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Developing a University-Workforce Partnership to Address Rural and Frontier MCH Training Needs: The Rocky Mountain Public Health Education Consortium (RMPHEC)

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Abstract The objective of the article is to provide the socio-cultural, political, economic, and geographic conditions that justified a regional effort for training maternal and child health (MCH) professionals in the Rocky Mountain region, describe a historical account of factors that led to the development of the Rocky Mountain Public Health Education Consortium (RMPHEC), and present RMPHEC as a replicable model developed to enhance practice/academic partnerships among state, tribal, and public health agencies and universities to enhance public health capacity and MCH outcomes. This article provides a description of the development of the RMPHEC, the impetus that drove the Consortium's development, the process used to create it, and its management and programs. Beginning in 1997, local, regional, and federal efforts encouraged stronger MCH training and continuing

The Rocky Mountain Public Health Education Consortium consists of local and state MCH programs and representatives from Native American Nations in the Rocky Mountain Region.

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education in the Rocky Mountain Region. By 1998, the RMPHEC was established to respond to the growing needs of MCH professionals in the region by enhancing workforce development through various programs, including the MCH Certificate Program, MCH Institutes, and distance learning products as well as establishing a place for professionals and MCH agencies to discuss new ideas and opportunities for the region. Finally over the last decade local, state, regional, and federal efforts have encouraged a synergy of MCH resources, opportunities, and training within the region because of the health disparities among MCH populations in the region. The RMPHEC was founded to provide training and continuing education to MCH professionals in the region and as a venue to bring regional MCH organizations together to discuss current opportunities and challenges. RMPHEC is a consortium model that can be replicated in other underserved regions, looking to strengthen MCH training and continuing education.

Keywords Distance education · Continuing education · Graduate education · Workforce development

Introduction

The States in the Rocky Mountain and rural West provide our nation with a rich diversity of cultures, landscapes and economic resources that are enjoyed by residents and millions of others who visit the region each year. This region also suffers from vast health problems greater than average for our nation. These affect both majority and minority populations of the region. Specific portions of the Rocky Mountain population have some of the highest rates in the U.S. for childhood obesity, teenage suicides and drug abuse, school drop-out, early pregnancies, lack of early and adequate prenatal care, sexually transmitted diseases, and infant mortality [1–7].

MCH programs in our area confront great disparities in health care and wellness, especially among rural and border, African American, Hispanic and Native American populations. There are huge distances between providers and those needing services, with many counties in the region being designated as frontier areas. It is a region where public health professionals are doing their jobs in relative isolation and with few resources other than the occasional continuing education offering. Compounding the issue of the long distances, the MCH workforce often has to travel in these states on poor roads and along dangerous mountain passes to obtain continuing education. There is also a lack of access to undergraduate and graduate education in maternal and child health due to low wages and few financial aids [8, 9].

The purpose of this article is to provide a historical account of the establishment of the Rocky Mountain Public Health Consortium (RMPHEC), to describe the impetus behind the Consortium's development, vision, and goals, the processes used to create it, its management and programs.

Historical Overview

In spring of 1997, the University of New Mexico (UNM) Master of Public Health (MPH) Program was approached by the Region VI MCH Consultant of the Health Resources Service Administration (HRSA), to collaborate and develop a regional MCH education training program. At that time, there was no MCH training program in Regions VI and VIII. Both UNM faculty and HRSA representatives agreed that the need for such training was urgent. This concern arose from the emergence of Medicaid Managed Care, Title XXI (SCHIP), changing demographics, and changing roles of public health professionals from providing personal health care services to the uninsured to providing more population-based services for communities.

A 2-year grant was approved by the HRSA Maternal and Child Health Bureau (MCHB) for the UNM to hold a series of MCH public health leadership conferences for the Rocky Mountain/Southwest states. These conferences identified methods for increasing the practice of core public health functions and tested the need for a regional MCH public health education program.

The first conference was held in Albuquerque, New Mexico in April 1998. A total of 91 MCH public health leaders and consumer representatives attended the meeting from 12 states, local communities, and Tribes (Arizona, Arkansas, Colorado, Louisiana, Montana, New Mexico, Navajo Nation, Albuquerque Area Indian Health Board, North Dakota, Oklahoma, South Dakota, Texas, Utah and Wyoming). The regional needs identified from six focus groups were the following:

1. A regional network for sharing.
2. Increased training and technical assistance at all levels.
3. Increased support for health systems development.
4. Increased consumer and community involvement in public health programs.
5. Strong desire for a regional public health leadership program.
6. Mandate to explore the use of technology to promote regional networking and education.
7. Mandate to explore the possibility of a regional university network to serve regional MCH public health education needs of the states.

An additional assessment of the regional needs was undertaken in 1998 as part of the HRSA's Maternal and Child Health Bureau (MCHB) grant. A working group obtained a needs assessment questionnaire developed by the Association of Maternal and Child Health Programs (AMCHP) and revised it with permission to include core public health competencies (essential public health services) as outlined in the *Public Health in America* statement by the Public Health Functions Committee [10]. Results from this assessment indicated that there was a need for professional education at all levels, including undergraduate, graduate, and continuing education (CE) opportunities.

In regards to the CE needs, over half of the respondents believed there were insufficient program offerings. There was a desire to focus on both technical skills/training and public health concepts ($\sim$70% respondents). The nine topics most frequently identified as needed for CE offerings were (1) program evaluation; (2) social marketing; (3) needs assessment; (4) data collection; (5) statistical analysis; (6) legislative advocacy; (7) health outcomes analysis; (8) community organization; and, (9) leadership development.

To address the public health problems and workforce development challenges identified in the needs assessments, the RMPHEC was formed in 1998. Simultaneously, the accredited graduate program in public health at the University of Arizona (UA) developed a concentration in Family and Child Health (FCH) that was based on the competencies developed by the Association of Teachers of Maternal and Child Health (ATMCH) and became part of an accredited college of public health in 2003. In 2005, the University of Arizona received HRSA MCHB funds to provide training to graduate students in MCH studies to enhance the cadre of public health professionals practicing in the Rocky Mountain and Southwest areas. The presence of a MCH program at the UA provided an anchor for the Consortium to further develop regional training programs.

RMPHEC

The RMPHEC is an innovative collaboration among several MPH and graduate programs in the Four Corners States, other frontier communities in the West, and the region's MCH practice community (Fig. 1). The RMPHEC mission statement is: "To improve the health status of, and eliminate health disparities among women, children, and families, including those with special health care needs." RMPHEC achieves this mission by increasing the knowledge, skills, and capacity of public health professionals, paraprofessionals, organizations and systems in the Rocky Mountain and surrounding states and Tribes within the Region. The goals of the Consortium are to:

- Increase the number of public health professionals and paraprofessionals in the Rocky Mountain Region with formal public health training who can carry out core functions of public health to improve the health status of MCH/FCH populations.
- Build state, local, and tribal health agency system capacity to develop, implement, and evaluate evidence-based approaches to promote MCH/FCH well-being.

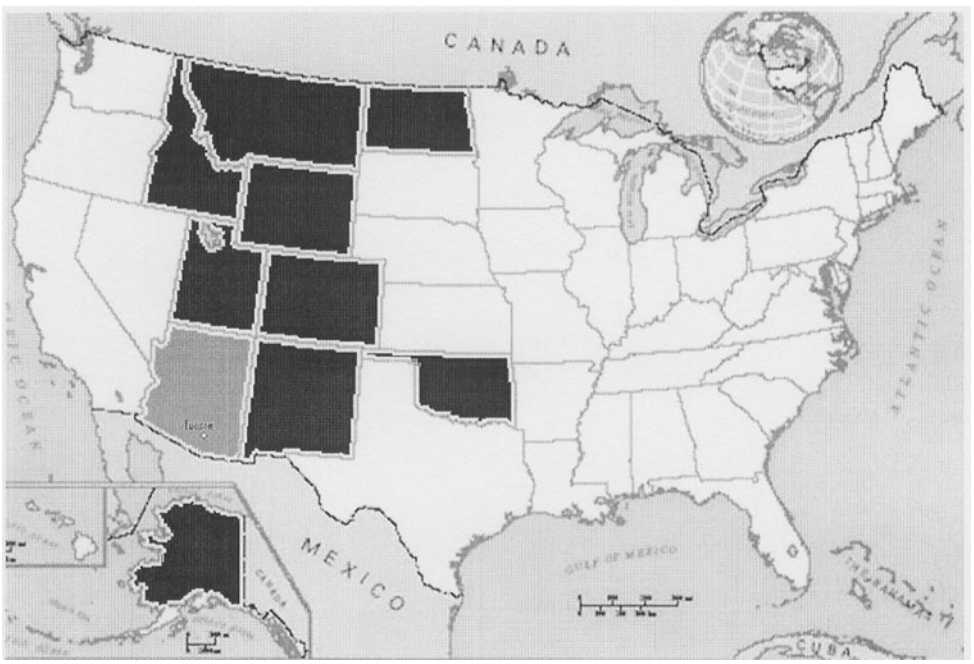

Fig. 1 States participating in the Rocky Mountain Public Health Education Consortium

- To establish and support a collaborative research agenda and projects that build upon our consortium partnerships and benefit the health and well-being of our FCH communities.

The RMPHEC consists of several advisory committees that provide continual input into the development and implementation of its programs through an annual assessment of training needs. These committees consist of regional AMCHP representatives, state MCH program representatives, health and education employees of Native American Tribes, university faculty members and family members. The advisory committees meet annually to set the curricular directions for the training programs. In this manner, the curricula address both the foundations of public health skills and respond to new and emerging issues through its network of academic and health care professionals. To provide MCH training, RMPHEC engages in on-going infrastructure development, continual communications between university partners and the MCH public health workforce, an annual MCH Institute, the development of distance learning continuing education programs, and a MCH certificate program.

Infrastructure and Communications

The current RMPHEC infrastructure (Fig. 2) coordinates various training activities with continual input from MCH leaders, academic MCH professionals, and a biannual needs assessment. This interactive method has led to integrated programs that target all levels of the MCH workforce in the Rocky Mountain States and underserved regions of the rural West.

The RMPHEC is a virtual consortium, unincorporated, that works through a series of contracts and subcontracts that are codified through various memoranda of understanding. During the early stages of the RMPHEC, a five-year strategic plan was developed (1998–2003). The RMPHEC made considerable progress over the first 5 years having established several programs and was able to develop a second strategic plan to guide the RMPHEC forward for the next 5 years (2003–2008).

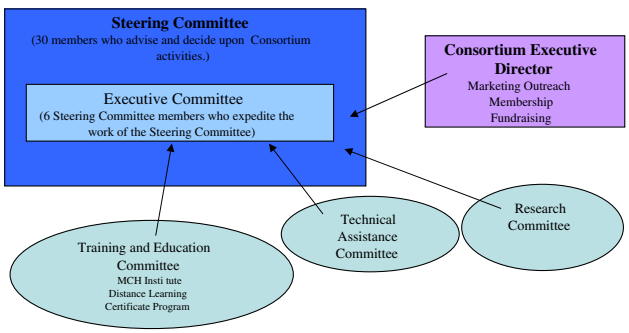

Fig. 2 The Rocky Mountain Public Health Education Consortium (The Consortium comprises of regional MCH friends and colleagues, i.e. individuals or groups who are interested in the health of mothers, children, and families in the Rocky Mountain and Southwest areas of the U.S.)

This success was obtained by conducting regular regional conference calls for the RMPHEC. Furthermore, the annual RMPHEC meeting rotates within the Four Corner States (Arizona, New Mexico, Utah and Colorado). The annual meeting includes the curriculum committee for the MCH Institute, the MCH certificate program, distance learning programs and a needs assessment update.

MCH Certificate Program

The MCH Certificate is a competency-based 12 graduate credit program that focuses on meeting national and state MCH goals. Courses are directed at meeting the ATMCH Competencies, HRSA's MCHB performance measures (national core objectives and indicators), and state Title V MCH goals.

The certificate trainees attend two MCH Institutes (30 h of coursework each), at the start and completion of the certificate program. The courses consist of a professional development and leadership seminar, a course on the foundations of public health, and specific topic related courses.

After the initial MCH Institute, the trainees return to their worksites and are matched with an academic mentor and a practicum mentor to develop a study plan that consists of one graduate-level course, the RMPHEC Internet Courses and a five credit practicum experience. At the conclusion of the practicum, trainees present their practicum research at their second MCH Institute. These sessions have included oral and poster presentations.

To date, the Certificate Program has accepted more than 56 students in nine states (AK, AZ, UT, NM, CO, MN, ID, ND, and WY). These certificate trainees work at state, county/local, tribal health departments and with non-profit agencies. Furthermore, more than a third of these trainees are now enrolled in or have finished graduate degree programs.

MCH Institute

The first MCH Institute was held in the summer of 1999 in Durango, CO and continued there through 2002. In 2003 it moved to Salt Lake City, UT, in 2006 to Tucson, AZ, and in 2007 in Ft. Collins, CO. More than 400 MCH professionals have attended the institute since its inception (Fig. 3). The MCH Institute has been supported in part with a grant from HRSA's MCHB, private funds, and tuition from participants and participating states.

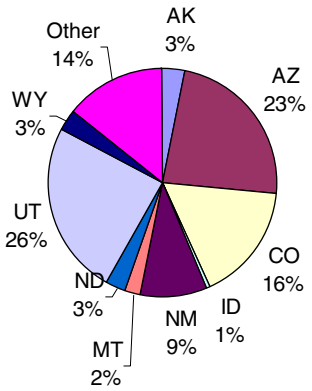

Fig. 3 States represented at the MCH Institutes from 2001 to 2007 ($n = 345$). There were an additional 77 participants who attended the MCH Institutes in 1999 and 2000

The MCH Institute is organized as a series of workshops/courses using problem-based learning strategies. In each course, students interact around knowledge, skills and competencies needed to solve real life public health problems with the support of faculty and personnel with expertise in the field. Innovative education methods included teams of academic faculty and MCH practice professionals who taught all courses; experiential learning strategies and hands-on activities; and networking among public health practitioners and their academic partners.

Plans for the 2008 MCH Institute will model the success of the 2007 MCH Institute and will be held in conjunction with the annual CityMatCH Urban Maternal and Child Health Leadership Conference in Albuquerque, New Mexico in September 2008. The location of the annual MCH Institute will continue to rotate among the Rocky Mountain States.

The MCH Institute not only serves the continuing educational needs of the public health workforce, but also creates linkages between the extensive MCH public health academic resources of the participating Universities. It is intended to serve as the foundation upon which the other programmatic components of the RMPHEC are built.

Distance Learning Programs

The RMPHEC has established three collaborative MCH distance learning programs. The first distance learning program was coordinated by the University of Utah and provided five Internet-based courses, totaling 12–18 contact hours in length each. Participants were able to obtain continuing education credits from a variety of professional organizations for taking the courses. These courses are (1) Fundamentals of Maternal and Child Public Health, (2) Program Planning and Evaluation for MCH Professionals, (3) Cultural Factors in Maternal and Child Health, (4) Building a System of Care for Children with Special Health Care Needs, and (5) Adolescent Health.

The second distance learning program, *Substance Abuse Distance Learning Enhancement (SADLE)* was developed at the University of Arizona. It consists of three 1-credit graduate or continuing education courses developed to help MCH public heath and clinical workers increase their abilities to address alcohol and tobacco use problems in the MCH population. The three courses are (1) Alcohol and Tobacco: Effects in Pregnant and Parenting Women, (2) Alcohol and Tobacco: Effects on Infants and Children, and (3) Alcohol and Tobacco: Effects in Adolescents.

The University of Alaska-Anchorage has led a third collaborative RMPHEC distance learning project called *Frontier Models of Leadership: Learning from Communities* with anticipated completion in 2008. The primary aim of this project is to use distance learning methods to enhance the leadership, scholarship and partnership skills of geographically isolated and underserved MCH practitioners and populations in our region, while highlighting successful local community initiatives.

Conclusion

Sociocultural, political, economic, and geographic conditions in the Rocky Mountain region contribute to both its beauty and to a number of health disparities among vulnerable and MCH populations, including high rates in teenage suicide, obesity, drug abuse, and inadequate prenatal care. These health disparities are exacerbated by lack of access to quality and affordable health care and workforce shortages among MCH professionals, especially in rural and frontier areas.

To increase the number of MCH professionals in the region and improve workforce development, local, state, regional, and federal efforts over the last decade have encouraged a synergy of MCH resources, opportunities, and training for MCH professionals. The RMPHEC was founded to address the training and continuing education needs of MCH professionals in the region.

The success of the RMPHEC is based on the inclusion of academic and MCH practitioners working together on identifying the educational needs for the region and developing strategies to meet these needs. Initially this was accomplished by using seed funds for meetings that allowed for the interchange of ideas. These funds were very important and made it possible to quickly develop programs that would respond to the annual needs assessments within the States. At the same time, as the programs were being developed, the RMPHEC was able to obtain several MCHB grants and leverage advancements in communications technology to minimize costs while at the same time

being able to conduct our needed educational outreach activities.

What remains to be seen is how to keep the RMPHEC as an effective organization, especially since its structure is dependent upon grants and donations. Although the RMPHEC has built strong university, state, and tribal partnerships, which are necessary for its sustainability, its revenue stream has been limited. The RMPHEC will need to continue to build upon its current relationships and venture out to other universities, health departments and various funders to remain sustainable. It also has to find better ways to meet its larger mission of providing technical support and being a source for regional research programs.

The RMPHEC is responding to the workforce development and continuing education needs of Rocky Mountain professionals by offering a variety of innovative programs such as the MCH Institute, the MCH Certificate Program, and distance learning courses. RMPHEC also provides a regional venue for discussions among academic, state and local health representatives, interested community and family members, and tribal and private organizations on current MCH challenges and opportunities. RMPHEC advisory meetings set the curricula for new programs and biannual assessments keep the Consortium aware of growing and new training needs and programs for the region.

RMPHEC is a working model of how collaboration between various public and private entities can partner together to provide educational resources that otherwise would not be possible by any one organization. In addition, the Consortium is a replicable model, which other MCH practice/academic partnerships can tailor to improve their own workforce development needs based on geographical, political, social, cultural and economic conditions.

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