

### Introduction

Chronic diseases such as heart disease, stroke, cancer, arthritis, and diabetes are among the most prevalent, costly, and preventable of health problems.<sup>1</sup> Access to high-quality and affordable prevention measures, including screening and follow-up, are essential steps in saving lives, reducing disability and lowering costs of medical care.<sup>1</sup> Nationally, chronic diseases account for 75% of the money spent on health care.<sup>2</sup> In Nevada, the annual estimated costs associated with chronic disease is \$20.3 billion.<sup>3</sup> Nevada's healthcare system performs lower than average compared to the rest of the U.S. healthcare system with serious shortages of primary care providers and below average health statistics.

Community Health Workers (CHWs) serve as effective, cost-efficient, and culturally-appropriate linkages between underserved communities and the healthcare delivery system. Their training and experience enables them to demonstrate core competencies and knowledge to improve health outcomes using interpersonal communication, service coordination, advocacy and capacity building, organizational, and teaching skills. States across the nation are considering legislation to define the role of CHWs, establish training and certification programs, ensure quality of care, and support inclusion of CHWs as health care extenders.

The Centers for Disease Control and Prevention (CDC) developed a position statement supporting the use of CHWs as critical connections in communities to address health specific concerns, especially in relation to management of diabetes. The use of CHWs in health interven-

tion programs is associated with improved health care access, prenatal care, pregnancy and birth outcomes, client health status, chronic disease management, health and screening-related behaviors and health care costs.<sup>4</sup> The CDC recommends addressing the following to promote CHW policy change: obtaining sustainable financing, promoting workforce development, creating occupational regulations, and continuing research and evaluation of programs.

### Program Background

The Nevada Division of Public and Behavioral Health (NDPBH) implemented the CHW Program in late 2012. Since the program started, CHWs have been particularly effective in reaching minority populations; specifically, Latino and socioeconomically disadvantaged populations helping to address health disparities in both urban and rural settings. Currently, CHWs help increase access to healthcare for underserved Nevadans by increasing health knowledge and self-sufficiency among communities through a range of activities such as outreach, community education, cancer screening, blood pressure self-management education, informal health counseling, social support, and advocacy. The areas of focus for CHWs are chronic diseases such as diabetes, heart disease, and nutrition. The success of the CHW Program depends on willingness to invest in the infrastructure of the CHW model in order to meet healthcare needs.

### Affordable Care Act (ACA)

The Patient Protection and Affordable Care Act (ACA) has three specific goals: improve the health of the population, lower healthcare costs, and provide better care for individuals.<sup>5</sup>

<sup>1</sup> Centers for Disease Control and Prevention (2014): Chronic Diseases: The Leading Causes of Death and Disability in the United States. Available at: <http://www.cdc.gov/chronicdisease/overview/>

<sup>2</sup> Centers for Disease Control and Prevention (2009): The Power of Prevention: Chronic Disease...the Public Health Challenge of the 21<sup>st</sup> Century. Available at: <http://www.cdc.gov/chronicdisease/pdf/2009-power-of-prevention.pdf>

<sup>3</sup> Whitehill, J., Flores, M., & Mburia-Mwalili, A. (2013). The Burden of Chronic Disease in Nevada. Chronic Disease Prevention and Health Promotion, Carson City: Nevada State Health Division.

<sup>4</sup> Centers for Disease Control and Prevention (2011): CDC's Division of Diabetes Translation Community Health Workers/Promotores de Salud: Critical Connections in Communities. Available at: <http://cdc.gov/diabetes/projects/pdfs/comm.pdf>

<sup>5</sup> U. S. Department of Health & Human Services (2014).; Available at <http://www.hhs.gov/strategic-plan/goal1.html>

According to the CDC, Section 5313, the ACA authorizes grants to “eligible entities to promote positive health behaviors and outcomes for populations in medically underserved communities through the use of community health workers<sup>6</sup>.” CHWs are members of the healthcare delivery team that play a critical role in three areas: 1) securing access to healthcare; 2) coordinating access to health care and preventive services; and 3) helping individuals manage chronic conditions. A CHW is an individual who promotes health or nutrition within the community in which the individual resides: a) by serving as a liaison between communities and healthcare agencies; b) by providing guidance and social assistance to community residents; c) by enhancing community residents’ ability to effectively communicate with healthcare providers; d) by providing culturally and linguistically appropriate health and nutrition education; e) by advocating for individual and community health; f) by providing referral and follow-up services or otherwise coordinating; and g) by proactively identifying and enrolling eligible individuals in federal, state and local private or nonprofit health and human services programs.

## Problem Statement

### Healthcare Costs

The United States healthcare system has long been plagued by a disturbing paradox; while healthcare spending reached \$2.7 trillion, or \$8,600 per capita, in 2011 -by far the highest of all nations- the US continues to fare worse than other wealthy countries in health domains such as life expectancy, birth outcomes, sexually transmitted infections, and chronic diseases.<sup>7</sup>

<sup>6</sup> Centers for Disease Control and Prevention (2010): Finding Solutions to health disparities. Racial and ethnic disparities in health: the facts. *REACH U.S.*; Available at [http://www.cdc.gov/chronicdisease/resources/publications/AAG\\_reach.htm](http://www.cdc.gov/chronicdisease/resources/publications/AAG_reach.htm).

<sup>7</sup> Woolf, S.H. & Aron, L. (2013). U.S. health in international perspective: shorter lives, poorer health. *National Research Council and Institute of Medicine*, Washington, D.C., The National Academies Press, 1-394.

The cost per case drives much more of the increasing costs than changes in the prevalence of disease.<sup>8</sup> Only a small number of conditions account for most of the increases in health costs.<sup>9</sup> We need lower cost, better-coordinated approaches to delivering preventive services and earlier care interventions to reduce costs and improve outcomes.

### Primary Care Provider Shortages

Nevada ranked 46th among US states in the number of primary care physicians (PCPs) per population with only 50.3 active primary care physicians per 100,000 of the population compared to the national average of 79.4 in 2012<sup>10</sup>. The ratio of PCPs per 100,000 population in Nevada is 37% below the national average and rural Nevada’s ratio is 43% below the national average.

### Barriers to Healthcare Access

While the overall quality of our nation’s healthcare is improving, healthcare access remains inadequate and poor across the US, particularly for inner city and rural communities, and “persons of color and limited economic means”<sup>11</sup>. In Nevada, with rural and frontier regions as 14 out of 17 counties, only an estimated 10.7% of Nevadans are spread out over 87% of the state’s land mass<sup>12</sup>. These geographic circumstances present tremendous challenges to accessing the healthcare system.

<sup>8</sup> Roehrig, C.S., & Rousseau, D.M. (2011). *The growth in cost per case explains far more of U.S. health spending increases than rising disease prevalence*. *Health Affairs*, 30 (9): 1657-1663

<sup>9</sup> Thorpe, K., Florence, C., and Joski, P. (2004). *Which medical conditions account for the rise in health care spending?* *Health Affairs* Web Exclusive.

<sup>10</sup> Griswold, T., Packham, J., Etchegoyhen, L., Marchand, C., & Lee, B. (2013). *Nevada rural and frontier health data book: 2013 edition*. Nevada Office of Rural Health, University of Nevada School of Medicine.

<sup>11</sup> Garner, D.L., Wakefield, M.A., Tyler, T.G., Samuels, A.D., & Cleveland, R. (2012). *Health care access and insurance availability in Nevada*. *Reports*, University Libraries, University of Nevada, Las Vegas, 33, 1-38.

<sup>12</sup> Griswold, T., Packham, J., Etchegoyhen, L., Marchand, C., & Lee, B. (2013). *Nevada rural and frontier health data book: 2013 edition*. Nevada Office of Rural Health, University of Nevada School of Medicine.

### Strategies

The CHW model is optimal for outreach to underserved populations. Providing culturally-relevant health education and information to native-born and immigrant communities, CHWs are cultural, linguistic and socioeconomic partners to their communities and bridges to social and health services.

#### Health Benefits

There is evidence that healthcare teams with physicians, nurse practitioners, pharmacists, social workers, and dietitians may better manage chronic conditions. An emerging member of effective care management teams is the CHW. A growing body of evidence suggests that CHWs reduce healthcare costs and complications for people with chronic diseases. In 2013, the New England Comparative Effectiveness Public Advisory Council concluded that interventions by CHWs improved health and related outcomes including:

- Clinical measurements (*e.g.*; Body Mass Index, blood pressure, HbA1c)
- Increased immunizations
- Symptoms (*e.g.*; “symptom-free” days)
- Missed work or activity limitations
- Health-related quality of life
- Medication adherence
- Appropriate care (*e.g.*; appointments kept, screenings performed)
- Reduced unscheduled care (*e.g.*; ED/urgent care visits, hospitalizations)

#### Economic Benefits

Integrating CHWs into health care delivery yields cost savings. For example, a Baltimore program that matched CHWs with diabetes patients in Medicaid achieved significant drops in emergency room visits and hospitalization (38% and 30%, respectively)<sup>19</sup>. This drop translated into a 27% reduction in Medicaid costs for the patient group.<sup>4</sup> In another study, 590 underserved men were analyzed 9 months before and after interaction with a CHW. The return on in-

vestment (ROI) was measured at \$2.28 for every \$1 invested in the program, a savings of \$95,941 annually<sup>13</sup>. These data provide evidence of CHW economic contributions and inform policy makers about the importance of program sustainability.

### Recommendations

The Nevada Division of Public and Behavioral Health (NDPBH) and collaborative partners have prioritized the need to develop infrastructure for a sustainable system to increase use of CHWs in Nevada’s healthcare delivery system. Steps taken to do so in Nevada include: standardization of a CHW training curriculum; licensing agencies with CHW pools; evaluation to monitor CHW health outcomes (in cancer and blood pressure CHW pilots) and CHW return on investment study with Health Plan of Nevada; establishment of a CHW Association; and exploration of private and public reimbursement models to fund CHWs.

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<sup>13</sup> National Fund for Medical Education. (2006). Advancing community health worker practice and utilization: the focus on financing. UCSF Center for the Health Professions. Retrieved from [http://nnphi.org/CMSuploads/Handouts\\_HRIA\\_CHWs.pdf](http://nnphi.org/CMSuploads/Handouts_HRIA_CHWs.pdf).