Fostering integrated approaches to dissemination and implementation and community engaged research

Dara R. Blachman-Demner, Ph.D.¹ Tisha R. A. Wiley, Ph.D.² David A. Chambers, Ph.D.³

¹Office of Behavioral and Social Sciences Research, National Institutes of Health, Bethesda, MD, USA

²National Institute on Drug Abuse, National Institutes of Health, Bethesda, MD, USA

³National Cancer Institute, National Institutes of Health, Rockville, MD, USA

Correspondence to: D Blachman-Demner dara.blachman-demner@nih.gov

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This special issue has focused on the intersection of dissemination and implementation (D&I) research and community engaged (CE) research. These two approaches have largely emerged along parallel tracks at the National Institutes of Health (NIH) over the course of the last few decades, but both are consistent with NIH's overarching mission to “enhance health, lengthen life, and reduce illness and disability.” Achieving this goal involves a complex set of processes and stakeholders working together to improve the uptake of evidence and evidence-based health interventions.

Since 2006, NIH has supported the burgeoning field of D&I science through program announcements to support research projects [1], an annual conference [2], and, more recently, an annual training series [3]. Over the last decade, NIH investments have advanced our understanding of the processes, facilitators, and barriers involved in this translation into real world practice. As the field advances, we must build on this progress and deepen our understanding of which dissemination and implementation strategies are most effective and how best to tailor these strategies so that we can facilitate the broader adoption of and access to evidence-based practices, programs and policies. Much work remains to realize the potential that D&I science has to ultimately improve population level health, as highlighted by the identification of “facilitating the adoption of behavioral and social science findings into health research and practice” as a scientific priority in the new Office of Behavioral and Social Sciences Research (OBSSR) Strategic Plan [4].

Community engaged research has progressed along a simultaneous, but mostly parallel trajectory. There is a growing consensus that for research discoveries to truly have the desired impact on human health, the “community” needs to be engaged in the research process. “Community engagement” in research, policy, and practice was first defined by CDC as “the process of working collaboratively with and through

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groups of people affiliated by geographic proximity, special interest, or similar situations to address issues affecting the well-being of those people” [5]. Since that time, a range of efforts across the federal government have emerged to encourage this collaboration and community engagement in the research enterprise. At NIH, the Clinical and Translational Science Awards (CTSA) program, which began in 2006, was developed to improve translation of basic and clinical findings to benefit health. Although primarily focused on earlier stages of translation, the CTSA program has also included efforts to optimize the pathways necessary to get treatments and preventive interventions to patients, families, and communities as quickly as possible. From the initial funding announcements, community engagement was identified as a critical and necessary component of this work and a number of initiatives were developed and implemented to work towards this goal [6, 7].

Inherent in this work is an implied definition of “community” that typically encompasses the clinicians involved in implementing an intervention and/or the targeted patient population (and sometimes their families). However, a broader definition of CE research may include engagement of a range of stakeholders such as community leaders, advocates, policy makers, social service practitioners or state/local administrators [8]. It is important to be clear about how community is defined in any given initiative or project. As we continue to push towards integration of CE and D&I research, it may be useful to consider whether the same principles from community engaged research and practice can be applied to other systems, organizations or stakeholders.

Community engagement in research can span a continuum from minimal participation (e.g., an advisory board to help disseminate findings) to

involvement of the community partner as an equal participant throughout with many alternatives in between. Community-based participatory research (CBPR) lies at one end of this continuum as a framework that requires the community entities to be equal partners in the entire research enterprise from project identification and design to dissemination of results [9]. Over the last few decades, NIH has supported a broad range of CBPR projects starting from the first one funded by the National Institute of Environmental Health Sciences (NIEHS) in the mid-1990s and, more recently, with OBSSR playing a leadership role in building and supporting this science.

A recent commissioned review identified 490 CBPR projects actively funded from 2004 to 2013 across a broad range of NIH institutes and centers [10]. This review included a survey of Principal Investigators that found while CBPR projects spanned the research continuum from basic to clinical to health services and translational, the majority identified their project as health services or translational research. Interestingly, however, only 7% self-identified as a D&I study, compared to 48% as an intervention study (this was compared to 2 and 58% respectively among a comparison group of Behavioral and Social Science Research (BSSR) community intervention grants). Notably, CBPR grants were more actively engaged in disseminating their findings to community audiences than comparable non-CBPR BSSR grants. While not all community engaged research can or should reach the intensity level of CBPR, these findings suggest that there is much work to be done in terms of better integrating the principles, practices and methods of community engaged research with those of D&I research.

It is clear that dissemination and implementation research requires an understanding of and collaboration with the service and community settings in which the work is occurring for the research to be meaningful. A recent analysis of D&I studies funded by the National Cancer Institute from 2000 to 2012 suggests that it is common for these studies to involve some form of “collaborative processes” [11], and the projects in this volume represent examples of studies that have extensively worked to incorporate both D&I and CE research perspectives. That said, as noted by Holt and Chambers [12], it is challenging for studies to be able to successfully integrate both perspectives with rigor and expertise. Nonetheless, we are encouraged by the innovation of these studies and hope this trend will grow in coming years—a trend away from minimal approaches to community engagement (e.g., incorporating a focus group in intervention development) and towards more meaningful, purpose-driven collaborative efforts. As outlined below, several recent NIH-supported efforts and initiatives explicitly encourage and facilitate the coming together of these two fields.

A number of recent Funding Opportunity Announcements (FOAs) and related activities highlight the increasing emphasis on this integration of D&I and CE/CBPR research traditions. These FOAs exist

along a continuum from encouraging but not requiring partnerships, to making partnerships a central feature of any proposed study. The most recent multi-institute D&I funding announcements (PAR-16-236, PAR-16-237, PAR-16-238), which provide a broad outline of the areas of D&I science that NIH would like to see develop further, do not require investigators to take a CE/CBPR approach, but do have language encouraging the “incorporation of stakeholder relevant outcomes of research” and “...a greater emphasis on the resources of local care settings and the needs of multiple stakeholders including approaches that...engage stakeholders and end users throughout the process” [1].

Other recent NIH funding announcements have been directive about the importance and centrality of a community partner. For example, the RFA that solicited applications for NIDA’s Juvenile Justice-Translational Research on Interventions (JJ-TRIALS) initiative, RFA-DA-13-009, required applicants to name a juvenile justice partner as part of the application, and these partners were designated as Key Personnel (meaning that NIH had to be notified and approve of any proposed changes in partners). After the JJ-TRIALS initiative was funded and launched, it was structured such that juvenile justice partners were treated as equal voting partners to academic-based PIs on the steering committee responsible for the overall direction of the cooperative project [13]. Similarly, a recent RFA issued by NHLBI, “Implementation REsearch to Develop interventions for People Living with HIV,” (PREClUDE; RFA-HL-18-007) requires a partnership between researchers and the targeted clinical or community-based setting. A step further in this continuum can be found in recent RFA issued by NIMH, “Implementation Science for the Prevention and Treatment of Mental and/or Substance Use Disorders in Low- and Middle-income Countries (U01)” (RFA-MH-17-650), which required that applicant organizations be based in low- and middle-income countries. While the RFA did not require that the applicant organization be a community-based organization, the requirement that the applicant organization be based in the targeted country helps assure that the perspective of those in the targeted community will remain a focus of the research.

Advancing the field will require not only studies that fully integrate the D&I and CE research perspectives, but a cadre of researchers trained in both traditions, with a sophisticated skillset that allows them to understand and navigate the tensions inherent in such complex projects. Indeed, a recent paper exploring the training needs of D&I researchers, identified several priorities that sit at this intersection, including: Improving Practice Partnerships, Communicating Research Findings, Making Research More Relevant, Consider and Enhance Fit, Build Capacity for Research, and Understand Multilevel Context [14].

Mentorship is likely to play an essential role in training investigators in these ways [15]. To date, there are no existing programs that specifically focus on bridging these traditions, but the issues of community engagement are inevitably addressed in NIH-supported training programs. NIH has supported a number of training programs over the years to address these, and other, needs [16], including the Trans-NIH Training Institute on Dissemination and Implementation Research in Health (TIDIRH) [3], the NIMH-supported Implementation Research Institute (IRI) [17], and the NCI-supported Mentored Training for Dissemination & Implementation Research in Cancer (MT-DIRC) [18], among others [19]. Motivated D&I researchers may also choose to avail themselves to targeted training in CE/CBPR methods, such as the NIGMS/OBSSR supported CBPR Partnership Academy [20] or the NCI/OBSSR supported CBPR Quickstart Training in Breast Cancer Research [21].

Cross-cutting these initiatives is the broad underlying goal of improving population health by ensuring that research findings move beyond scientific journals and into broad use by the communities that most need these insights, tools, and interventions. While NIH plays a crucial role by providing infrastructure to support research that moves us closer to this goal, we recognize that we are one among many Federal funders working to improve this uptake of evidence. Indeed, for our investments to have their broadest impacts over time in communities and health care systems depends on the ongoing work by our partners such as the Centers for Disease Control and Prevention (CDC), the Agency for Healthcare Research and Quality (AHRQ) and the Substance Abuse and Mental Health Services Administration (SAMHSA). For example, our partners at CDC are leveraging implementation science to address key questions that will examine which implementation approaches, barriers and facilitators will allow PEPFAR programs to have their broadest possible impact [22]. Additionally, recognizing the importance of these inter-agency collaborations, over the last few years, the annual Dissemination and Implementation Conference has included representatives from agencies such as CDC on the conference planning committee.

Although not without its challenges, collaboration and coordination across the range of federal agencies that support basic, applied, or policy research; translation; and delivery of services is crucial to ensuring that the investments we make in developing interventions and knowledge will ultimately make their way to our clinics, hospitals, homes, and communities. To achieve the desired public health impact of these investments, we encourage researchers to be bold and to forge new scientific paths that use the unique and important insights community partners offer to develop ever-more creative and methodologically

rigorous studies that will facilitate the rapid translation of scientific findings to be broadly accessed by the communities and patients that can most benefit from this information.

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