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Building an academic-community partnered network for clinical services research: The Community Health Improvement Collaborative (CHIC)

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## BUILDING AN ACADEMIC-COMMUNITY PARTNERED NETWORK FOR CLINICAL SERVICES RESEARCH: THE COMMUNITY HEALTH IMPROVEMENT COLLABORATIVE (CHIC)

**Objective:** Community-based participatory research is recommended for research on health disparities and to improve uptake of clinical research findings. We describe the development of a multicenter consortium designed to support a community agency-academic partner infrastructure to support community-based, health-services research on multiple sources of health and healthcare disparities in local communities.

**Design:** We describe the development of the Los Angeles Community Health Improvement Collaborative (CHIC).

**Results:** The CHIC partners examined the research capacity and health priorities of its partners and developed a research agenda focused on four tracer conditions (depression, violence, diabetes, and obesity) and four areas for development of research capacity: public participation in all phases of research; understanding community and organizational context for clinical services interventions; practical clinical services trial methods; and advancing health information technology for clinical services research. The partners pooled resources to develop these areas for the tracer conditions.

**Conclusions:** The challenges of a participatory approach to community-based clinical services research go beyond the significant methodologic and operational issues for specific projects and include building a sustainable capacity for research, community programs, and partnership across diverse communities and stakeholder organizations even when funding sources are not fully aligned with these goals. (*Ethn Dis.* 2006;16[suppl 1]:S1-3-S1-17)

**Key Words:** Collaboration, Community Participatory Research, Health Improvement

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### INTRODUCTION

Despite remarkable advances in the biomedical sciences and the availability of proven clinical therapies to address many chronic diseases and conditions, the anticipated health improvements at the community level have been elusive, in part because of the difficulty of translating scientific findings into clinical practice.<sup>1</sup> As many as half of Americans with chronic diseases such as diabetes or depressive disorders do not receive adequate care.<sup>2-4</sup> The gap between the promise of science and the realities of community practice have prompted urgent calls for broad changes in health care<sup>5</sup> and expansion in the scope of research to include "practical trials" that inform everyday practice decisions.<sup>6</sup> Trials may be considered practical if they yield findings that practitioners, consumers, or the public

can use and apply. Even given practical utility, research findings may not result in improvements at the community level if stakeholders do not perceive them as relevant and use them. Similar issues apply to adoption and sustainability of evidence-based public health programs designed to prevent or ameliorate health problems through behavior change.<sup>7</sup>

The problem of research relevance may be particularly acute for populations that both suffer health and healthcare disparities and are underrepresented in research.<sup>8</sup> Factors associated with disparities tend to cluster in the same population. Among people living in areas of urban poverty in the United States, for example, 67% were African-American, 20% were Hispanic, and 12% were White<sup>9</sup>; the percentage of non-elderly African Americans and Hispanic Americans below the federal poverty level was 31% and 29%, respectively, compared with 11% for Whites.<sup>10</sup> Thus, clinical or public health intervention research efforts within communities of color, or communities with diverse and largely ethnic-minority populations, may need to attend in intervention design to factors associated with disparities that affect health. Moreover, such studies offer under-served communities an opportunity to participate directly in research designed to benefit their health and to frame those

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Science (KCN, RNB); Healthy African-American Families (LJ); Los Angeles Unified School District 333 (MW); Los Angeles; Venice Family Clinic, Venice (AS); California.

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studies around the set of problems that both research and community stakeholders view as relevant to the primary health concern. How can such trials be developed, and what infrastructure do they require?

The Institute of Medicine's Clinical Research Roundtable recommended promoting public participation and community partnership in all phases of research to increase the relevance of clinical research and promote the adoption of research findings in multicultural and under-served groups.<sup>11</sup> Academic-community partnership is the cardinal feature of community-based participatory research (CBPR), which has been used in public health research to address health disparities but has been less used as a paradigm for clinical or health services research.<sup>11-13</sup> Three core ideas are emphasized in successful CBPR efforts: 1) the mutual transfer of expertise and insights into the issues of concern; 2) sharing in decisionmaking; and 3) mutual ownership of the expertise, data and products of the collaboration.<sup>14</sup>

The development of evidence-based practice strategies, a hallmark of clinical-services research, typically starts with development and evaluation of treatment and service-delivery interventions by researchers without strong community participation. The promise of CBPR is that more sustainable and useful interventions could result if beneficiaries of planned improvements

are involved in all phases of research. The promise is that such participation could lead to more rapid and effective improvements in community health outcomes.<sup>15</sup> A recent review of CBPR identified only 55 English-language studies in health, only one third of which were intervention studies. Thus, this field is still under development. The challenges to implementing CBPR and the strategies required to promote equal partnerships with diverse communities differ greatly from the design priorities and recruitment strategies for traditional clinical or health-services research, which emphasizes strict control of treatment delivery goals and implementation.<sup>16</sup>

Community-based participatory research (CBPR) does not reflect a single approach to research but rather is a philosophy or paradigm for research with a set of principles and methodologic approaches that are still under development. For example, CBPR approaches range from those that are community-generated and driven, supported by consultants, to those that are largely driven by experts in research or advocacy, supported by community participation; the approach to leadership and participation may differ for different phases or activities within a project.<sup>13</sup> A central goal in many CBPR initiatives is empowerment, which focuses on the development of leadership and active participation of vulnerable community members to address issues of importance to their community; efforts to achieve this goal may conflict with efforts to implement evidence-based practices, which often derive from research that has largely excluded community participation in the planning phases.<sup>13</sup> This practice poses a challenge to the current goals of clinical-services research to achieve broader community impact while addressing disparities. Wells et al<sup>17</sup> described a model for blending health-services delivery intervention research, such as quality improvement programs

for chronic disease, by coupling clinical-services research and CBPR goals and methods. That model suggested: 1) joint negotiation of health-improvement priorities across research and community partners; 2) interventions based on evidence-based models but with functions and responsibilities divided among relevant community agencies; 3) development and implementation through a participatory process; and 4) evaluation of effects of these programs on individuals and communities. This model relies on community agencies as brokers for community members in negotiating a fit between evidence-based goals and community priorities and differs from CBPR models that emphasize empowerment of grassroots community members in the leadership structure. Instead, in this model the empowerment of community members becomes a priority within project activities around negotiated aims.

In this article, we describe the development of the Community Health Improvement Collaborative (CHIC), an academic-community partnership designed to develop the infrastructure and methods to implement this model in Los Angeles County. We describe the goals and development of CHIC, four tracer conditions and four research capacity-development areas, and pilot work linking the research development to tracer conditions. We also describe key opportunities and challenges in pursuing these goals.

## **METHODS: GOALS AND DEVELOPMENT**

The Community Health Improvement Collaborative (CHIC) is an academic-community partnership that supports clinical and health-services research applicable to local communities and health-related agencies. The CHIC focus is on developing and implementing effective, evidence-based interven-

tions to address unmet needs and disparities in major health conditions in Los Angeles County that meet research standards for effectiveness and community standards for validity and cultural sensitivity.

To advance its goals, CHIC develops partnerships and promotes leadership on academic and community sides of the partnership in developing, implementing, and evaluating both community programs and research evaluations. The partnership facilitates negotiation of priorities for programs and research and sets guidelines for their development. The long-range goal of CHIC is to build within the community the capacity for sustainable academic-community partnerships that can support improvement in community health care and public-health services and outcomes across diverse cultural and sociodemographic groups and across key health conditions of importance to the community and for which evidence-based programs exist or can be developed through the research. While individual programs and projects may focus on implementation of specific evidence-based programs or pursuit of particular agreed-upon priorities, CHIC is designed for infrastructure capacity development for sustainable partnerships and ongoing program and research development. The Community Health Improvement Collaborative (CHIC) seeks to develop relatively stable academic and community agency leadership and to support entry of new community and academic members over time to improve continuity and sustainability of leadership around key priorities: participatory partnership values; expertise in selecting from and adapting evidence-based strategies; promoting community and cultural relevance; and partnered evaluation and dissemination activities.

Fundamental to the CHIC approach is the principle that community organizational partners require the necessary resources to participate equally in

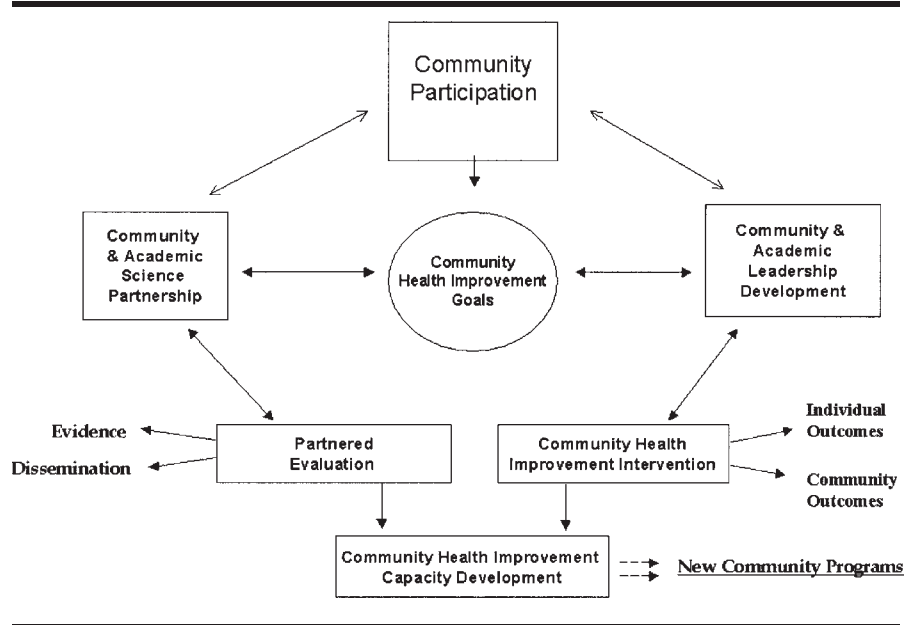


Fig 1. Model: Community Health Improvement Collaborative

research, while academic partners require the institutional support of their community partners to improve health outcomes of relevance to the community in a manner consistent with their values and priorities.

The opportunity to develop an infrastructure initiative arose when several centers and research and training programs became re-oriented and funded nearly simultaneously to advance CBPR principles in seeking to reduce health and healthcare disparities. In particular, the Robert Wood Johnson Clinical Scholars Program shifted its focus to include a major focus on CBPR at the same time that new National Institutes of Health (NIH) centers with a focus on health and healthcare disparities were funded, with overlapping leaders and community partners. The primary investigators (PIs) and community leaders for these programs realized that cooperation and consolidation of resources and planning efforts offered an opportunity to explore a new model of community-partnered health services research while addressing two problems often encountered in CBPR and work in disparities: 1) the lack of funding for meaningful, sustainable

community participation in research; and 2) the weak incentives in academic centers for long-term, community-based research, especially under a CBPR model, given long lead time for products and more reliance on quasi-experimental designs and qualitative methods. In addition, the community partners in these centers recognized that project-based funding is poorly designed to support community partnership and may lead to an exclusive focus on priorities and intervention approaches valued by investigators or funding agencies, rather than by community agencies or members. In addition, research training directors in the partnership thought that the more stable infrastructure of a partnership with centers and lead community agencies would facilitate entry and development of projects by trainees, supported by mentors working consistently with particular community partners over time. Otherwise trainees faced a relatively long lead time for developing relationships and projects despite short training program tenures.

We convened a planning group to explore the desirability and feasibility of coordinating the efforts of several re-

search and training programs housed at three academic institutions (the RAND Health Program, the University of California–Los Angeles (UCLA) branch of the Robert Wood Johnson Clinical Scholars Program [CSP] at the David Geffen School of Medicine, the UCLA Family Medicine Research Center, three NIH centers at UCLA, RAND, and Charles R Drew Medical University) and lead community agency partners for these programs. Each of the Centers, the CSP, and RAND Health has an active community board. One goal of the planning group was to avoid burdening the most active community partners with multiple partnership meetings. An open invitation to participate in CHIC planning was issued to the main community partners of the UCLA CSP and the community chairs of the advisory boards for the NIH centers; of those partners, four agreed to serve as liaisons to the CHIC planning group, including the two community co-chairs of the CSP (representing Healthy African-American Families and the Los Angeles Unified School District) and representatives of the Department of Health Services and Venice Family Clinic, the nation's largest free clinic. Other community partners agreed to participate as needed in presentations, pilots, and other initiatives. In addition to these community partners, the PIs or co-PIs of the relevant centers and programs participated, as well as a few junior faculty members and fellows serving lead roles in projects that were thought to most closely reflect the CHIC goals. While other faculty expressed interest in leadership participation, without specific funding that supported participation in the CHIC planning process, ongoing participation in the CHIC council was most feasible for the initial leaders from the planning phase.

An early activity of the CHIC council was to identify overlapping goals and interests of the academic programs and explore priorities and

new opportunities for programs and research for the community organizations. We explored the best fit between goals to develop or implement evidence-based clinical services or public-health interventions with perceptions of community agency and community member interests. We developed subcommittees to explore priorities and make recommendations for development of tracer conditions, infrastructure and grant development, and research methods. A council chair was appointed who, with the support of the infrastructure committee, negotiated availability of some flexible resources at RAND and UCLA to provide administrative support to CHIC operations. The directors of each center and program, as well as the community leaders, developed a plan within their own programs to expand the scope of their planned research to approach CHIC goals, given the availability of shared resources and newly negotiated flexible funds. Then the planned expansions were implemented by the individual programs, not the CHIC council. The council monitored progress of programs and pilots and identified new priorities for methods or infrastructure development across programs as the work progressed.

### **RESULTS: RATIONALE FOR TRACERS, RESEARCH DEVELOPMENT PRIORITIES, AND PILOTS**

The CHIC leadership council was initiated in April 2003 and meets monthly. The assessment of best fit between academic programs and community priorities led to identification of four tracer conditions: depression, psychological consequences of exposure to violence in children, obesity, and diabetes. These represented the conditions for which the most intervention research had been conducted in the academic partners in collaboration with commu-

nity partners and which were seen as continuing priorities for the community partners. Further, this set of conditions afforded an opportunity to focus intervention programs and research on a wide range of health and healthcare issues, including access to care, quality and outcomes of care, and primary prevention of health conditions through behavioral change strategies relative to public health. Other tracers considered included hypertension and heart disease, smoking, alcohol and drug abuse, asthma, and schizophrenia. These were viewed as priorities for expansions of the partnership after establishing an infrastructure and approach. We briefly discuss the rationale for each tracer condition below.

#### **Depression**

The CHIC council members selected depression as the lead tracer condition for a substantial pilot of a broad community development, because of substantial community interest and a 15-year history among CHIC investigators of research on depression, from assessing levels of quality of care and outcomes in regional areas and nationally<sup>4,18</sup> to implementing and evaluating quality-improvement programs in primary-care practices. The Partners in Care study, for example, demonstrated that feasible quality-improvement programs for community-based practices improved outcomes for minorities as well as Whites, and in the long run, overcame substantial health-outcome disparities in depression.<sup>19,20</sup> The implementation of this approach was followed by studies of similar interventions for socially disadvantaged women,<sup>21</sup> the elderly,<sup>22</sup> and adolescents.<sup>23</sup> The CHIC depression pilot is Witness for Wellness, a community capacity development initiative to reduce the burden of illness from depression by reducing social stigma from mental illness, increasing access to appropriate care for depression, and improving policy support for mental-health ser-



vices, within south Los Angeles and other communities of color in Los Angeles County.<sup>24,25</sup>

### Psychological Consequences of Violence Exposure in Youth

The CHIC council selected this tracer condition because it offered a strong focus on an issue of central importance to urban communities, for which an evidence-based intervention had already been developed collaboratively across UCLA, RAND, and a community partner, the Los Angeles Unified School District (LAUSD). The intervention, Cognitive Behavioral Intervention for Trauma in Schools (CBITS), uses group therapy and parent and teacher education provided within the school and is effective in reducing symptoms of depression and posttraumatic stress disorder, compared to a wait-list condition that has enhanced community referral.<sup>26-28</sup> In considering the goals for a pilot, the council prioritized replication rather than dissemination because CBITS was the first evidence-based program for the particular population and condition studied, ie, immigrant children in schools who were exposed to violence. The CHIC pilot is the QueensCare Wellness Study, an adaptation and pilot-effectiveness study for the CBITS intervention for middle-school Latino children in faith-based programs in the Pico-Union/Hollywood area. The pilot investigators and community partners selected faith-based programs as the site for replication because of their importance in community-based intervention in Latino communities<sup>29</sup> and to diversify community partners for pilots within CHIC.

### Obesity

The CHIC council members selected lifestyle change (diet and exercise) to prevent obesity because of its importance in health disparities and prominence in current national discussions of health-promotion priorities.<sup>30,31</sup> The

CHIC investigators had experience in tailoring community-based lifestyle-change interventions to different organizational settings and populations<sup>32,33</sup> and developing opinion leaders for lifestyle change in the community.<sup>34</sup> The obesity pilot for CHIC, Lifestyle Balance Program, is an adaptation of an existing lifestyle-balance intervention evaluated in the Diabetes Prevention Program<sup>35</sup> for under-served minority populations in Santa Monica. Early progress is discussed by Punzalan et al.<sup>25</sup>

### Diabetes

The CHIC council selected diabetes as a pilot area because it is a major source of health and healthcare disparities<sup>36-38</sup> and because CHIC investigators had been developing work on diabetes in minority populations<sup>39,40</sup> and were funded by NIH to study diabetes self-management in minority elderly (Mangione, PI).<sup>41,42</sup> The CHIC pilot for diabetes is the implementation and evaluation of an already-funded, randomized empowerment intervention designed to enhance self-management skills of older African Americans and Latinos who have diabetes within several CHIC community partners, such as Venice Family Clinic. In addition, at the request of the community partners, the council decided to follow the Witness for Wellness pilot of depression with a similar pilot on improving access to appropriate care for diabetes. This new diabetes work will be described in a future article, as it is in an earlier stage of development. Because the self-management pilot was already funded, we could implement it within several CHIC community partners to facilitate learning about strategies for cross-partner work; we could also reserve some shared resources to enable the subsequent new diabetes pilot modeled on Witness for Wellness.

The CHIC investigators and community leaders recognized that the set of tracer conditions offered complementa-

ry opportunities for developing the research infrastructure. The problems of depression and diabetes facilitate the investigation of disparities in health status and/or healthcare access and quality, while obesity and psychological reactions to violence permit a focus on prevention and early intervention. Each tracer condition is relevant across age groups, enabling a lifespan perspective. Further, the set of conditions is appropriate for intervention studies that focus on individual and/or neighborhood influences on behavior and on individual and community outcomes of interventions. The historical strength of the academic investigators is in services delivery and health-policy interventions, while much of the health-disparities and health behavior-change literature focuses on environmental and policy factors. Further, the community leaders were also interested in developing environmental and broader social interventions underlying health disparities. Thus, we planned to begin with the services-delivery interventions that are more familiar, but we planned to use a set of conditions that were suited to expansion in the contextual domains. Further, the mental-health conditions permit gaining experience with partners in working on conditions that are the subject of social stigma and discriminatory policies such as differential insurance coverage, while obesity and diabetes offer less socially stigmatized conditions that are often more readily apparent as priorities in under-served, largely minority communities. Ongoing contact with our community agencies as brokers in this negotiation process will allow us to explore, over time, more inclusion of grassroots community members in the council as well as to monitor how community agency and member goals and priorities change. The success of the council will be determined by its ability to achieve these more fundamental elements of CBPR over time.

## RESEARCH INFRASTRUCTURE DEVELOPMENT PRIORITIES

The CHIC council reviewed recommendations for improving clinical research, practical trials, reducing health-care disparities, and implementing CBPR.<sup>6-8,11,13,43-46</sup> We identified four infrastructure development priority areas across tracer conditions and developed a preliminary timeline for addressing each area. The four priority areas are: 1) public participation; 2) community context assessment; 3) practical trial methods; and 4) health information technology (HIT). The first and fourth areas represent major priorities for improving the clinical research enterprise according to the IOM Clinical Research Roundtable, and the second and third areas concern practical trial capability.<sup>6,44</sup>

### Public Participation

Public participation refers to the participation of community members or representatives of community stakeholders, such as community agency representations, in research. Under a CBPR model and as recommended by the IOM roundtable, community participation extends to all phases of research.<sup>13,44</sup> While community-based research typically includes a range of participation roles across different aspects of research,<sup>13</sup> some reviews hold to a standard of full and equal (equitable) participation in all phases of research,<sup>13</sup> a model referred to by Jones et al as community-partnered participatory research (CPPR).<sup>24</sup> The CHIC council implemented a two-level strategy to implement public participation. At the council level, lead community agencies represented public interests. Those agencies included a community advocacy group more similar to community broker or liaison models in CBPR, and the other lead agencies represented service agencies for broader, public-sector populations. These agencies hold

considerable authority and resources for services and have their own institutional goals and constraints. We considered these agencies to be appropriate community stakeholders for developing CHIC because they have the resources to negotiate with academic partners over development, implementation, and evaluation of evidence-based service delivery-improvement models, under the negotiated model suggested by Wells et al.<sup>17</sup> At the project level, depending on the project and lead agency, a fuller community-level participation model was encouraged. Within selected projects, especially Witness for Wellness, CHIC partners pooled resources to support qualitative and quantitative evaluations of the feasibility, process, and impact of such grassroots participation models.<sup>24</sup>

### Community Context Assessment

By community context assessment, we mean measuring and using information on local organizational context and cultural characteristics of populations to inform intervention design and implementation, as well as to identify potential mediators and moderators of intervention effects and therefore clarify potential limits to generalizability. Today's urban communities are organizationally and culturally complex, and these complexities may enable, limit, or shape the uses of interventions and participants' responses to them.<sup>47-49</sup> In addition, community and cultural factors affect the ability of diverse populations to participate in research.<sup>7,8,50</sup> In clinical and health-services intervention research, such environmental factors are often not explicitly addressed, other than attempts to enroll diverse populations and sites and reporting gross site or demographic differences in outcomes. While organizational capacity assessment has been implemented in many fields,<sup>49</sup> such approaches are not usually implemented with a CBPR set of principles, that is, with full community participation in the assessment and

research. Stockdale et al<sup>51</sup> describe the approach being piloted in CHIC for a participatory assessment of the capacity of community organizations to partner in addressing mental-health and substance-abuse problems.

### Practical Trial Methods

Practical trial methods, even in randomized studies, differ substantially from the methods of traditional randomized trials.<sup>6,16,45</sup> Examples include a greater emphasis in practical trials on external validity or systematic representation of a target population and greater use of quasi-experimental observational designs and analysis methods.<sup>52,53</sup> Within a CBPR framework, other challenges include having sufficient flexibility in design and evaluation methods to accommodate changes based on community input and reliance of an action-research paradigm, given that both interventions and evaluations may change into new priorities or opportunities for the community organization. In addition, practical trials, particularly following a CBPR framework, often have a greater focus on broad outcomes, such as quality of life or quality of environment, which has implications for measurement and sampling strategies. Both practical trials and CBPR increase the need for research methods that can track and estimate the influence of factors at multiple stakeholder levels (eg, individuals, families, organizations, policymakers, the public). In response to these challenges, the CHIC council initially prioritized methodologic review and input into the CHIC pilots (see Tracer Conditions above), while developing in the long-run stronger methods to evaluate the overall effect on participants and their communities of more complex interventions, such as the Witness for Wellness community development pilot. One development as these methodologic recommendations were implemented, however, was that community members at the grassroots level, for example, in the

Witness for Wellness and QueensCare Wellness pilots, requested and/or required additional background and education in research methods to enable their participation as full partners. As a result, research methodology meetings were opened to community members; background lectures and discussion groups in some cases were held on such topics as formulating research questions and hypotheses, developing conceptual frameworks, and design and analysis strategies. Similarly, academic partners required substantial mentoring from CHIC council members from the community on approaches to communicate effectively with community partners and to permit respectful engagement in methods discussions.

### HIT Development

Health information technology (HIT) can facilitate storage, retrieval, and sharing of clinical data and support complex decisionmaking by stakeholders in care.<sup>44</sup> However, relying on HIT to coordinate clinical care or research across diverse public sector partners can be extremely challenging, as public sector agencies and community organizations may not have advanced HIT capabilities, and different agencies may have different platforms or specifications that interfere with their coordination. Our experience to date has been with the use of HIT to increase the efficiency and standardization of chronic disease management and monitoring of outcomes within specific research studies.<sup>22,23,54</sup> We will build on this experience to coordinate disease-management trials across CHIC partners through HIT, and also use HIT to facilitate communication among CHIC partners, for example, within the Witness for Wellness pilot.<sup>17</sup> We view development of HIT capability to achieve broader CHIC goals as a longer-range objective for infrastructure and methodology development, after strengthening the partnership and

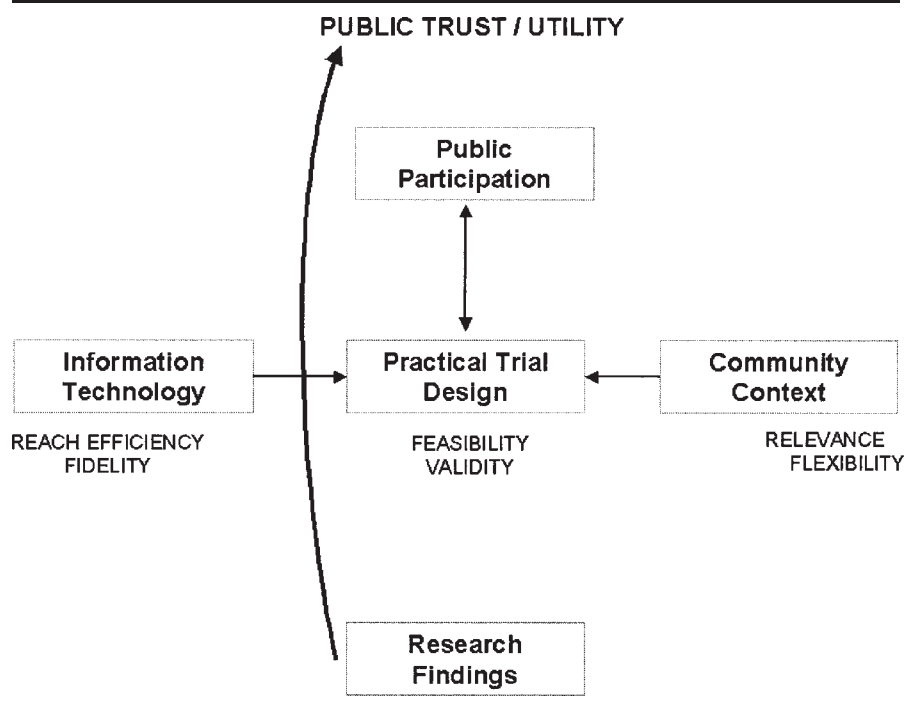


Fig 2. Infrastructure and interactive characteristics needed to achieve CHIC goals

studying our early experience with the CHIC pilots.

Figure 2 illustrates how these areas of infrastructure development interrelate and address CHIC goals. Public participation holds promise to build trust in science and increase its utility in the community, while raising new challenges for relationship building and true sharing of resources, knowledge, and opportunities.<sup>13</sup> Further, input derived through participation may have implications for research design, and vice versa. For example, participation can result in new questions asked or expansion of outcomes to include domains relevant to the public, such as employment.<sup>52</sup> Advances in research design are needed to increase the feasibility and validity of intervention research. Achieving an optimal balance among these priorities requires interaction between community stakeholders and scientists in a partnership model, with facilitation of meaningful participation through bringing new programs and sharing processes to the table (Figure 1). In addition, HIT and

community capacity assessment can be viewed as technologies that enable more feasible and valid trials. Specifically, HIT can increase the trial's efficiency, as well as their reach or inclusion of diverse populations, fidelity, and dissemination.<sup>22</sup> Local context assessment can be used to tailor interventions to local settings, making them more relevant and flexible,<sup>47</sup> or be used to better document the conditions under which interventions are effective. However, generating such information requires resources that may not be anticipated in more traditionally developed projects, and often leads to qualitative data on implementation of projects within a case-study framework, which may be hard to generalize. However, the data can help clarify the settings or situations for which project findings might apply.

### PARTNERS

One of the early challenges for the CHIC partnership was selecting a set of core academic programs and communi-



ty partners, given the enormous cultural and organizational diversity of Los Angeles. For our initial phase, we focused on overlapping partners of several academic programs who were willing to share resources, extend their project goals, and develop new collaborations. We sought, across partners, to tap into different under-served neighborhoods and a range of models of community entry and engagement. Below we briefly describe the main partners for the first stage of CHIC planning.

### Academic Programs

- The UCLA/Drew/RAND NIH Project Export Center conducts research on reducing disparities in diabetes, obesity, depression, and violence-related health for low-income Latinos and African Americans. It builds research capacity and supports training on such research, and enhances recruitment and career advancement for under-served minority researchers.
- The UCLA/Drew NIA Center for Health Improvement for Minority Elders (CHIME) conducts observational and experimental research to reduce health disparities for African-American and Latino elders and supports training and mentorship of minority faculty. The CHIME pilots focus on improving diabetes care for older persons, promotion of healthy exercise/diet for minority elders with chronic conditions, and analyses of environmental influences on health.
- The UCLA/RAND/USC NIMH Center for Research on Quality in Managed Care conducts research to further the dissemination of evidence-based treatments for major psychiatric disorders, including depression and posttraumatic stress disorder (as well as schizophrenia and attention deficit disorder), across the lifespan. The center develops research on consumer-driven interventions for severe mental illness and

approaches to increase the use of evidence-based treatments for mental-health conditions in communities of color.

- The UCLA Robert Wood Johnson Clinical Scholars Program prepares physicians as leaders. Traditionally focusing on health services and policy research and leadership, the new program has a strong focus on improving the health of local communities and CBPR principles, as well as health services and policy research that also derive from those principles. The program has a core set of community partners, overlapping with CHIC.
- The UCLA Family Medicine Research Center has a strong focus on improving the health of vulnerable populations including ethnic minority populations affected by domestic violence, adolescent health issues and youth violence, homelessness, other poverty-related problems.
- RAND Health is one of the nation's premier private healthcare research organizations and has helped analyze and shape private- and public-sector responses to emerging healthcare issues for more than three decades. RAND Health investigators focus on a variety of health and healthcare policy issues, including alcohol, drugs, and mental health; measurement of health status; health services research methods; healthcare organization, economics, and finance; HIV and AIDS care; and vulnerable populations such as the homeless and the elderly. RAND Health and the UCLA David Geffen School of Medicine have a formal memorandum of understanding that facilitates health-related research across institutions.

### Community Agencies

- The Los Angeles County Department of Health Services (LAC DHS) is the largest county health depart-

ment in California and the second largest health system in the nation, providing care for more than one million low-income and uninsured adults and children and public health oversight for the entire county. The LAC DHS assesses prevention needs, develops policies to address them, manages harmful agents in the environment, encourages healthy behavior, and provides health promotion and preventive services. The LAC DHS is a provider, contractor, and coordinator of healthcare services, and partners with the private sector, other county departments, and affiliated educational institutions in training health professionals. The Los Angeles County Department of Mental Health (LAC DMH) develops and coordinates mental-health services, including case management, inpatient care, outpatient services (including crisis intervention and emergency response) and day treatment, through a network of contracted and county-operated clinics and hospitals. The system is targeted to individuals disabled by severe and persistent mental illness and persons who are poor or uninsured. Behavioral Health Services, Inc. is a non-profit organization contracted with LACDHS to provide healthcare programs and community education concerning substance abuse problems.

- The Los Angeles Unified School District (LAUSD) has 947 schools and centers and more than 900,000 students, many of whom are at increased risk for poor health. The LAUSD is one of two districts nationally with mental-health service and crisis-intervention units. A staff of 160 psychiatric clinical social workers, clinical psychologists, child psychiatrists, and community workers, as well as 250 district crisis team members and counselors, provide a range of professional services.

- The Department of Veterans Affairs (VA) Greater Los Angeles Healthcare System is the largest healthcare facility in the VA. The system operates 1056 beds with a \$390 million dollar budget. Services include comprehensive medical, surgical, psychiatric, diagnostic, and treatment services and a 321 bed domiciliary to prepare veterans for community reentry.
- Community Clinic Association of Los Angeles County (CCALAC) is a membership organization of community clinics that promotes free health care and advocates for services for medically under-served people. The CCALAC provides a forum through which clinic leaders can raise concerns and interact with consumers, explore collaboration across clinics, and access technical services. Many of the 43 clinics work with the federal Bureau of Primary Health Care on chronic disease management. The lead clinics for CHIC are Venice Family Clinic (with facilities in the west Los Angeles area) and To Help Everybody (THE) Clinics (in the south Los Angeles area).
- Healthy African-American Families (HAAF) is a community organization that spearheads health-promotion and disease-prevention efforts for residents living in south Los Angeles. The organization pioneered, with CDC and subsequently NIH funding, a model of community partnering in health research. The organization educates and helps to coordinate and identify services for a population of half a million people, who are predominantly Latino and African-American.
- QueensCare Health and Faith Partnership (QHFP) is an interdenominational collaboration of churches, parochial schools, community service agencies, and volunteers that provides health care and preventive services to the under-served and uninsured in the Hollywood and

Pico-Union area. Their Health Cabinet establishes policies and priorities in serving their local, largely Spanish-speaking, Latino populations. The primary care clinics within the QueensCare network are also members of CCALAC.

Table 1 illustrates the participation of the key institutional partners in prior and current work in the four tracer conditions within the CHIC network, as well as in the central academic research center and training programs. The academic partners have a fairly extensive history of working together on research initiatives prior to CHIC. Relationships of some academic partners to the service agencies were fairly well-established, and those partners had some history of working together. The lead community agencies with a stronger advocacy focus (HAAF and QueensCare) had not worked together previously, although each had some established history with the service partners. Their relationship was newer with the academic partners, but their participation in the UCLA CSP had accelerated these relationships.

## PROGRESS AND PROMISE OF CHIC

The CHIC initiative is designed to coordinate efforts across academic programs and community partners to build a stable infrastructure for community-based health and healthcare-improvement research, across disease conditions and with diverse community organizational partners. The initiative has proven useful for identifying health conditions for consolidating resources and partner efforts, and for identifying research infrastructure development goals. Since its inception in March 2003, the initiative has sponsored the development of four pilot studies and a community context methods pilot, and as described in other articles in this special issue, the progress on these pilots

is substantial in the 18 months since they were initiated.<sup>24,25,51,55</sup> In particular, the scope of most of these pilots, particularly the Witness for Wellness project, could not have been achieved without combined resources. For example, the Witness for Wellness project began with a conference that included the participation of >400 community members who shared their thoughts on depression and its effect on the community in round table discussion groups that included note-takers—referred to as “scribes”—who recorded the essence of these discussions in written form. More than 50 staff members from the centers and the community agencies were trained as scribes and participated in the conference, which required the release of almost all discretionary staff across centers for two days. Additionally, the involvement of fellows from local training programs permitted further expansion of the scope of the pilots, with the added benefit that the trainees have been learning unique leadership and research skills for applying successful CBPR.

While each of the CHIC collaborating centers anticipated using CBPR approaches, none of them fully anticipated the central role that community partners would ultimately play, leaving each with the challenge of how to sustain these relationships. The CHIC has made it possible to more effectively meet this challenge by anticipating the need for programs and offering opportunities to identify lead partners to develop them. The presence of this challenge is perhaps the most telling sign of CHIC’s success in achieving its goal of working in a full community participatory partnership model. Despite the challenges of implementing a full partnership model, these collaborative efforts have important payoffs for academic and community partners alike. Because this initiative developed from a blend of CBPR and clinical-services research traditions, however, somewhat less attention has been given

Table 1. CHIC network research (tracer conditions)

Projects (Funding source)	Academic Partners			Public Healthcare Partners					Community Partners (Vulnerable Populations)	
	UCLA	RAND	DREW	LAC DMH	LAC DHS	LAUSD	VA	LA Clinic Assoc.	HAAF	Queens Care
<b>DEPRESSION</b>										
Partners in Care (NIMH MH01170, MH54623; MH 061570-04; AHCPR HE08349; MacArthur Foundation 96-42901A-HE)	x	x		x	x		x			
Youth Partners in Care (YPIC) (AHCPR HS09908-01)	x	x						x		
WECare (NIMH MH56854)	x									
Suicide Prevention Programs in Schools (NIMH MH06839-01)	x	x				x				
Witness for Wellness (NIMH MH06839-01)	x	x	x	x	x	x			x	
Improving Care for Co-Occurring Health Disorders (SAMHSA)		x			x	x				
Teen Depression Awareness Project (Pfizer)		x		x		x		x		
<b>DIABETES</b>										
Community Based Lifestyle Balance Program (NIH/NCMHHD MD00148-01)	x		x		x			x		
Self-Care Diabetes Intervention for Latinos (NIDDK DK059527, AHRQ)	x	x	x					x	x	
Diabetes Self-Care Program/Older African Americans (NIA AG 10415, AHRQ)	x	x	x					x	x	
REACH 2010 (CDC)	x	x			x	x				
<b>OBESITY</b>										
California Fit WIC (USDA)	x				x					
Los Angeles FUEL UP-LIFT OFF (USDA)	x				x			x		
Health Impact Assessment (CDC Foundation)	x				x					
Community Steps of Minority Youth Fitness (NIH/NICHHD HD39103)	x					x				
Walking for Exercise/Elderly African Americans (CHIME/RCMAR)	x									
<b>VIOLENCE</b>										
QueensCare Wellness (NIMH MH06839-01, NCMHHD MD00148-01)	x	x		x						x
Elder Abuse & Health Care (NIA)	x									
Cognitive Behavioral Intervention for Trauma in Schools (CBITS) (LAUSD, SAMHSA, National Center for Child Traumatic Stress)	x	x		x		x				
Violence Exposure Survey of Sixth Grade Students (LAUSD)	x	x				x				
<b>RESEARCH CENTERS AND RESEARCH TRAINING</b>										
Center for Health Improvement for Minority Elders (CHIME): Resource Center for Minority Aging Research (RCMAR) (NIH/NIA AG-02-004)	x		x					x	x	
Project Export (NIH/NCMHHD MD00148-01)	x	x	x		x			x		
Center for Research on Quality in Managed Care (NIMH MH06839-01)	x	x		x	x	x	x		x	x
Center for Adolescent Health Promotion (CDC)	x	x				x			x	
UCLA Clinical Scholars Program (Robert Wood Johnson Foundation)	x	x		x	x	x	x	x	x	x
Center for Urban Research Excellence in Diabetes and Metabolism (NCRR)	x		x							x
Comprehensive Center for Health Disparities: Chronic Kidney Disease (NCRR)	x	x	x							x

to attending first to the foremost concerns of community agencies and members compared to what would have been seen under a full CBPR model that does not focus on negotiated priorities. In its current phase, having implementing substantial pilots, CHIC is developing plans to host a more substantial program to enable sharing of lead priorities of all partners, with invitations to potential new partners. This program may allow us to gradually include a stronger focus on main community priorities, for which we hope to develop partnered programs and evaluations.

As the CHIC council and its work have progressed, we have moved from defining our goals and approaches toward broader fund raising and program planning for training and major research initiatives. These have mainly been successful to date on a smaller level, such as obtaining some modest foundation grants. Recognizing that major funders of clinical and health-services research are not yet very familiar with such partnership models and their operational requirements for shared resources, we have focused on generating strong pilot data and developing presentations of our approach that involve community and academic partners to demonstrate the potential of this approach. Work from the CHIC network has been presented within the last year at the American Public Health Association Annual meeting; the Services Research meeting of the National Institutes of Mental Health, Drug Abuse, and Alcohol Abuse and Alcoholism; the Annual Meeting of the Institute of Medicine; as part of a Senate Briefing on approaches to overcome health disparities; the NIH Council of Public Representatives; and to the Centers for Communicative Diseases, among other presentations.

In terms of establishing a network that can sustain pilots and develop the datasets and presentations to document and share our progress and serve as

**Table 2. CHIC partnership priorities and challenges**

Priorities	
<ul style="list-style-type: none"> <li>• Equal partnership</li> </ul>	Health problems identified through negotiated process Interventions based on evidence-based models and adapted locally Evidence generated for strong local programs with national significance Early inclusion of key stakeholders Special efforts to give vulnerable partners voice
<ul style="list-style-type: none"> <li>• Sharing of expertise and resources</li> </ul>	Multiple centers provide resources Staff are used flexibly Inclusion of agencies for vulnerable populations in research funding Community agencies help build community expertise in academics
<ul style="list-style-type: none"> <li>• Focus on capacity development</li> </ul>	Promote leadership in community members and academic partners Use senior researchers and community program staff to support structure Development resources in community agencies for research development Development of people is a key outcome of the CHIC initiative Sustained funding to develop and maintain academic-community partnerships
<ul style="list-style-type: none"> <li>• Evaluation and research</li> </ul>	Rigorous, but consistent with level of community trust Seek to push the envelope for the field in terms of rigor of methods and scope of community participation Keep community informed of research and research informed by community
Challenges	
<ul style="list-style-type: none"> <li>• Obtaining funds for community partners for program development and research</li> <li>• Evidence-based programs require modification or new approaches for dissemination in underserved communities</li> <li>• Need to incorporate diverse community priorities at the same time (depression and violence, environment) to be relevant in communities</li> <li>• Achieving the scale and data sets for comprehensive evaluation of impact</li> <li>• The real competing needs of partners and members, community and academic, complicate achieving stability and commitment to the work</li> <li>• Learning to effectively communicate between partners; understanding the differences in language and expectations between academia and community</li> </ul>	

a basis for future work, CHIC is proving to be a successful forum for developing goals and projects that stimulate deeper partnerships quickly—even if we do not yet know that we can achieve the necessary scale for programs and evaluation that may help generate policy support for sustainable changes. Even so, we have a clearer awareness of the requirements of such a partnership approach and the challenges that lie ahead. At the end of the first 18 months of development, the CHIC Council sponsored an internal progress review and formulated key challenges to face in

the next phase of work. Table 2 summarizes the priorities for development and challenges identified in that process. Several of the key challenges and priorities were identified as priorities by a community advisory board for investigator training within a CBPR perspective in a separate consortium.<sup>56</sup>

## CONCLUSION

The CHIC experience suggests that substantial progress is possible in developing a CBPR/CPDR infrastructure



initiative, across multiple academic institutions and community partners, and multiple areas of health and healthcare disparities, through collaboration and strategic planning across multiple research and training centers, each of which alone could not sustain a planning and development effort of this scale. The CHIC investigators initiated this effort because we could not make this progress without consolidating and because this kind of partnered research development has not been the norm for health-services research, even though it is more common in public-health initiatives. Research to improve the health and health care of underserved communities that is based on a full academic-community partnership model is difficult to achieve and realize, and the infrastructure needs for such research easily exceed what can be supported through individual project initiatives or within the scope of a traditionally focused single NIH center. The resources required by communities for partnering seem currently to be a poor fit with existing research funding priorities, particularly as a partnership initiative also needs the flexibility to respond to community needs in a variety of health areas and to changing community opportunities and needs over time. The CHIC approach helped stimulate a fairly large and flexible infrastructure and substantial development in partnership skills and depth, as well as development of specific research projects that could not have easily been supported through independent funding from a single agency. Further, RAND, UCLA, and Drew have complementary areas of research strength and collaboration experience with local communities, and the community partners have often complementary and sometimes overlapping areas of service responsibility across multiple health priorities, as well as extensive community partner networks. Nevertheless, creating a shared infrastructure that

could rest on these strengths required careful matching of granting agency, community, and investigator priorities, and careful analysis of our research progress in different areas to select foci for pilot studies that built on our strengths but advanced the field and our capacities for partnered work in reducing health and healthcare disparities.

To date, the CHIC council does not have an independent source of funding, which may challenge the initiative's stability as different NIH centers come and go and priorities change. Nevertheless, the principle and operational procedures have been established, and we have already been exploring further partnering with other centers (such as the CDC center on adolescent health promotion at UCLA and RAND).<sup>56</sup> Pechura in this issue<sup>57</sup> comments on how funders can collaborate to help achieve some of the stability needed to support the growth of this field and more consistent academic-community partnerships.

We do not mean to convey that achieving CHIC has been easy or without strain for community or academic partners, and we are aware that next steps of introducing more grassroots community representation and attending more fully to community agencies' and members' first priorities will likely cause further strain on infrastructure and resources, necessitating new approaches to expand funding and programs to support these growth steps. Further, CHIC is a voluntary coordination and agenda-setting forum, and the direct project responsibility implications of recommendations often falls to individual programs and partnerships within CHIC. For this reason, some of the strain and adjustments to accommodate CHIC goals can fall more heavily on some partners and programs in the initiative, a consequence that CHIC has been monitoring and attempts to address in decisions about sharing resources.

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*The resources required by communities for partnering seem currently to be a poor fit with existing research funding priorities . . .*

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Several features of the CHIC infrastructure may be atypical for CBPR initiatives, which might limit the generalizability of our approach to other programs seeking to develop a CBPR approach to health services research. First, most of the lead academic investigators are clinicians, and the lead training program (the Clinical Scholars Program) focuses on physicians. Challenges in developing community-based research of this type may be greater for medical schools than for schools of public health or social work, which have stronger traditions of community participatory research.<sup>13</sup> Second, we responded to a unique combination of elements. Funding three NIH centers and refunding the Clinical Scholars Program provided a core set of faculty and fellows who worked in research with many overlapping partners. The Clinical Scholars Program refunding effort required substantial development of and assessment of capacity to partner with community agencies and helped stimulate the overall CHIC efforts, for example, by serving as a focus of collaboration for the PIs and co-PIs of the individual NIH centers. Such partnerships in funding are desirable but can be difficult to achieve.

A third enabling feature is that several senior academic leaders had substantially retooled their skills, which derived from a traditional health-services research perspective, to incorporate knowledge and experience with CBPR, for example through consultation with national leaders in this field. The resulting retooling led to



a shift in conceptual framework for new work<sup>58</sup> and a shift in analytic perspective on existing intervention studies,<sup>19,20</sup> which coincided with a shift in mentoring focus for junior colleagues' work with community partners.<sup>26</sup> This shift in commitment across several leaders meant that, within a risky area for medicine, senior leaders who were well established could focus on some of the longer range infrastructure goals while targeting products and presentations for more junior colleagues.<sup>26,42,55,59</sup> Around the same time, senior community leaders in the CHIC framework gained increased national exposure; for example one was awarded the first CDC recognition for community members overcoming health disparities; another was selected as a member of one of the Institute of Medicine's boards governing IOM studies. The potential implication for building infrastructure in this area is that investigators should seek opportunities to collaborate and coordinate funding across different components of their institutions and with other neighboring institutions and that senior investigators should consider taking the lead for risks rather than focusing primarily on supporting junior colleagues who may be reluctant to lead without an example. We of course do not yet know whether these strategies that we used will lead to a sustainable infrastructure, but we have received preliminary encouragement from early successes with presentations and funding of junior colleagues within the network.

Given the importance of addressing the gap of bringing advances in science to clinical practice and of reducing health disparities and the practical and scientific difficulties in achieving these goals, innovative strategies are needed to develop infrastructure that can enable and promote development of this new field over some period of time. Our approach to resource sharing, analysis of opportunities, and

initiating carefully selected intervention- and methods-development pilots may offer one strategy, particularly to medical centers, that have options to bridge across institutions and community partners. Even if we are successful, however, a focus on marginal improvements in services delivery may have relatively limited effects on health outcomes and health disparities at the community level, given that broad policy and environmental changes may be needed to support substantial improvements in health.<sup>29</sup> We are encouraged, however, by findings from some of our studies that service-delivery strategies hold promise to reduce outcome disparities and to improve economic outcomes.<sup>17,60</sup> Nevertheless, we are exploring partnerships with another NIH center that focuses on environmental structural factors underlying health disparities, and we have implemented a policy and advocacy focus within one pilot (Witness for Wellness). We plan in the future to provide the field with further progress on our infrastructure development, substantive conclusions from the pilots, and the lessons learned for conducting clinical and health-services research on health and healthcare disparities.

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