Published in final edited form as:

Am J Prev Med. 2009 November ; 37(5): 464–467. doi:10.1016/j.amepre.2009.06.018.

Clinical Translational Science Awards and Community Engagement Now Is The Time to Mainstream Prevention into the Nation's Health Research Agenda

Lloyd Michener, MD,

Department of Community and Family Medicine, Duke University, Durham, NC

F. Douglas Scutchfield, MD,

College of Public Health, University of Kentucky, Lexington, KY

Sergio Aguilar-Gaxiola, MD, PhD,

University of California, Davis, School of Medicine, Sacramento, CA

Jennifer Cook, BA,

Department of Community and Family Medicine, Duke University, Durham, NC

A.H. Strelnick, MD,

Albert Einstein College of Medicine Institute for Community and Collaborative Health, Bronx, NY

Linda Ziegahn, PhD,

Center for Reducing Health Disparities, Sacramento, CA

Richard A. Deyo, MPH, MD,

Departments of Family Medicine and Internal Medicine, Oregon Health and Science University, Portland

Linda B. Cottler, MPH, PhD, and

Department of Psychiatry, Washington University School of Medicine, St. Louis, MO

Mary Anne McDonald, MA, DrPH

Department of Community and Family Medicine, Duke University, Durham, NC

Abstract

While much attention is devoted to the slow process of cutting-edge “bench science” finding its way to clinical translation, less attention is paid to the fact that basic prevention messages, tests, and interventions never find their way into communities. The NIH Clinical Translational Science Awards (CTSA) program seeks to address a broad mission of improving health, including both speeding up the incorporation of basic science discoveries throughout the clinical research pipeline as well as incorporating concerns of communities and practices into research agendas. The preventive medicine community now has an important opportunity to marry their mission of promoting and expanding prevention in communities to the nation's medical research agenda. This article suggests opportunities for collaboration.

Address correspondence and reprint requests to: Lloyd Michener, MD, Duke University Medical Center, Dept of Community and Family Medicine, Duke Center for Community Research, Box 2914 DUMC, Durham, NC 27710. miche001@mc.duke.edu.

No financial disclosures were reported by the authors of this paper.

Publisher's Disclaimer: This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Despite a 50-year history of medical school involvement in preventive care, national outcomes indicate that the U.S. does not prioritize preventive care. The U.S. still spends more money per capita on health care than any other nation for health outcomes that are similar or worse than peer nations.^{1,2} Effective strategies for prevention and treatments are provided less than half the time.³ Both public and professional media underscore the underinvestment in prevention.^{4–8} However, there is now—more than ever—opportunity to elevate the importance of prevention in the nation's healthcare agenda through the Clinical and Translational Science Awards (CTSA) program.

Background: A Legacy of Community Engagement

Beginning in the 1950s and 1960s, departments of community medicine took root and started growing within medical schools. Primarily focused on assisting communities in improving their overall health, these new departments expanded and established links with physicians, nurses and groups of citizens who were committed to improving the health of their communities. From underserved communities in Appalachia to those in Harlem—these departments flourished.

In the 1970s and 1980s, new departments of family medicine worked to address the shortage of high-quality primary care doctors that could contribute to overall community health improvement. Community health centers started to flourish in those same departments, as faculty working in communities recognized the benefit of allowing community ownership of care delivered in the communities being served.

Despite progress in some communities, in other places, the era was marred with tension between medical school leadership and the community activists living in the neighborhoods surrounding academic medical centers. Academic medical centers, often located in low-income, urban neighborhoods, were too often more focused on expanding and modernizing their clinical, research and parking facilities to appeal to suburban patients; growing their grant, contracts and clinical income; and building their regional and national reputations rather than on improving the health and well-being of their neighbors. At that time, very little connection existed between NIH-funded biomedical research and departments of community, preventive, and family medicine. As NIH and the medical school clients they served rapidly expanded funding (between 1998 and 2003 the NIH budget doubled), the role and place of departments concerned with health problems outside the walls of the academic medical center remained unconnected to the nation's larger research agenda.

The CTSA Program

That relationship is now changing. To assure that federally funded basic science discoveries and clinical scientist training opportunities result in overall population health improvement, The NIH formed the CTSA program. The CTSA program seeks to address a broad mission of improving health, including both speeding up the incorporation of basic science discoveries throughout the clinical research pipeline as well as incorporating concerns of communities and practices into research agendas.⁹

Sponsored by and funded through NIH's National Center for Research Resources (NCRR), the CTSA program, which currently includes 38 academic health centers in 23 states, will ultimately link 60 institutions together at a total annual cost of \$500 million by FY 2012.² Half of the nation's medical schools will ultimately weave into the program. As these CTSA sites spread across the nation, the opportunity for prevention and primary care communities to link to translational science grows large.⁹

Of particular interest to those wanting to promote the importance of prevention in the nation's healthcare agenda, is the CTSA's work in community engagement. Currently, a committee with representatives from more than 40 medical schools with CTSA awards is working with governmental agencies to knit together medical schools, healthcare providers, community-based agencies, and the lay community itself, to shape the definition and role of community engagement in clinical and translational research. "The work of this group falls under the CTSA's strategic goal to "Enhance the Health of Our Communities and the Nation." (See Table 1)

This community engagement key function committee has undertaken a number of activities over the past year (see Table 2). However, realizing improved national health outcomes—the ultimate hope of the nation's research agenda—will take far more than meetings and monographs. Increased emphasis is needed at every level on prevention and on translating research findings into practice and policy.^{10–14} The prevention community—including Schools of Public Health and Departments of Preventive Medicine, Family Medicine, Internal Medicine, Geriatrics, Nursing and many others—are excellent sources of translation of clinical research into the community, as are partnerships with state and local health departments, and the CDC.

The prevention community needs to quickly engage the research deans of the nation's medical schools to emphasize the value of their community practice linkages in this new era. Working in partnership with communities, building trust and establishing long-term research relationships—strategies long employed in the prevention community—are vital to the mission of translational science and essential to moving from bench research to the incorporation of medical discoveries into public health practice.

Opportunities for Collaboration

The CTSA program does not directly fund the classic NIH hypothesis-driven, investigator-initiated research. Rather, it is a funding mechanism that seeks to build infrastructure and nurture long-term, ongoing connections, and transform how academic health centers conduct research. To that end, what are some of the ways that the prevention community can and should immediately link with CTSA efforts?

The first question that would benefit from the input of preventive medicine is how to frame and define translational research and community engagement. Translational medicine has many definitions and goals. The IOM's Clinical Research Roundtable describes two translational blocks : (T1) moving laboratory science into clinical application and (T2) translation of clinical studies into clinical practice.¹¹ However, many in the research community have identified other blocks to be included in the agenda that focus on dissemination and implementation research. A proposed (T3) block would move clinical application into widespread practice and a (T4) block would translate practice into improved outcomes.¹⁵ Advocates for prevention and primary care need to drive these discussions to ensure that prevention is included in T3 and T4.

Next, how should future generations of investigators for this work be trained? The CTSA Education and Career Development key function committee provides "a forum for the advancement of integrated and interdisciplinary education, training, and career development in Clinical and Translational Science." Members of this committee are facilitating "the dissemination of new teaching ideas, the sharing of curricula and planning for shared courses." The Educational Competencies workgroup, a subgroup of the Community Engagement key function committee is working to offer a common set of core competencies for community engagement that can be woven into translational medicine programs. Prevention advocates can and should and could help define these educational competencies.

Also, translation medicine will not yield health outcomes that matter until it tackles health disparities. Training researchers to undertake this kind of research and to attract more members of disadvantaged communities to medical professions is a crucial objective with which the preventive medicine community can assist.

Third, how can the methodologic innovations pioneered by preventive medicine and public health, such as community–academic partnerships and community-based participatory research (CBPR), be moved from the margins to the center of clinical and translational research?^{16,17} Some centers at NIH (e.g., National Cancer Institute, National Institute of Environmental Health Sciences, among others) support community–academic partnerships, while others have supported CBPR (e.g., National Center for Minority Health and Health Disparities). The CTSA's Community Engagement program provides an opportunity to end prevention research's marginalization and mainstream its methodologic innovations.

Finally, the CTSA sites are working to build links between medicine and public health.¹⁸ Building partnerships with Prevention Education Resource Centers (PERCs), Prevention Research Centers (PRCs) and other prevention entities within Schools of Public Health is key. PRCs can assist CTSA sites by providing a ready infrastructure and decades of experience in community engagement.¹¹

Conclusion

Admittedly, these proposed collaborations are no easy feat. Funding challenges are squeezing every institution's time and money. Public health and medicine have a long and colorful history of cultural differences. But perhaps most importantly, the public is traditionally more fascinated by cutting-edge technical innovation that addresses disease after the fact than it is in disseminating what is already known about disease prevention and health promotion. Legislators reflect this public perception and allocate funding accordingly.

The CTSA's work in community engagement offers an opportunity to help shift this perception and strike a balance between bench science and disease prevention. Together, those inside and outside the CTSA consortium, now have an opportunity to face the complexity of encouraging a broader focus on prevention. In an increasingly competitive environment the temptation is to work even harder in isolation. But only by working together, across and within our communities of researchers, clinicians and citizens, will we collectively realize better health outcomes. It is time to mainstream prevention and community engagement into the nation's health research agenda.

More information on the CTSAs and their activities can be found at <http://www.ctsaweb.org/>

Acknowledgments

This article was made possible by Grant Numbers: UL1 RR024992, RR024128-01, 1 UL1 RR024140-01, UL1 RR024146, UL1 RR024992, and 1UL1 RR025750-01 from the National Center for Research Resources (NCRR), a component of the NIH, and NIH Roadmap for Medical Research. Its contents are solely the responsibility of the presenters and do not necessarily represent the official view of NCRR or NIH.

References

1. Anderson GF, Hussey PS, Frogner BK, Waters HR. Health Spending In The United States And The Rest Of The Industrialized World. *Health Affairs*. 2005; 24:903. [PubMed: 16136632]
2. Davis K, Fund C. *Mirror, Mirror on the Wall: An International Update on the Comparative Performance of American Health Care*. Commonwealth Fund. 2007

3. McGlynn EA, Asch SM, Adams J, et al. The Quality of Health Care Delivered to Adults in the United States. 2003; 348:2635.
4. Begley S. Where are the cures? Newsweek. 2008; 152:56.
5. Levi J, SL.; Juliano, C. Prevention for a Healthier America: Investments in Disease Prevention Yield Significant Savings, Stronger Communities. Washington, DC: Trust for America's Health; 2008.
6. Farquhar JW. The case for dissemination research in health promotion and disease prevention. 1996; 87:S44–49.
7. McGinnis, MMJ. Does Proof Matter? Why Strong Evidence Sometimes Yields Weak Action. Vol. 15. American Journal of Health Promotion, Inc.; 2001. p. 391-396.
8. Satcher D. The prevention challenge and opportunity. Health Affairs. 2006; 25:1009–1011. [PubMed: 16835179]
9. CTSA Program. July 10, 2008http://www.ncrr.nih.gov/clinical_research_resources/clinical_and_translational_science_awards/
10. Briss PA, Brownson RC, Fielding JE, Zaza S. Developing and Using the Guide to Community Preventive Services: Lessons Learned About Evidence-Based Public Health. Annual Reviews.
11. Woolf SH. The Meaning of Translational Research and Why It Matters. JAMA. 2008; 299:211. [PubMed: 18182604]
12. Colditz GA, Emmons KM, Vishwanath K, Kerner JF. Translating Science to Practice: Community and Academic Perspectives. 2008; 14:144.
13. Kerner JF. Integrating Research, Practice, and Policy: What We See Depends on Where We Stand. 2008; 14:193.
14. Zaza S, Briss PA, Harris KW. The Guide to Community Preventive Services: What Works to Promote Health? Task Force on Community Preventive Services. 28
15. Westfall JM, Mold J, Fagnan L. Practice-Based Research—“Blue Highways” on the NIH Roadmap. JAMA. 2007; 297:403. [PubMed: 17244837]
16. Israel BA, Schulz AJ, Parker EA, Becker AB. REVIEW OF COMMUNITY-BASED RESEARCH: Assessing Partnership Approaches to Improve Public Health. Annual Reviews. 1998; 19:173–202.
17. Cargo M, Mercer SL. The Value and Challenges of Participatory Research: Strengthening Its Practice. Annual Reviews. 2008; 29:325.
18. Brownson RC, Kreuter MW, Arrington BA, True WR. Translating Scientific Discoveries Into Public Health Action: How Can Schools Of Public Health Move Us Forward? Association of Schools of Public Health. 2006; 121:97.

Table 1**CTSA strategic goals**

Goal 1:

Enhancing National Clinical and Translational Research Capability

Goal 2:

Enhancing the Training and Career Development of Clinical and Translational Scientists

Goal 3:

Enhancing Consortium-Wide Collaborations

Goal 4:

Enhancing the Health of Our Communities and the Nation:

Subgoal 4A:

Link and facilitate collaboration among community-based research networks to implement research best practices aimed at improving the public's health and reducing health disparities.

Subgoal 4B:

Develop capacity and methods for the translation of research results into practice across the healthcare system, including but not limited to health services and health policy research, comparative effectiveness research, and research into the generation and implementation of evidence-based medicine.

Table 2

Community engagement key function committee activities

<ul style="list-style-type: none">• Defining core competencies for community engagement• Producing a series of regional workshops on community engagement where CTSA sites across the country can gather to exchange best practices• Preparing a monograph highlighting the findings and consensus areas that emerged from the workshops• Offering a community engagement consultative service (CECS), which offers sites the opportunity to exchange knowledge and provide guidance on how to effectively work with communities.
--