TBM

NEWS FROM NIH

News from the NIH: highlights in implementation science from the National Cancer Institute and the National Institute of Mental Health

Russell E Glasgow, PhD,[1] David A Chambers, DPhil,[2] Laurie Cynkin, MHS[1]

[1]National Cancer Institute, Rockville, MD, USA
[2]National Institute of Mental Health, Rockville, MD, USA
Correspondence to: L Cynkin
cynkinl@mail.nih.gov

Cite this as: *TBM* 2013;3:335–337
doi: 10.1007/s13142-013-0218-z

There is interest in and support for activities related to implementation science (IS) at the National Cancer Institute and the National Institute for Mental Health. Since some of the activities we mention are identified under the broad heading of dissemination and implementation (D&I) research, we consider D&I and IS to be synonymous for purposes of this update. This column highlights some of the activities in the field in the hopes that investigators will use these opportunities and resources to build upon current knowledge and practice in IS. Below, we summarize new opportunities in research funding and review, a training institute for dissemination and implementation researchers, resources available, and a new demonstration project designed to bring patient-centered care to the primary care setting. Several of these initiatives are trans-National Institutes of Health (NIH) activities in which multiple institutes and centers participate. This update does not intend to cover all NIH activity in this area.

Funding opportunities

Sixteen institutes, offices, and centers of the NIH encourage investigators through three recently reissued funding opportunity announcements to submit research grant applications that identify, develop, and refine effective and efficient methods, structures, and strategies to disseminate and implement research-tested health behavior change interventions and evidence-based prevention, early detection, diagnostic, treatment, and quality of life improvement services into public health and clinical practice settings:

- PAR-13-055 R01
- PAR-13-054 R21
- PAR-13-056 R03

The goals of these re-issued and expanded program announcements are to encourage transdisciplinary teams of scientists and practice stakeholders to work together to develop studies that improve understanding of IS research and demonstrably improve the success of efforts to integrate evidence-based practices within diverse community and practice settings. Tinkle et al. [1] summarize and describe characteristics of studies funded during the initial years of the PAR (2005–2012).

Highlights of the new announcements:

- An explicit focus on measures and measure development for IS issues
- A request for applications focused on sustainability and encouragement of international IS applications
- Added emphasis on "scaffolding of interventions" and multilevel, complex programs for complex situations and persons with multiple chronic conditions
- Interest in the development and use of innovative designs appropriate for IS to produce more relevant, rapid, and generalizable results
- Opportunities to study efforts to expand capacity of healthcare contexts and healthcare–public health linkages to improve practice
- Study of the assessment and impact of contextual factors and policy issues on IS efforts

Who's on board?

There is widespread participation across the NIH for these PARs, as numerous Centers and Institutes have expressed their support for these funding opportunities in D&I research. At present, supporters include NIMH, NCI, NCCAM, NHGRI, NHLBI, NIA, NIAAA, NIAID, NIDA, NIDCR, NIDCD, NIDDK, NINDS, NINR, FIC, and OBSSR. In addition, there are separate institute-specific initiatives (e.g., NHLBI and NIDDK's R18 FOAs), and also considerable cross-institute activities such as the Clinical and Translational Science Awards (e.g., the comparative effectiveness and community engagement subgroups) and the recent NIH Common Fund supported Health Care Systems Collaboratory (https://commonfund.nih.gov/hcscollaboratory/) funding of pragmatic studies.

Standing review committee

The Dissemination and Implementation Research in Health (DIRH) permanent study section (http://public.csr.nih.gov/StudySections/IntegratedReviewGroups/HDMIRG/DIRH/Pages/default.aspx) was created by the Center for Scientific Review in 2010 to review IS applications intended to bridge gaps between public health, clinical research, and everyday practice. The review committee, which grew out of the Special Emphasis Panels of the PARs, focuses on the review of a broad range of IS studies designed to transform healthcare delivery, improve health outcomes, manage acute and chronic illness, and advance research methods and measurement. This permanent study section also reviews investigator-initiated IS grants intended to integrate research, policy, and practice in addition to responses to the PARs mentioned.

Resources

NCI's IS website (http://dccps.nci.nih.gov/is/) has a number of resources available for both researchers and practitioners. Resources include IS publications, selected presentations, NCI-funded IS projects, funding opportunities, and the multifaceted Cancer Control P.L.A.N.E.T. (Plan, Link, Act, Network with Evidence-based Tools), a web portal that integrates several website resources and tools [2]. Possibly most relevant to *TBM*, it contains the Research Tested Intervention Programs (RTIPS) website, a repository of evidence-based intervention programs which currently houses over 130 RTIPS programs, many of which address prevention or care issues that are relevant to but not specific to cancer such as obesity, tobacco control, and translational genomics. RTIPS also contains resources such as manuals, guidelines, FAQs, materials for participants, and tools for program implementation.

Training

D&I research is advancing the knowledge base for how best to integrate evidence-based interventions within clinical and community settings and how to make research more relevant and actionable for policy and practice. Though the field is growing, there are only a few training programs in IS research and further efforts are crucial to build the field's capacity. To this end, the NIH (led by OBSSR, NCI, and NIMH), and Veterans Health Administration collaborated to develop a 5-day training institute (Training Institute in Dissemination and Implementation Research in Health (TIDIRH)) for postdoctoral level applicants aspiring to advance this science.

The TIDIRH, now in its third year, uses a residential immersion approach to maximize opportunities for trainees and faculty to interact. A train-the-trainer-like approach equips participants with materials that they can readily take back to their home institutions to increase interest and further investment in D&I. The TIDIRH curriculum includes a balance of structured large group discussions and interactive small group sessions. Meissner et al. recently summarized the results from the first TIDIRH in a publication ([3], *Implementation Science*).

Over the first 3 years of TIDIRH, over a hundred fellows (selected from over several times this number of applicants) from a wide variety of disciplines will have completed the course. Six months after the first year of the institute, a follow-up survey (97 % return rate) revealed that 72 % had initiated a new grant proposal in D&I research; 28 % had received funding, and 77 % had used skills from TIDIRH to influence their peers from different disciplines about D&I research through building local research networks, organizing formal presentations and symposia, teaching, and by leading interdisciplinary teams to conduct D&I research.

The second year of training was held in San Jose, CA, USA in July 2012, and the 2013 course is set for St. Louis, MO, USA. All presentations including speaker notes and key references are publicly available on the web at http://obssr.od.nih.gov/index.aspx. While TIDIRH and other recent experiments in IS training have reported positive initial findings, there remains a largely unmet need for training in IS. We encourage applications for regional training grants and other training innovations (e.g., distance learning, on-line training; communities of practice).

My Own Health Report

An example of an ongoing federally-supported IS activity is the My Own Health Report (MOHR) project. Funded by the NCI, AHRQ, and the NIH Office of Behavioral and Social Sciences Research, MOHR is an effort to collaboratively design, implement and rapidly evaluate a flexible, pragmatic intervention employing a patient reported data system to be used by patients/ providers in jointly developing patient-oriented health plans.

MOHR is predicated on the need for greater attention to and support for patient-centered health behavior and mental health issues in primary care, and for practical tools, study designs and results that stakeholders will find relevant. It is important to demonstrate that agreement can be reached on key indicators of patient-centered factors, that patient-reported measures are considered relevant and feasible by both patients and practitioners, and that such brief measures can be integrated into the real world primary care clinic flow to promote consistent evidence-based interventions in diverse and low-resource primary care settings (Glasgow, HEB [4]).

Based on work from a prior NIH consensus conference to identify brief, valid items, MOHR standardizes key intervention elements (e.g., 17 patient report items to assess 10 important health behavior and mental health domains, automated

feedback reports including summaries for both patients and health care teams) but allows for local tailoring of delivery flow and approach to counseling and referral.

Multiple stakeholder groups, including patients and practitioners, have been involved in identifying domains and patient-report items, design, and testing of the automated survey, patient feedback, and provider guidance documents [5]. This pragmatic cluster randomized implementation study [6] is being conducted among nine pairs of diverse primary care clinics in six states including both community health center safety net and AHRQ funded practice-based research network sites. Each clinic will study approximately 200–300 adult patients, focusing on primary outcomes of (a) the reach of the intervention among all eligible adult primary care patients; (b) the consistency of implementation of the items, feedback, and counseling/referral; and (c) resource and time costs.

Summary

This overview highlights recent centralized and individual IS funding and training opportunities at NIH, with emphasis on efforts from NCI and NIMH. There is increasing interest in IS across the Department of Health and Human Services, among healthcare stakeholders, and recently, among international and global health organizations, in particular.

1. Tinkle M, Kimball R, Haozous EA, Shuster G, Meize-Grochowski R. *Nursing Research and Practice*. 2013;2013:909606.
2. Sanchez MA, Vinson CA, et al. Cancer Control PLANET: moving research into practice. *Cancer Causes & Control*. 2012;23:1205–1212.
3. Meissner HI, Glasgow RE, Vinson CA, Chambers D, Brownson RC, Green LW, Ammerman AS, Weiner BJ, Mittman B. The U.S. training institute for dissemination and implementation research in health; implementation Science 2013;8:12.
4. Glasgow RE. (2013). What does it mean to be pragmatic? Pragmatic methods, measures and models to facilitate research translation. *Health Education and Behavior, 40*:(3)257–265.
5. Estabrooks PA, Boyle M, Emmons KM, et al. Harmonized patient-reported data elements in the electronic health record: supporting meaningful use by primary care action on health behaviors and key psychosocial factors. *Journal of the American Informatics Association*. 2012;19:575–582.
6. Krist, AH, Glasgow, RE, Glenn B, et al. (2013). Designing a flexible, pragmatic primary care implementation trial: the My Own Health Report (MOHR) Project. Implementation Science (in press).