As noncommunicable or chronic diseases (NCDs) have spread across the globe, becoming the leading causes of death, disease, disability, and health care costs, it has become increasingly important for public health to address their underlying causes. Two approaches to doing so are gaining ascendency: 1) examining and addressing underlying social determinants of health and 2) understanding and applying evidence-based strategies targeting the 4 key health behaviors underlying NCDs—physical activity, diet, tobacco use, and alcohol consumption. This issue of the *Journal of Physical Activity and Health* features research that focuses on physical activity and NCD prevention in a broad social context in Latin America. The GUIA Project (Guide for Useful Interventions for Activity in Brazil and Latin America) and the research network facilitated by the Centers for Disease Control and Prevention World Health Organization Collaborating Center for Physical Activity and Health (CDC WHO CC) provided the organizing framework for the work published here. In this commentary we will examine how this structure was created, consider its role in stimulating and supporting public health research, and suggest how the GUIA model may be applied elsewhere.

The GUIA Project was competitively funded as a special interest project of the CDC Prevention Research Centers (PRC) Program. The PRC in St. Louis (a collaboration of Saint Louis University and Washington University in St. Louis) initiated the project in partnership with CDC’s Divisions of Nutrition, Physical Activity and Obesity and Adult and Community Health, the Federal University of São Paulo (UNIFESP), the Brazilian Ministry of Health (MOH), the Pan American Health Organization (PAHO), the Centro de Estudos do Laboratório de Aptidão Física de São Caetano do Sul (CELAFISCS), and a network of universities and municipalities in Brazil. The project received a total of approximately $1.3 million over 4 years and was coordinated with a new NCD prevention program of the Brazilian MOH that used physical activity as the starting point for integrating NCD prevention into municipal health departments. Over the 4 years of the GUIA project, the MOH invested more than $70 million into creating national, state, and local infrastructure for surveillance, evaluation, and public health programming for NCDs.

There were 5 initial aims of the GUIA Project:
1. Establish and build cross-national, collaborative relationships with researchers, practitioners, and institutions in Brazil to enhance capacity to determine and implement evidence-based interventions that promote physical activity
2. Conduct formative research to reach consensus on evidence-based categories and strategies
3. Synthesize the peer-reviewed and fugitive literature on community-based strategies to promote physical activity in Latin America
4. Evaluate 2 ongoing community interventions in Brazil based on gaps or opportunities identified in the review accomplished in Aim 3
5. Actively disseminate the products from the review process and intervention evaluations to communities, institutions, and public health professionals in Brazil, across Latin America, and globally.

Early returns suggest that all 5 aims have been met. A dynamic multinational partnership was formed, an evidence-based review was completed and the results were published, and comprehensive quantitative and qualitative evaluations of community-based physical activity programs in Recife and Curitiba were completed and published. To date, there have been more than 40
per epidemic and lifestyle transitions. By the 1990s, Brazil was the first country to take advantage of the opportunities provided by this collaboration.

Brazil provided an ideal location for testing this collaborative and integrative model of building research capacity focused on synthesizing and translating community-based research into NCD prevention policy and programs. Brazil is rapidly moving through the triple transition: demographic, epidemiologic, and lifestyle. Since the 1950s, average life expectancy at birth has increased by almost 30 years; the fertility rate has dropped from 6.2 to 2.3 children per woman over a lifetime; the population over 60 has increased by 100%; NCDs now account for more than 62% of total mortality, and a formerly rural country is 80% urbanized. The MOH has effectively initiated the process of reorienting an already well-developed public health infrastructure to address the new patterns of demographic, disease, and lifestyle. National legislation in 2003 established a secretariat within the health ministry for surveillance and disease prevention which included both a specific unit for NCD prevention and funding to support programs at the state and municipal level. A national health promotion policy was published in 2006 and a comprehensive chronic disease risk factor surveillance system (VIGITEL) was created with technical support from the University of São Paulo School of Public Health and CDC. With progressive leadership and a strategy of funding many municipalities across all regions of Brazil, a network of more than 500 local health departments addressing physical activity and NCD prevention was created. However, as in most low- and middle-income countries, it is not clear exactly which NCD prevention strategies can best be applied in this context.

The conditions for productive collaborations are present in Brazil and Latin America. Few promising interventions have been evaluated and even fewer published. For example, the book, Best Practices for Physical Activity Promotion Around the World, published in 2006, included 50 case studies of community-based physical activity promotion from Latin America. To date only 4 of these have been described in scientific publications. Brazil and Latin America have an abundance of excellent universities and many well-trained investigators, but relatively few focus on the type of applied public health research needed to understand, evaluate, and disseminate population-based strategies. The MOH has formed a network of Brazilian universities with the idea that these institutions can be linked to the network of community prevention programs and will be able to evaluate the most promising ones. The GUIA project tapped into both networks and combined resources to enhance the focus, cultural relevance, and quality of evaluation research efforts in Brazil. GUIA seems to have played a catalytic role by introducing resources, expertise, and high scientific expectations into a system where most of the building blocks for good quality research were already in place, but few projects were culminating in peer-reviewed publications.

Matching comparable US, Brazilian, and Colombian academic institutions has been an especially productive aspect of the project. Exchanges of students have provided field experience for US students and opportunities for consultation, data analysis, and publication for Latin American students and investigators. Protecting blocks of time for data analysis and writing is a very basic strategy, but an important one as many junior investigators in
Latin America must balance multiple academic appointments and contracts to make ends meet. The time made available through international grant support coupled with the infrastructure of a multicenter research team makes it much more likely that good work is brought to fruition. Cross-national projects such as GUIA also provide unusual opportunities for adapting and developing research methods as exemplified by the application of SOPARC (System for Observing Play and Recreation in Communities) in Recife, complex logic models and environmental measures in Curitiba, quantitative-qualitative evaluation in Recife and Aracaju, and network analysis in Brazil.

The work published in this special issue suggests that with a modest investment, it is possible to build strong partnerships between academic and governmental institutions in the US and Latin America, and that these partnerships can advance research and practice related to NCD prevention. The GUIA model was groundbreaking in numerous ways. For example, it was the first to do the following:

- Apply and adapt the method of the Community Guide in low- and middle-income countries
- Evaluate community physical activity interventions in Latin America comprehensively using quantitative and qualitative and transdisciplinary approaches
- Adapt and use the methods of SOPARC and neighborhood auditing in low- and middle-income countries
- Conduct an organizational network analysis of collaboration for physical activity promotion in Latin America
- Publish an article in the American Journal of Preventive Medicine in 3 languages (English, Spanish, and Portuguese).

Extending this model to other low- and middle-income countries and regions that are going through epidemiologic, lifestyle, and demographic transitions and face growing burdens due to NCDs may be an important global health imperative for the coming decade.

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References


