence-based practices for children and adolescents (Burns, Teagle, Schwartz, Angold, & Holtzman, 1999; Garland, Kruse, & Aarons, 2003; Glisson, 2002; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001). Improving the dissemination and implementation of evidence-based practices in any area of health care services requires an understanding of the individual, institutional, and systemic factors that both facilitate and constrain these processes (Hoagwood et al., 2001; Schoenwald & Hoagwood, 2001).

The position of social work to advance translational science. As shown above, there is a great need for translational research in mental health services for children and adults. There are also multiple service sectors that were not specifically mentioned but that are equally as critical in the translational mental health science agenda for social work. These include schools, corrections, child welfare, and services for the elderly. The goal of translational science is to support research that will build the models and methods needed to bridge the science and service communities and thereby directly affect the provision of services in all of these usual-care settings across sectors and populations. In this regard, two of the highest research priorities at NIMH are to speed the use of promising and evidence-based mental health practices into usual-care settings and to train services researchers to develop and participate in interdisciplinary investigative teams. Social work is ideally placed to meet these goals using the translational science model articulated below.

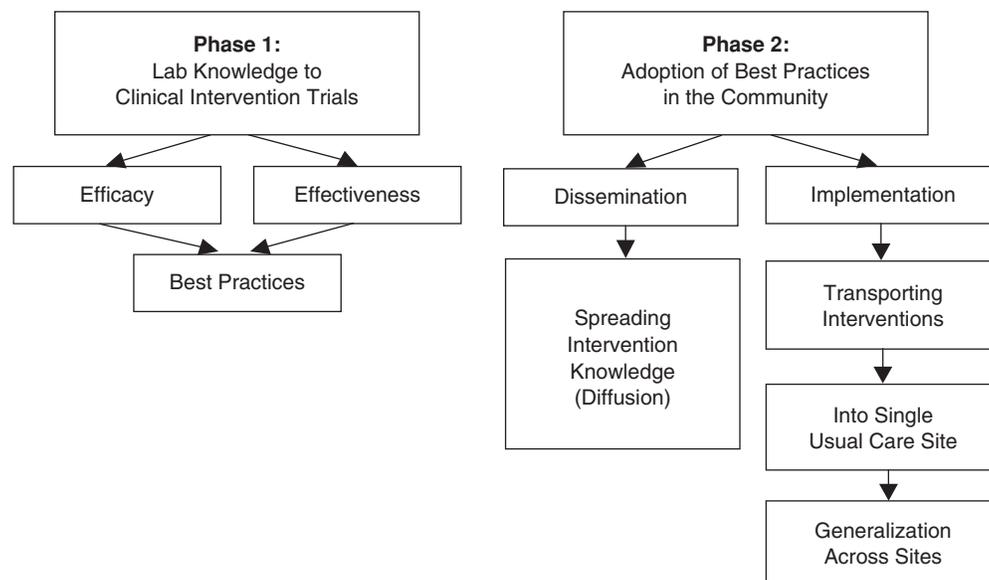


Figure 1: Conceptual Model for Translational Research

The phases and domains of translational research. Although translational science is an emerging field, there is a growing body of literature on the methods and results from translational research (e.g., Kerner, Rimer, & Emmons, 2005). Figure 1 provides a representation of the phases of translational science. Before proceeding, it should be noted that there are various uses of the terms *diffusion*, *implementation*, and *dissemination* (Flay et al., 2005), so we will provide definitions as we proceed. NIMH has endorsed consistent definitions in recent announcements (NIH, 2006a, 2006b; NIMH, 1999). Recent reviews also show efforts to converge on definitions, and it is generally accepted that moving toward a consensus on terminology is essential for collaboration (Bromley, 2005; Ellis et al., 2005; Mauskopf, 2003).

There are two phases to translational research activity. Phase 1 translation is the process of applying discoveries generated during research in the laboratory and in pre-clinical studies to the development of clinical trials and studies in humans. Phase 1 includes moving knowledge from basic science to more applied clinical usage in human studies ("bench to bedside"), including efficacy and effectiveness trials of clinical interventions. This phase includes the development and/or testing of best practice (or evidence-based) interventions (BPIs) in community-based human service settings. A considerable amount has been written about this phase of translational science, including efficacy and effectiveness issues (Beutler & Howard, 1998; Carroll & Rounsaville, 2003; Wells, 1999b), practical clinical trials (Glasgow, Magid,

Beck, Ritzwoller, & Estabrooks, 2005; March et al., 2005; Tunis, Stryer, & Clancy, 2003), and methods for developing and manualizing psychosocial interventions (Carroll & Nuro, 1997; Onken, Blaine, & Battjes, 1997; Rounsaville, Carroll, & Onken, 2001). Phase 2 translation concerns research aimed at enhancing the adoption of best practices in the community ("bedside to the community"). Phase 2 includes two types of knowledge transfer: (a) dissemination and (b) implementation. Knowledge transfer can refer to many activities ranging from providing knowledge about sunscreen to prevent carcinoma to the utilization of the newest behavioral interventions for coping with psychotic symptoms. In Phase 2 studies, dissemination would refer to efforts to spread information about BPIs to practitioners. This activity has been referred to as "passive dissemination" or diffusion. It involves the distribution of information (such as written guidelines) about interventions to practitioners or consumers.

Implementation, on the other hand, concerns the use of strategies to introduce or change evidence-based mental health interventions within specific settings (Drake, 2003; Drake et al., 2003). This effort is required because interventions developed in the context of efficacy and effectiveness trials are usually not transferable without adaptations to specific agency settings. Implementation in clinical settings requires another kind of research that examines the process of transferring interventions into local settings that are very different from the ones in which the intervention was developed and tested. This activity has also been referred to as the transportation of

interventions and involves the adaptation, adoption, and infusion of effective interventions into usual-care sites (Schoenwald & Hoagwood, 2001). Another aspect of implementation concerns the generalization of an already transported intervention into multiple agencies or sites. This generalization involves an empirical understanding of the degree to which any transported intervention can be replicated across usual care sites that vary in subtle or significant ways.

Flay et al. (2005) have provided a rich discussion of the methodological requirements for high-quality research within the efficacy–effectiveness–dissemination spectrum of activity, so we will not address those issues here. However, we believe that social work is ideally placed to make significant contributions to Phase 1 effectiveness knowledge about BPIs and to Phase 2 implementation science about transporting BPIs into usual-care settings. This includes developing an implementation knowledge base about how interventions are transported to real-world practice settings. This knowledge is based on a less linear understanding of the research process (Glasgow et al., 2003; Kerner et al., 2005). For example, a linear transition from controlled efficacy trials to effectiveness trials and generalization to the intended target in the community may not succeed in behavioral research. Translation of social and behavioral research into practice is more complex than translation of medical research on drugs or surgery, in part because of the inherent interactivity among consumers, staff, and organizations. Participatory models of translation broaden the process by encouraging participation and feedback from all stakeholders and across relevant disciplines. However, all of this research activity requires a perspective or framework for the research process that involves the development of knowledge within complex service delivery systems.

A framework for translational research in mental health services. Mental health services research in the past decade has been influenced by a number of trends. One of these trends has been the growing recognition of the need to understand cultural influences on the disparities in treatment of mental illness. The 2001 surgeon's general report on mental health and its supplement, *Mental Health: Culture, Race, and Ethnicity* (DHHS, 2001), documented serious disparities in mental health services for minorities. Despite similar prevalence rates of mental health disorders among racial and ethnic groups and overrepresentation of minorities in public service sector systems, mental health services for minorities are characterized by lower utilization rates and poorer quality of care (DHHS, 1999, 2001). The

focus of the surgeon general's report was on the role of cultural factors in accounting for these disparities. These factors include the types of stresses confronted by different racial and ethnic groups, whether they seek help, what types of help they seek, what symptoms and concerns they bring to clinical attention, and what types of coping styles and social supports they possess. Likewise, the culture of clinicians and service systems affect the nature of mental health services. The report notes the inadequate science base on racial and ethnic minority health, particularly as it pertains to these cultural factors.

Another trend has been the growing recognition of the need for research on processes and outcomes of dissemination and implementation of evidence-based research. For example, the implementation of evidence-based BPIs into real-world mental health service settings is an important priority for improving the quality of services and outcomes (Hebert, 2003; Hoagwood & Olin, 2002), especially because interventions with proven efficacy or effectiveness are much less likely to be implemented in community settings than values-driven models that lack scientific evidence of efficacy or effectiveness (Bickman, 1996; Rotheram-Borus & Duan, 2003). However, in mental health services little is known regarding what factors enhance or impede implementation efforts, at what organizational and individual levels such factors operate, and how such factors interact (Goldman et al., 2001; Greenhalgh, Kostopoulou, & Harries, 2004; Silverman, Terry, Zimmerman, Nutini, & Ricci, 2004). This information is viewed as being vitally important for determining both the effectiveness and sustainability of evidence-based practices.

For example, the effectiveness of a BPI will likely be compromised if it is poorly implemented (Henggeler, Pickrel, & Brondino, 1999) due to efforts of clinicians or agencies to adapt it to local conditions (Elliott & Mihalic, 2004; Lewis et al., 2005). Poor implementation could lead to a negative appraisal of BPI effectiveness when it is really the implementation process rather than the BPI that is responsible for poor outcomes. On the other hand, BPIs found to be efficacious in controlled settings may be impractical or irrelevant when applied to real-world settings (Glasgow et al., 2003). The ability to predict the process (how something happens) and implementation (how much of what was supposed to happen actually did) of evidence-based practice is critical to determining the likelihood that such practices will indeed be effective. There are a number of different models for implementation that have appeared in both adult and child mental health. A common thread to these efforts appears to be a move away from the directive,

unidirectional model of implementation to more collaborative models where community consumers, providers, and service system managers are partnered with researchers involved in the development and testing of efficacious treatments (Henggeler, 2002; Palinkas, Allred, & Landsverk, 2005; Rogers, 1995).

A third trend in mental health services research has been the growing recognition of the need for community-based participatory research (CBPR; Minkler & Wallerstein, 2003). This research strategy is based on the premise that public participation in all phases of research ensures its clinical and cultural relevance to target communities and contributes to the effectiveness and sustainability of the programs and evidence-based practices that result from such research (Wells et al., 2006). Examples of CBPR include medical practice research networks where researchers collaborate with nonacademic community physicians who provide access to patients who can serve as research participants (Nutting, 1996; Thomas, Griffiths, Kai, & O'Dwyer, 2001; van Weel, Smith, & Beasley, 2000), collaborative projects targeting issues such as HIV prevention (Sanstad, Stall, Goldstein, Everett, & Brousseau, 1999; Sterk, 1999) and youth development and violence prevention programs (Lennett & Colten, 1999; McCormick et al., 2000; McHale, Crouter, & Obeidallah, 1996; Ostrom, Lerner, & Freel, 1995; Weinberg & Erickson, 1996; Zeldin, 1995) that are meaningful to the community yet maintain sufficient scientific merit for replication and generalizability (Thomas et al., 2001; Zarin, Pincus, West, & McIntyre, 1997) and quality improvement efforts such as the University of California Los Angeles–Rand Partners in Care Project (Rubenstein et al., 1999; Wells, 1999a, 1999b) and the Community Health Improvement Collaborative (Wells et al., 2006).

Although each of these trends has been viewed as involving separate and discrete issues, they are, in fact, intimately connected by the interactions that occur between the various stakeholders in the use and delivery of mental health services (client or consumer, provider, and researcher). Clinicians often state that researchers need to be more clinically informed (Ragins, 2005) and, likewise, researchers feel that clinicians need to be more research informed (Hogarty, 2005). The practical result of this has been that clinical and cost-effective interventions are often not sustained even after being put into place because the practitioners do not feel ownership of the practice and mistrust its specificity to their situation (Sullivan et al., 2005). Several models exist that describe these interactions with varying degrees of involvement assigned to each stakeholder.

Diffusion of innovation theory (Rogers, 1995) is based on the concept of diffusion as a process in which

an innovation is communicated through certain channels over time among the members of a social system. It is a special type of communication in that the messages are concerned with new ideas. Communication is a process in which participants create and share information with one another to reach a mutual understanding through the exchange of information. It is a two-way process rather than a one-way, linear act (Rogers, 1995). Social marketing of programs and practices designed to promote health and prevent disease are consumer oriented, and focus groups are often used to elicit consumer preferences and perspectives (Manoff, 1985). Social marketing techniques can help to overcome distrust by fostering open and honest communication about the research process and engagement of participants in study planning and implementation (Manoff, 1985; McKenzie-Mohr, 2000). Cultural exchange is a transaction of knowledge, attitudes, and practices (KAP) that occurs when two individuals or groups of individuals representing diverse cultural systems (e.g., ethnic, professional, organizational, national) interact and engage in a process of debate and compromise (Bailey, 1973; Palinkas et al., 2005). Depending on the context, this transaction can lead to improved patient or client outcomes and reduced disparities in outcomes among patients from different cultural and ethnic backgrounds, to adaptation and/or adoption of an innovation such as a BPI or to effective and mutually beneficial community–academic partnerships devoted to the conduct of practice-based research. It is a bidirectional process in which two or more participants (stakeholders) derive something from and are changed as a result of the transaction (Palinkas et al., 2005). In contrast to other models of community-based research, cultural exchange is both a theory and a method, a means of understanding this transaction as well as a tool for facilitating transactions involving multiple stakeholders. Cultural competency in delivery of health services is also based on concepts of communication and negotiation (Carrillo, Green, & Betancourt, 1999).

The key elements to the social interaction in all of these models are communication based on a common language for identification of behavioral health problems and solutions; collaboration based on an egalitarian model of stakeholders as partners in the development, dissemination, implementation, and sustenance of evidence-based practices; and consensus based on principles of negotiation and compromise. Communication, collaboration, and consensus will serve as the hallmarks for the cultural exchange approach to translational research. These processes are intended to bring together the three themes of mental health services research on the

effectiveness of psychosocial interventions, cultural competency in service delivery, and community participation in the translation, implementation, and sustainability of evidence-based practices in usual-care settings in the community. These elements of translational research result in a number of notable challenges for social work researchers.

The challenges of translational research in the community. There are many challenges to translational mental health services research in the community that require specialized and intensive training and new perspectives about the critical domains of research. First, the service phenomena occur in a complex context that spans issues of financing and service system organization, interorganizational factors, and administrative and organizational factors, as well as individual-level clinical issues (Hohmann, 1999; Hohmann & Shear, 2002). Although it is unlikely that any one study will investigate all or even many of these levels of factors, the phenomena investigated at any one level are affected by forces and factors at all levels, and this requires an interdisciplinary focus both within and across investigative levels of analysis. Second, given the complexity of the area, the use of interdisciplinary investigative teams is critical. These teams are required in order to provide expertise in the various substantive areas that will be relevant to any proposed study. Third, translational research requires the use of a range of methodologies encompassing both quantitative and qualitative approaches. This does not suggest that any single investigator must be expert in both approaches, but it does assume that investigators will need experience working in mixed methods teams even when they specialize in one of the methodological approaches (Teddlie & Tashakkori, 2003).

Fourth, translational research occurs in usual-care settings. It is imperative that investigators understand and gain intensive firsthand experience and familiarity with the service environments in which they will work and study. Fifth, given that the laboratory for translational research is the community, investigators need to know how to engage in research activities and collaborations with multiple stakeholders including practitioners, administrators, consumers, and family members. These stakeholders will be critical to informing the research and to successfully carrying it out. Sixth, investigators must have knowledge about issues of diversity that are common in usual-care settings and in the communities with which they will interact. Finally, in translational research there will always be a tension between the unique challenges and requirements of the local setting and the development of knowledge that can be generalized across settings.

These challenges are well within the purview of how social work research defines itself. Our research and education have always embraced interdisciplinary approaches to treatment and research. We prepare students for complex community service environments. Much of our research takes place in the community, and cultivating approaches to diversity has always been part of our approach to understanding and intervention. The cultural exchange model for translational research described above emphasizes issues of cultural competence, community participation, transactional communication among stakeholders, and a commitment to evidence-based interventions, all of which are hallmarks of social work practice models. In short, we are a good platform for building a translational research agenda in mental health services.

A potential criticism of this analysis is that we have not included a detailed presentation of the evidence-based practice literature in social work. As stated above, this literature generally provides models for conceptualizing and describing evidence-based practice, how to do it or how to teach it. A translational research agenda for any of these models for doing evidence-based practice in social work would suggest that they should be investigated as practice models using rigorous research methods. Relevant translational questions would concern whether these approaches to evidence-based practice can be developed and manualized for practitioners, implemented with fidelity and sustained over time, whether they improve consumer outcomes, whether they are cost-effective, and whether they can be generalized across practice settings. These questions would make excellent additions to the NIMH agenda for social work research.

AN AGENDA FOR SOCIAL WORK IN TRANSLATIONAL MENTAL HEALTH SERVICES RESEARCH

Having defined translational science and shown that social work is ideally placed to move translational science, we now turn to suggestions for setting an agenda that will increase the likelihood that social work research can find a strong place in translational science at NIMH. We see at least four activities that are critical to promoting translational research in social work: training, special funding mechanisms, national activities, and development of consortia of service practitioners and researchers.

1. *Training.* The training for translational mental health services research in social work must be interdisciplinary in theory and methods. Relevant theoretical fields include

information science, clinical decision making, organizational theory, finance, strategic and behavioral change, learning theory, and marketing. The relevant methods encompass randomized effectiveness trials, a range of quasi-experimental designs, case studies, CBPR, and qualitative and mixed methods. We would recommend a move away from generic research training to specialization. For example, training that specifically focuses on the use of randomized controlled trials to test intervention effectiveness or to test implementation methods in the community would be a single training track. Similar specialization tracks could include methods for intervention development and feasibility testing, the range of cost methodologies in mental health services, the use of prospective observational quantitative methods to study critical implementation processes over time, and the use of ethnographic methods to study critical implementation processes at the organizational and practitioner levels, as well as tracks in mixed methods designs. We believe that this will require building a range of postdoctoral training options in social work in translational science. This specialization could also begin at the predoctoral level, but we recognize that specializing too early could compromise some of the theoretical and methodological breadth that is necessary for providing leadership in translational science efforts. We not only want to train experts but also scientists who can take leadership on interdisciplinary teams. Nonetheless, we believe that postdoctoral training is the main vehicle for building research expertise and capacity in translational mental health services research in social work.

Building these kinds of postdoctoral training options will necessitate the use of a range of training arrangements that are interdisciplinary within schools of social work or that are multidisciplinary across departments and universities. This will require leadership to develop these training teams around problem areas or service sectors that social work is ideally placed to provide.

We would also recommend integrating some of this training with master of social work (MSW) curriculum through seminars or field placement opportunities with existing translational research projects. This MSW integration is critical for two reasons. First, it will be an opportunity to attract MSWs into PhD programs and groom them for advanced translational research training. Second, and equally important, is to build bridges for team building with MSWs as they move into the human service sectors that are the sites for future translational research.

2. *Funding mechanisms.* Aside from the standard investigator-initiated mechanisms, R-01, R-21, R-34, and R-03 that are well suited for translational science, there are three mechanisms with additional relevance. The T32 is a training mechanism for predoctoral, postdoctoral, and combined training programs. There are almost no mental health services T32s in social work. There are two recent initiatives at NIMH that further the relevance of these training grants for social work. One is for building an interdisciplinary workforce in research (RFA-RM-06-006), and one is on translational science specifically (PA-06-356). Social work

could invest in the development of T32 training grants using interdisciplinary teams that include researchers from other fields who have existing T32s in relevant training areas. This could bring needed expertise and experience in both substantive and training domains that would be needed for developing new training grant applications in social work. T32s can also be developed across institutions when they are organized around a methodological or population-specific theme.

The R-25 (research education grant) is also a mechanism that can be used for more time-limited training institutes on translational science for practice and research professionals in the context of regularly occurring national professional conferences (National Association of Social Workers, Council on Social Work Education, Society for Social Work and Research). For example, there could be a yearly series of colloquia or workshops on different methodological aspects of translational research taught by social work and interdisciplinary faculty at national social work meetings. These colloquia could also spawn working groups that develop further training and research opportunities in particular areas.

Finally, the CTSA (Clinical and Translational Science Award, RFA-RM-06-002) is a recent funding initiative at NIH. The purpose of the CTSA is to build a new cadre of well-trained translational scientists who work in multidisciplinary contexts to develop new and novel approaches to translational research and to speed the flow of knowledge to the front lines of clinical care. These are well-endowed centers (up to \$6 million in total costs per year), and they must capitalize on existing synergies at the host institution. NIH seeks to fund up to 50 of these in the next 10 years. It is very unlikely that schools of social work will mount these separately from other larger schools and departments, but it is very likely that CTSA consortia will develop at numerous universities, and social work should strongly advocate for participation as these consortia develop.

3. We need to use the setting of national social work meetings to define one or more interest groups that are committed to set agendas, assess capacity and needs, and devise strategies for enhancing social work's participation in translational research and for using the training mechanisms at NIMH. These groups then can be formal vehicles used to benefit from and inform national policy-making efforts that shape funding priorities and funding streams at NIMH and NIH.
4. If translational science is to grow in social work, we need to develop consortia of providers, consumers, and researchers to build the partnerships that can be used to develop commitments and strategies for translational research projects. Rather than advocating top-down or bottom-up approaches, these need to be synergistic partnerships that recognize the necessary combination of strengths and perspectives that are needed for true translational partnerships. The goal is not to ensure that practice

agencies become good hosts for research but rather to ensure that practitioners, consumers, and researchers work around the table together to learn from each other and devise working partnerships that will yield fundable translational research. Given the amount of shared experience and trust that is needed to successfully form these partnerships, social work is ideally placed to succeed.

We believe that if social work can successfully construct a translational training and research agenda, we are rightfully placed to become leaders in translational research. There is no other profession that is better placed to do it in mental health services. We urge the profession to devote the attention and resources necessary to promote and support the leadership that is required to take advantage of this extraordinary opportunity for social work to increase its capacity for practical, relevant, and rigorous research about improving services for mental health consumers in our country.

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