

The United States-México Border Health Commission



Researching Border Health

*A Review of Initiatives to Develop a Border
Health Research Agenda, 1995-2009*

December 2009

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Executive Summary

An acute need exists for a comprehensive border health research agenda that can lead to effective, evidence-based interventions to improve quality of life and health for people living in the border region. This report examines previous efforts from border health experts to develop a border health research agenda for the purpose of continuing to identify strategies towards guiding the development and implementation of such an agenda.

This report references nine separate events from 1999 to 2009 and identifies common themes and major health research needs that have emerged for the border region. While topics varied widely between meetings and forums, they consistently addressed the following concerns:

- 1) *Which health topics to include*—The following topics consistently emerged: infectious diseases, maternal and child health, environmental health, chronic diseases, mental health, social determinants of health, and health care systems.
- 2) *Who should participate in the development process*—It was determined that stakeholders at multiple levels are critical to the development and implementation of a comprehensive agenda. Policy makers at the federal level, allied health care professionals, researchers from México, and others in local communities such as faith-based groups and early child development programs were identified as stakeholders.
- 3) *What actions need to be taken*—Actions to be taken in the development process include continuing to identify stakeholders at multiple levels, utilizing existing resources, improving communication and collaboration between and among agencies, developing inventories of border research programs, projects, researchers, and health professionals, and translating scientific information that can be used by decision-makers.
- 4) *The identification of border health research gaps*—Major gaps and challenges include the lack of communication between and within agencies on both sides of the border as well as the lack of a strong infrastructure to facilitate the development of a border health research agenda. This weak infrastructure includes limited funding, inconsistencies in definitions and terminology used among agencies, and a lack of systems to house data.

Border health experts have already begun to address many of these issues and progress has been achieved on some. However, as the health care needs of border residents change, so does the plan of action to address those needs.

The goal of the U.S.-México Border Health Commission is to continue to identify strategies towards the development and implementation of a comprehensive border health research agenda intended to lead toward long-term coordinated dialogues and actions focused on understanding the current and future border health research environment.

Introduction

The U.S.-México border region stretches 2,000 miles from the Pacific Ocean to the Gulf of México and 100 kilometers north and south of the political dividing line between the United States and México. It is an area of stark contrasts, where high poverty rates are accentuated by small pockets of wealth, urban centers are surrounded by rural communities, and agricultural and manufacturing industries lie next to residential neighborhoods. The population is growing rapidly and health resources are scarce. In such an environment, children and adults suffer from many chronic and infectious diseases and other adverse health conditions.

The U.S.-México Border Health Commission (BHC) was created in 2000 to address these health challenges in the border region. Through its binational leadership and expertise, the BHC carries out its mission to provide international leadership to optimize health and quality of life along the U.S.-México border. In keeping with that mission, the BHC is seeking to develop a health research agenda for the border region. An acute need exists for health research that can lead to effective, evidence-based interventions to improve the quality of life and health for people living in the border region.

The development of a comprehensive border health research agenda is intended to lead toward long-term coordinated dialogues and actions focused on understanding the present-day and future border health research environment, the types of research conducted, the applications of completed research, the implications on policy and action of that research, and the overall gaps in border health research, whether in funding, research capacity, or priority.

Objectives

This report provides a summary background of previous initiatives that have contributed to the development of a health research agenda for the border region. It is important for those currently involved in border health research to be able to 1) identify common themes and major health research needs that have emerged in the border region and 2) identify how the health research needs of the border region can be prioritized effectively.

Methods

To address these objectives, a literature review was conducted using Medline, ABSTRACT, Ask.com, and Google.com. Several reports and proceedings were identified documenting the objectives, actions, and recommendations from forums, meetings, and initiatives among various organizations involved in border health. The selection criteria used were as follows: 1) the event was borderwide, 2) the event focused on setting a research agenda in the area of health, and 3) the event occurred no earlier than 1995. Additionally, primary source documents and reports were also provided to the BHC by the sponsoring agencies or organizations.

Literature Review Results

Through the literature review process, seven principle documents were identified. These documents reference nine separate events that aimed, at least in part, to contribute to the development of a border health research agenda and were identified as follows:

1. Structures and Mechanisms for United States-México Border Health Cooperation (July 1999)
2. Meeting of the Pan American Health Organization / World Health Organization Collaborating Centers of the U.S.-México Border (October 31, 2000)

3. Hispanic-Serving Health Professions Schools, Inc., U.S.-México Border Health Research Initiative, Symposium I: Setting the Research Agenda on U.S.-México Border Health (December 7-9, 2001)
4. Pan American Health Organization-University of Texas Border Health Research Agenda Council Meeting (February 7-8, 2002)
5. Hispanic-Serving Health Professions Schools, Inc., U.S.-México Border Health Research Initiative, Symposium II: Developing Research Interventions to Improve the Health of Border Populations (July 19-20, 2002)
6. U.S.-México Border Centers of Excellence Consortium Forum, Phase II: Building Healthy Borders through Creative Research Collaborations (August 15-16, 2005)
7. U.S.-México Border Centers of Excellence Consortium Forum, Phase III: Collaborations to Eliminate Disparities: Model Programs That Work (August 14-15, 2006)
8. United States Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy, U.S.-México Border Health Care Initiative, *Improving Knowledge Transfer among Health Researchers and Decision makers at the Border: An Expert Meeting* (June 26, 2007)
9. United States Department of Health and Human Services, Health Resources and Services Administration, Office of Rural Health Policy, *Options for Improving Access to Clinical Information for Border Health Grantees* (December 8-9, 2008)

Summary of Events

Structures and Mechanisms for United States-México Border Health Cooperation, July 1999

This meeting was sponsored by the U.S.-México Border Office of the Pan American Health Organization (PAHO), the World Health Organization (WHO) Collaborating Centers on Border Health and Rural Health Research and Development, and the University of Arizona, Rural Health Office. During the meeting, fragmentation of efforts and lack of communication mechanisms were identified as the two biggest problems affecting binational cooperation for health. In response to these challenges, participants proposed that institutional resources be identified and classified through which 121 academic and research centers actively involved in border health research were identified by PAHO.

PAHO also prepared a proposal designed to involve border academic and research institutions in cross-border health activities. The proposal included four components: 1) the creation of a border virtual health library, 2) the development of a border health research agenda, 3) the transfer of technology and human resources, and 4) the conversion of scientific information into information usable for decision-makers and border communities. The proposal was presented to academic institutions within the Health Education Training Centers Alliance of Texas and the Universities Conference Group of the United States-Mexico Border Health Association (USMBHA), and support was secured from participating institutions. Thus, the Border Health Information and Research Project (BHIRP) was initiated.

Meeting of the PAHO/WHO Collaborating Centers of the U.S.-México Border, October 31, 2000, South Padre Island, Texas

As a follow-up to the Structures and Mechanisms for the United States-México Border Health Cooperation meeting, PAHO and the University of Texas System co-sponsored a meeting between academic institutions and health care service providers involved in public health related activities in the

U.S.-México border region. The purpose of the meeting was to increase the availability of resources aimed at improving the health of U.S.-México border residents.

Expected outcomes were identified as follows:

- Persons/institutions of the U.S.-México border will know of available resources offered by the PAHO/WHO Collaborating Centers of the U.S.-México Border.
- PAHO/WHO Collaborating Centers of the U.S.-México Border will know about the activities of the U.S.-México Border Office of PAHO.
- Networks between PAHO/WHO Collaborating Centers and border institutions will be promoted.
- The border health research agenda will be enriched with the input and commitment of participating institutions.

After presentations and workgroup sessions, recommendations were identified in regards to the four components of the BHIRP, which are summarized below:

Virtual Library

The types of documents and topics to be included in the library as well as possible limitations in implementing the network were discussed. Examples of documents included reports of meetings and conferences and summaries of research projects. Possible limitations addressed were the financial restrictions of participating institutions and copy rights and other legal issues related to the authenticity and reliability of the research.

Research Agenda

Participants recommended creating a Border Health Research Task Group (later referred to as the Border Health Research Council) with the following functions as a minimum:

- Assess the need for binational research collaboration for the improvement of health and welfare in border communities.
- Formulate recommendations and advocate, with private and public funding sources, for the implementation of a structured research agenda for the improvement of health and welfare in border communities.
- Mobilize resources for the implementation of a research agenda.

In addition, three groups were identified for possible consideration in creating the Task Group: 1) institutions that generate information such as universities and health services, 2) those who disseminate information such as non-governmental organizations and advertising agencies, and 3) those who use information such as decision-makers and researchers.

The workgroups also identified characteristics and processes for inclusion into the border health research agenda.

The border health research agenda should contain the following characteristics:

- Reflect ownership and interests of border stakeholders
- Sustain multidisciplinary form and involve several levels of participants
- Be dynamic
- Be participatory
- Consider evaluative processes-both internal and external

The border health research agenda should include the following processes:

- Development of inventories
- Identification of regional health and environmental priorities
- Creation of core groups on specific research areas
- Development of regional, binational meetings

Technology Transfer and Development of Border Researchers

Building infrastructure through different methods such as connecting research/academic institutions with health services, providing training with added skill sets (culture and ethics of the border, teaching, grant writing, scientific writing, etc.), and utilizing existing resources better (minimizing duplication of efforts, exploring Mexican models, including all institutions interested in border issues, etc.) among other methods were discussed.

Social Communication

Social communication was defined as the mechanism to make scientific knowledge available to policy makers and the community. A range of topics were discussed that included utilizing new and different communication methods and improving communication across and between the border entities, both public and private. Improved communication also called for providing information in several modalities for wide distribution, training news reporters on health issues, and establishing links with other areas like schools and faith-based groups. In addition, it was also recommended that an evaluation of the impact of social communication models in the U.S.-México border area should be considered, as well as a needs assessment of social communication resources along the border.

Hispanic-Serving Health Professions Schools, Inc. (HSHPS), U.S.-México Border Health Research Initiative, Symposium I: Setting the Research Agenda on U.S.-México Border Health, December 7-9, 2001, El Paso, Texas

The HSHPS Board of Directors decided that the U.S.-México border would be the focus of the first HSHPS research initiative. Funding was allocated to support two symposiums, each with different purposes, but both with the same goal of improving the health of border residents. Five overall purposes to the U.S.-México Border Health Research Initiative were identified, three of which were realized at the end of Symposium I: 1) Increase the knowledge of current health prevention activities being conducted in the border region, 2) Develop an HSHPS priority listing or research agenda on border health prevention research in Hispanics and increase the amount of research and number of researchers at HSHPS member institutions, and 3) Increase the data, information, and knowledge database about Hispanic health research in the border region.

The goal of the first symposium was to establish a border health research agenda. The purpose was to identify key areas for discussion among U.S. and Mexican researchers that could be used to build a research agenda to guide the development of research and research training projects by HSHPS and its partners.

The symposium highlighted the fact that infrastructure at the U.S.-México border is ill-equipped to handle the complexity of the burden of disease. Participants identified priority areas to strengthen the infrastructure to allow for a developing research agenda that can mature with binational benefits. The priority project areas for the initiative were as follows: 1) health professional and researcher training, 2) surveillance and data collection, and 3) communications (establishing a binational bilingual journal, developing a bilingual internet site for the journal, developing computer-based distance learning to

promote partnerships, and research and surveillance), and 4) advocacy and leadership. Recommendations for specific health topics, some with subtopics, for the research agenda fell under the following areas:

- Maternal health: domestic violence, breast-feeding, well-women exams, prenatal care, family planning, and obesity
- Child health
- Respiratory illnesses: asthma, chronic lung disease, and lung cancer
- Environmental degradation
- Chronic illness: obesity, diabetes, hypertension, and cancer
- Mental health: addictions, violence, depression, post-traumatic stress disorder, suicide, and dementia
- Health services: develop a quality health services research workforce; develop a clearinghouse for health services research activity and funding, quality of care, and surveillance systems on high risk groups; assess new emerging populations; create registries for cancer and other conditions; and address weak public health infrastructure
- Infectious disease: drug resistance to tuberculosis and other organisms, sexually transmitted diseases and intravenous drug abuse, enteric disease, and infectious borne diseases
- Immunizations: migrant children, binational immunization, and vaccine registries
- Bioterrorism

Recommendations were also classified according to geographic region. California and Arizona supported the expansion of ongoing projects to include strategic and binational collaboration in research and to seek supplemental funding for Mexican investigators. Texas and New Mexico recommended establishing a U.S.-México Border Health Research Center to serve as a multifunctional network for the six core areas of clinical research and to assist in the translation of research into awareness on policy issues to improve programs along the border.

Limitations of Symposium I were identified and recommendations were made to overcome these for Symposium II including inviting the BHC, PAHO, and others and ensuring representatives from México attend and participate.

PAHO-University of Texas Border Health Research Agenda Council Meeting, February 7-8, 2002, Edinburg, Texas

This meeting served as a follow-up to the meeting of the PAHO/WHO Collaborating Centers of the U.S.-México Border held October 31, 2000, in South Padre Island, Texas. One recommendation made from the 2000 meeting was to create a Border Health Research Task Group (referred to as the Border Health Research Council). The purpose of the 2002 meeting in Edinburg was to follow-up on other recommendations discussed in relation to forming the Council. Two objectives of this meeting were to 1) identify relevant areas of research for the U.S.-México border and 2) define strategies used by the Border Health Research Council in carrying out its function.

The meeting was divided into four parts: 1) protocol, 2) presentations for providing a reference framework, 3) workgroups for defining lines of research relevant for the border, and 4) group discussion for proposing sustainability strategies for the Border Health Research Council. Major outcomes, related to the two objectives, are summarized below:

Identification of Relevant Areas of Research for the United States-México Border

Four general recommendations for lines of research were developed based on participants' input and included in the document *Border Health Research Agenda Lines of Research*:

- Prioritize projects that are aimed at achieving the goals of Healthy Border 2010 and provide an immediate public health application.
- Identify researchers who can devote energies.
- When comparing research binationally, first compare between peers.
- Create a conceptual and methodological framework for binational collaboration.

The lines of research are divided into different topic areas: 1) disease prevention and control, 2) health and environment, 3) health care systems and services and human resources, and 4) health, society, and development. Each area has several specific lines of research that are outlined in detail.

Define the Strategies to Be Utilized by the Border Health Research Council in Performing its Functions

The document *United States-México Border Health Research Council Agenda, Functions and Operational Organization* was used as a reference for defining the functions of the Border Health Research Council. Many points in the document were reviewed and agreed upon including the structure of the Council and the roles and functions of individual and organization members as listed below:

- All academic and research institutions interested in the Council's overall goal of improving the health of border communities, through the application of scientific knowledge generated by academic and research institutions on the border, will be potential Council members.
- All decisions will be made by a simple majority of participating members.
- A steering committee will provide follow-up on Council recommendations.
- The Council of Officers will be composed of twelve members:
 - Two co-presidents, one from each side of the border
 - Two representatives (coordinators) from each research area, one from each side of the border
 - Two ex-officio members, one from PAHO and one from the BHC. These institutions must assign funding resources for operating the Council and for performing research activities that have been identified as being relevant for the border.
- Members who are interested in or already working on activities for researching specific issues will be grouped around the four lines of research, identified as disease control and prevention, health and environment, health care systems and human resource development, and health, society, and development.
- The Council will meet every four years to study research needs on the border and every two years to assess progress in each of the research areas.
- The steering committee will hold a teleconference every six months and an annual meeting.
- The roles of the co-presidents (if included as members of the steering committee) were defined as follows:
 - Coordinate Council meetings.
 - Provide follow-up on the activities of the Council, the steering committee, and research areas.
 - Provide support to the coordinators of the various research areas.

- Advocate for and promote the border health research agenda among academic institutions and public and private funding organizations.
- The roles of the coordinators were defined as follows:
 - Create and feed a database of research projects registered in the portfolio of the Council.
 - Promote the registration and classification of research projects addressing border health in the corresponding research area.
 - Look for and disseminate information among border researchers about funding opportunities related to the corresponding research area.
 - Prepare semester reports for the steering committee and prepare a report to the Council every two years and participate in semester conference calls.

Hispanic-Serving Health Professions Schools (HSHPS), Inc., U.S.-México Border Health Research Initiative, Symposium II: Developing Research Interventions to Improve the Health of Border Populations, July 19-20, 2002, Albuquerque, New Mexico

Three of the five overall purposes of the U.S.-México Border Health Research Initiative were realized at the end of Symposium I in 2001. The remaining two were realized at the end of Symposium II: 1) Discuss and develop consensus around the current knowledge of the interventions related to the HSHPS U.S.-México Border Health Research Agenda, and 2) Develop a priority list of the interventions of an HSHPS research agenda focusing on research that has the greatest impact on the quality of Hispanic health along the border. The goals of Symposium II were to develop research interventions to improve the health of border populations and to design the principles for research from HSHPS member institutions and identify faculty from member institutions and partners from the community who could conduct the research.

The discussion included current knowledge on interventions related to the priority research areas selected during Symposium I. Three workgroups were organized based on geographic region: South Texas-Northeast México; Central (El Paso, New Mexico, Chihuahua); and California-Arizona-Baja California-Sonora. From these workgroups, a priority list of interventions for an HSHPS research agenda was developed, with a focus on the potential impact on the quality of health of Hispanics living in the border region.

The South Texas-Northeast México workgroup developed the following set of priority recommendations for research topics:

- Develop a permanent research infrastructure
- Develop the workforce research capacity
- Define research
- Develop methods, instruments, and workforce
- Investigate behavior, genetics, and interventions
- Conduct longitudinal studies across the life span
- Conduct research on all health aspects of gender, including dentistry, podiatry, mental health, etc.
- Include all residents of the geographic area, not just Hispanics (e.g., Native Americans)

The Central workgroup identified and prioritized health topics as follows:

1. Diabetes
2. Human papillomavirus (HPV)
3. Addictions
4. Environment
5. Chronic diseases
6. Mental health
7. Elderly/children
8. Bioterrorism

The California-Arizona-Baja California-Sonora workgroup reviewed current projects in the region and then compared those to the Healthy Border 2010 focus areas and objectives developed by the BHC and the Centers for Disease Control and Prevention (CDC) agenda, as well as priorities from other agendas. Based on this review and comparison, the following was concluded:

- HIV is a major research area proposed for California and Baja California.
- Cervical cancer is a major research area proposed for Arizona and Sonora.
- Obesity and diabetes are other priority areas, especially in California and Baja California.

Via this first year of meetings (Symposiums I and II), the HSHPS U.S-México Border Health Research Initiative accomplished and/or identified the need for the following:

- Development of a research agenda.
- Binational collaboration.
- Health professional and researcher training and development.
- Recognition of the need for binational surveillance and data collection.
- Strengthened communications among researchers from the United States and México for future border health research.
- Leadership, partnerships, and collaborative efforts.

Next steps included developing relationships with PAHO, USMBHA, and the BHC, categorizing resources and researchers for each region and determining funding that can be used in México. Other steps were to submit three proposals for future funding in order to coordinate and develop Symposiums III and IV. These future symposiums would focus on developing research training opportunities, developing a campaign to increase awareness of community leaders to encourage participating in research, discussing potential sponsors of research training programs, sharing strategies to promote collaboration with community leaders and organizations, and bringing together partners at multiple levels to discuss models for future research training programs along the border.

U.S.-México Border Centers of Excellence (COE) Consortium Forum, Phase II: Building Healthy Borders through Creative Research Collaborations, August 15-16, 2005, San Antonio, Texas

The COE Consortium was established in 2001 by the Health Resources and Services Administration (HRSA) Bureau of Health Professions' Division of Health Careers Diversity and Development to develop and implement a strategic plan to decrease the health professional workforce shortages along the U.S.-México border. The mission of the Consortium is to improve the health status of Hispanics in the U.S.-

México border region by increasing the number of Hispanic health professionals, improving the cultural competency of health care services for Hispanic communities, and enhancing health research on the Hispanic population. The Consortium core members represent the COE programs, institutions recognized for training significant numbers of Hispanics in each of the four U.S. border states.

Phase II of the COE Consortium was implemented specifically to develop recommendations toward accomplishing the goals developed in 2002 during Phase I. Whereas Phase I focused on the direct health services workforce, Phase II concentrated on the research workforce. Objectives for Phase II were to assemble state meetings to discuss implementation of the COE strategic plan and assess the needs and resources related to the training and education of the health research workforce capacity and diversity of HRSA-funded institutions in the U.S. border states. During Phase II, Consortium members focused on developing a database of research and research projects along the U.S.-México border.

Roundtable discussion groups were assembled by state on the first day and by topic area on the second day. Each group was asked to provide a summary that answered questions related to the following areas: defining research needs, defining the research workforce pool and demographics of researcher database information, and identifying opportunities for improved communication, coordination, and collaboration. Each group completed a thematic analysis summarizing as well as prioritizing common themes. Recommendations that emerged from this analysis are presented here.

Defining Research Needs

- Identify only three or four areas from Healthy Border 2010 as areas of focus for the Consortium over the next two to four years.
- Identify best practices parameters for research to ensure high quality.
- Identify research priorities most important to the region and those associated with strong local health care needs and with emerging local expertise.

Defining the Research Workforce Pool and Demographics of Researcher Database Information

- Link research with specific successful principal investigators in designated areas.
- Invite health departments to provide researcher and research project information for the database and include interdisciplinary research in the Consortium database.
- Encourage continued enrollment of faculty and obtain institutional information from the existing database for inclusion in the current Consortium database.
- Place the Consortium database in a permanent home, preferably the BHC, so it is easily and widely accessible.

Identifying Opportunities for Improved Communication, Coordination, and Collaboration

- Utilize new technology partners such as the BHC, PAHO, and USMBHA to fund support for replicating the database to collect and maintain information on Mexican researchers.
- Coordinate meeting schedules between the BHC, PAHO, USMBHA, and the next COE Consortium Forum.
- Continue to establish partnerships and discuss how to share and maximize dollars via collaborations.
- Invite the following groups to participate:
 - National Hispanic Science Network
 - Society for the Advancement of Chicano and Native Americans in Science

- SACMIS (MESA)
- Council of *La Raza*
- Alliance for Hispanic Health
- Seek funding from the following sources:
 - CDC; Agency for Health Quality and Research; Environmental Protection Agency; HHS, Office of Minority Health; and foundations such as the Gates, Kellogg, and Clinton foundations
- Encourage the creation of adjunct appointments and sharing of technologies between research institutions.

In addition, considerable institutional barriers to effective collaborative research were identified and discussed. These include, but are not restricted to, conflicting actions of various institutional review boards, competition for indirect costs, protracted contract negotiations, and administrative lapses. These barriers should be identified and potential solutions proposed.

Future Forums and Meetings

- Recommend a grant writing workshop for the next forum.
- Consider a plenary session with representatives from the National Institutes of Health.
- Recommend that a future forum focus on access to care issues.
- Improve communications to increase awareness of research activity within the region such as convening a regional scientific symposium.
- Strategically present the COE Consortium's work at national meetings.
- Create a regularly scheduled regional research seminar addressing Consortium findings.

Plans for the next forum include enhancing and maintaining different databases; updating the COE website and Internet links; expanding participation; developing a mechanism of funding to improve communication, collaboration, and coordination between Consortium members; assembling state meetings to identify model programs; and developing a guidebook of model programs on the border.

Action Plan

- Develop vision and mission statements for a possible Consortium Research Training Agenda.
- Develop achievable goals for the Consortium Research Training Agenda as the basis of a work plan.
- Establish the Consortium as a national voice that advocates for a balance between problem-driven and theory-driven research and raises awareness about how anti-immigrant sentiment and human rights abuse have been increasing since the advent of homeland security efforts and how these sentiments are impacting projects on border health.

As of 2009, the plans to move forward with the action plan have been postponed until further notice.

U.S.-México Border Centers of Excellence Consortium Forum, Phase III: Collaborations to Eliminate Disparities: Model Programs That Work, August 14-15, 2006, El Paso, Texas

Following Phases I and II, the COE Consortium identified that increasing the number of culturally competent health professionals along the border should be the next step in addressing the health professional workforce shortage. To accomplish this, the Consortium would expose health care professionals to culturally competent curriculums, cultural practices and settings, and clinical experiences in the border region by—

- Identifying programs and activities that deliver culturally competent care to border residents.
- Developing a Resource Guidebook of Model Programs along the U.S.-México border that have increased the number of disadvantaged and minority students entering health professions and have improved women's, infants', and children's health, oral health, environmental health, and public health.
- Developing greater collaboration with various agencies and programs along the U.S.-México border to reduce health care disparities and improve health outcomes.

Thus, the plan for Phase III was set. The objectives for Phase III included improving communication among partners by updating the COE website and Internet links to all COE and Consortium websites, expanding participation by extending membership to various organizations and agencies; assembling state meetings to identify model programs and to enhance and maintain the database of current programs in the border region, Hispanic programs within Consortium institutions, and currently funded research projects that target certain health disparity areas such as cancer.

After presentations, participants were organized by state and asked to respond to the following questions and statements regarding the Model Program Guidebook:

- Is the information in the guidebook helpful?
 - Participants stated the information was helpful but it needed to be modified and expanded to include other programs, including binational programs that accurately reflect the work of various agencies.
- What is missing?
 - An explanation of benefits and incentives for participating programs.
 - Website links that can provide access to more detailed information on the programs.
- Who is missing?
 - Specific programs were identified as well as entities beyond the normal scope of health care such as school districts, Head Start, and other early childhood programs.
- Develop an invitation list to enter into the Model Program Guidebook
 - A list of specific programs was identified as well as general areas and institutions (i.e., community-based agencies, health professions schools, etc.).
- What are your recommendations?
 - Several issues were identified including information technology compatibility between and within agencies, bringing together agencies with outreach education programs into the health professions, certification of community health workers or *promotoras* or certification of agencies that work with *promotoras*, and suggestions for improved collaboration.

Using the outcomes of Phase III, smaller meetings were to take place to plan future forums, which included the themes of a community responsive workforce, a health-literate and linguistically-competent workforce, and public-private partnerships toward a strong health professions workforce. However, approval has not yet been granted to move forward with these meetings.

Health Resources and Services Administration (HRSA), Office of Rural Health Policy, Improving Knowledge Transfer among Health Researchers and Decision-Makers at the Border: An Expert Meeting, June 26, 2007, Dallas, Texas

The focus of this invitational meeting was on finding ways to improve the translation and dissemination of border health research produced in the United States to maximize its use by decision-makers in health policy and practice.

The meeting agenda was based on WHO's framework for assessing knowledge transfer activities. The framework identifies challenges in linking research to policy and suggests four steps to addressing these challenges: 1) assessment of the general climate for linking research to policy, 2) production of research, 3) knowledge translation and dissemination, and 4) approaches to evaluation.

The meeting began with presentations on the production and use of health research along the border and knowledge transfers from the perspective of policy makers. Participants then broke into small groups to discuss possible approaches to improving links between research and policy. The four workgroup themes were based on the four border health research domains identified during the 2002 Border Health Research Agenda Council Meeting: 1) environmental health, 2) disease control and prevention, 3) health services, and 4) health, society, and development.

A number of cross-cutting themes emerged from the workgroup discussions:

- Workgroups were unsure of how to best package and channel research information for border health stakeholders and concluded that researchers need training to learn how to effectively communicate with policy makers.
- Some participants questioned whether policy makers and their intermediaries could not receive training to become more effective users of research.
- Researchers must remain objective and unbiased even while actively disseminating research findings.
- Some suggested that border health needs a champion who could function as a centralized and objective intermediary between researchers and policy makers and draw attention and resources to border health. It was suggested the BHC could develop a liaison function to help link research to policy.
- Those who fund research can play an important role in shaping policy changes, both by focusing on policy makers' priority issues when determining the research agenda and by improving knowledge transfers.
- Participants called for better coordination and collaboration between the different federal agencies' border initiatives.
- Some participants expressed concern that Mexican partners were not invited to the meeting. They noted that, while some unilateral work is needed, any profound changes in border health will require the collaboration of both countries.

The meeting concluded with these next steps:

1. Convene representatives from federal agencies involved with border issues to assess their priorities for health-related research and approaches for research dissemination.
2. Develop research agendas targeting priority thematic areas, possibly in partnership with other federal agencies and research funders.
3. Provide skill-development programs/resources for users of border research.

HRSA, Office of Rural Health Policy, Options for Improving Access to Clinical Information for Border Health Grantees, December 8-9, 2008, Rockville, Maryland

A group of border health professionals and stakeholders convened to examine options for transferring new and emerging clinical information into the hands of clinicians working on HRSA-funded projects along the U.S.-México border. This meeting was held as a follow-up to the *Improving Knowledge Transfer among Health Researchers and Decision-Makers at the Border* meeting in June 2007 where participants identified the need to find strategies to take current research and translate it into a more useful format for utilization by health care providers in the delivery of health care services along the border.

While many agencies within HHS are invested in border health issues in different ways, this meeting focused on options for providing HRSA grantees, healthcare providers, and entities that work with them access to clinical information . Meeting participants discussed current border health programs and activities funded by HRSA: the Bureau of Primary Health Care has the Health Center Program, with 40 federally qualified health centers located in the border region; the Bureau of Health Professions which established the COE Consortium; and the Office of Rural Health Policy that contributes to activities such as Border Binational Health Week, National Infant Immunization Week, and facilitates collaboration of activities along the border.

Meeting participants identified topics to be addressed in improving access to clinical information along the border. The three most common topics discussed were—

- Identifying strong partnerships and networks along the border.
- Creating an inventory of all HHS border health research activities.
- Identifying a centralized entity that can serve as a coordinator of all federal and clinical border health research activities for dissemination.

The meeting concluded with the decision that the best approach for HRSA would be to partner with organizations already working on developing a border health research agenda including the BHC, PAHO, and USMBHA.

Analysis and Discussion

Participants in all of these meetings and forums agreed that a need exists for a health research agenda tailored to the needs and circumstances of U.S.-México border residents. They consistently suggested that such an agenda must be developed in multiple phases, be sustainable, and use a method of internal and external evaluation. Key elements of all discussions focused on the *what* and *how* of developing such an agenda: What specific health topics should be included in the agenda? What infrastructure must be developed to make it possible? What are the gaps in border health research and how can they be addressed? How can the myriad health needs of U.S.-México border communities be prioritized? How can research be translated into evidence-based policies and practices?

Which health topics to include?

While topics varied widely between meetings and forums, specific health topics most often addressed were infectious diseases (especially tuberculosis, HIV/AIDS, and HPV [the virus that causes cervical cancer]), maternal and child health, environmental health, chronic diseases including diabetes and cancer, mental/behavioral health, social determinants of health (including factors affecting access to care such as cross-border migration, insurance rates, and immigration policies), and health care systems. While it is expected that specific topics will change as increased surveillance and more complete data are available

to help guide such decisions, the BHC's Healthy Border 2010 framework can be used to clarify the priority of specific health topics for research.

Who should participate in the development process?

It was determined that stakeholders at multiple levels from both the United States and México are critical to the development and implementation of a comprehensive agenda. Stakeholders include researchers, health practitioners, public health and allied health care workers, policy makers at the local, regional, and federal levels, and community leaders. Stakeholders should represent academic institutions, research centers, public and private health care clinics and hospitals, non-government organizations, and government offices. Faith-based groups, schools, early childhood development programs, community-based organizations and other sectors like the media were also identified as stakeholders that need to be included in future meetings and forums in order to establish new links and provide avenues for collaboration.

What actions need to be taken and what border health research gaps can be identified?

Several infrastructure-related issues were consistently discussed during these border health research events. These issues highlight major actions taken by different groups to address gaps and topics for inclusion in developing a comprehensive border health research agenda. These included the following:

- *The need for technical assistance from organizations such as the BHC, PAHO, and sister organizations.* These organizations serve a critical role by providing mechanisms for centralization and coordination of research efforts, data collection, and collaboration between agencies.
- *The need for tools that allow communication between researchers.* PAHO's Border Health Virtual Library and inventory serve as examples of tools that allow researchers to communicate with each other on research being conducted in the border region. This theme emerged in almost every meeting as a solution to fragmentation of research efforts.
- *The need to develop the mechanisms and skills to translate and disseminate research to policy makers, practitioners, and program managers.* A key gap identified in all initiatives was the difficulty of translating research into practical application. Several groups noted that researchers often do not possess the background and skills needed to package their research in ways that policy makers and practitioners can understand and apply. Likewise, policy makers and practitioners often do not possess the skills to evaluate a study's rigor and conclusions, but instead make decisions based on political climate and research presentation. This limits the translation of research into evidence-based practices.
- *The need for community involvement in research, not only as subjects, but as stakeholders in the process.* Almost all research forums referred to the need to reach out to community leaders and involve communities in decisions about when, where, and how to conduct research in those communities.
- *The need for more trained researchers involved in border health research.* Many dedicated health experts working in multiple fields bring their skills and knowledge to researching the health of people living in the U.S.-México border region. However, the research workforce is simply not big enough to accomplish all that needs to be done. Many of those researchers are nearing retirement age, while few young researchers are taking their places. Institutions must be able to expand programs to provide training to residents of the area. Several references were also made to the need for culturally-sensitive research, conducted by people familiar with the cultures, customs, and constraints of the border region.

- *The need for binational involvement and collaboration of researchers, policy makers, and practitioners in the development of a border health research agenda.* Several of these initiatives included researchers only from the United States, a limitation that was openly acknowledged by those reviewing their efforts. The need to address federal policies that limit researchers' abilities to work binationally was identified consistently.
- *The need for sustainable funding and other resources.* Resources for health programs are scant, and resources for health research are even scantier. However, funding of research that can lead to evidence-based interventions can be the most cost-effective means of implementing programs that can positively impact the health of border residents.
- *The need to develop and implement data collection systems.* The lack of appropriate systems that can capture data unique to the border such as alternative sources of health care professionals was often discussed as a major challenge. Without this data, it is difficult to understand issues related to the health of border residents.

Progress to Date

Since the initial discussions about the need to develop a health research agenda for the border region, the BHC and other key partners have adopted several of the recommendations outlined in this paper that were also addressed in some of the referenced fora. To date, the following progressive steps have been taken with a continued focus toward effective, evidence-based interventions to improve the quality of life and health for people living on the border:

- The Hispanic Serving Health Professions Schools (HSHPS) U.S.-Mexico Border Health Research Initiative created inventories of border health projects in each of the four U.S. border states and a research directory of U.S. federal initiatives on the U.S.-México border sponsored by the Agency for Health Research & Quality and the CDC. The Offices of Border Health in each state contributed to the inventories and information for the directory was taken from the National Library of Medicine Computer Retrieval of Information on Scientific Programs database. The inventories and directory were provided to participants during the HSHPS Symposium I in 2001.
- A Border Virtual Health Library (BVHL), sponsored and established by the PAHO U.S.-Mexico Border Office with assistance from others including HRSA after the 2002 PAHO-University of Texas Border Health Research Agenda Council Meeting, is available for health-information use and offers international, national, and specialized bibliographic controlled databases for researchers, professors, students, professionals, the media, and the general public. The BVHL can be found on the PAHO website at <http://www.fep.paho.org/eng/TechnicalCooperation/BorderVirtualHealthLibrary/tabid/282/language/en-US/Default.aspx>. A hardcopy version is also available for check-out from the Knowledge Management Center at the PAHO U.S.-Mexico Border Office in El Paso, Texas. The PAHO U.S.-Mexico Border Office is in the process of developing a complimentary database that will include researcher's and research institutions from the ten border states that is scheduled to be completed in 2010.
- A report was completed with input from participants at the 2002 PAHO-University of Texas Border Health Research Agenda Council Meeting, entitled *Border Health Research Agenda: Lines of Research*, and is included in the Border Health Research Agenda Council Meeting Report. This document outlines general recommendations for areas of research and details their justification and relevance to the border region.

- The COE Consortium has drafted a manuscript to address recommendations, specifically in defining research needs and the research workforce and demographics of researcher database information, from the COE Consortium Forum Phase II in 2005; the completion and release date is pending.
- In July 2006 the BHC started publishing a weekly electronic border health bulletin (E-Border Health) that examines current and relevant health issues unique to the U.S.-México border region via the distribution of health reports, research findings, and studies. To subscribe to the E-Border Health, go to the website of the U.S.-México Border Health Commission at www.borderhealth.org and enter your e-mail address on the subscription link at the top of the page. To submit completed work for possible distribution through the E-BH, please contact the BHC at bhc@borderhealth.org.
- The COE Consortium completed a resource guidebook of model programs on the U.S.-México border, one objective from Phase III in 2006. The guidebook is currently not yet available to the public.
- The BHC continues to focus on the development of a border health research agenda by sponsoring Binational Border Health Research Forums. The first research forum occurred in October 2006 in Monterrey, Nuevo León, México; the second took place in July 2009 in San Diego, California; and a third one is planned for 2011.
- The BHC formed a binational border health research expert panel in October 2007, which was a key recommendation from the Monterrey forum. A key recommendation of the expert panel, during their initial meeting, called for the BHC to work towards the establishment of an effective venue for publication of border health research with the support of partners such as the USMBHA and PAHO.
- The BHC sponsored the U.S.-Mexico Border Child and Adolescent Health Forum in El Paso, Texas, in June 2009. The forum included presentations by border health experts and health practitioners on current research in social determinants of health, health disparities, and access to health care focused on children and adolescents.

Next Steps

- The BHC will partner with HRSA and the COE Consortium in support of the COE's borderwide meeting in 2010.
- The BHC has begun a discussion of the relevant issues surrounding the application of Institutional Review Boards (IRBs) impacting binational border health research. This action was requested by the BHC's Border Health Research Workgroup and Expert Panel during their joint meeting in July in 2009. The outcome of this effort could result in the publication of a guide for border health researchers, applicable in both the United States and México, which will support more effective application of binational research methods.
- The BHC will host the third Binational Border Health Research Forum in 2011. Interested parties may contact the BHC for additional information.
- The BHC will explore potential options for the publication of border health research through existing journals or a journal to be developed.

Conclusion

This review of previous efforts to develop a border health research agenda provides a useful framework for the BHC's current effort to coordinate the development and implementation of such an agenda with input from binational stakeholders and experts. Many of the recommendations that have emerged in

recent years address similar challenges and are still current and necessary. While specific health priorities may change over time—for instance, as new infectious diseases emerge, or as the demographics of the population shift from young to old—infrastructure issues and binational and interagency collaboration remain constant. An effective health research agenda for the border must rest upon sustainable binational involvement, collaborative institutional partnerships, and supportable research infrastructures. It is hoped that this report provides the background information necessary for those who are bringing their knowledge, skills, and expertise to the formation of such an agenda and that this report continues to undergo revision as more activities are undertaken.

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