# THE ECONOMIC AND CLINICAL IMPACT OF COMMUNITY HEALTH CENTERS IN WASHINGTON STATE

Analyses of the Contributions to Public Health and Economic Implications and Benefits for the State and Counties

**Submitted to:**
**Community Health Network of Washington**
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**Submitted by:**
**Dobson DaVanzo & Associates, LLC**

**December 3, 2008**

Dobson | DaVanzo

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**Submitted to:**
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# Executive Summary

Community Health Centers (CHCs) represent one of the great "success stories" in the provision of primary and preventive health care services. CHCs provide health care homes[1] for vulnerable populations–those populations "at greater risk for poor health status and [reduced] health care access."[2] In addition, CHCs also serve as economic engines for their communities. The CHC program, from its inception, has fulfilled a dual economic and clinical purpose.

Nationally, CHCs serve over 17 million patients in 6,300 sites.[3] CHCs deliver high quality, cost-effective, patient-centered primary care focused on vulnerable populations. Nationally, CHCs serve 1 in 8 Medicaid beneficiaries; almost 1 in 3 individuals in poverty; and 1 in 5 low-income, uninsured persons. Two-thirds of health center patients are members of racial or ethnic minorities, placing CHCs at the nexus of the national effort to reduce health care disparities.[4] Because CHCs are located in rural areas and medically underserved areas with high unemployment and poverty levels, their impact on local area workforce and economic development is well recognized and significant.

In the State of Washington, CHCs offer a health care home for the entire community: for individuals who are insured through either public or private insurers and for those who are uninsured or underinsured. Washington CHCs serve "the rising number of uninsured in Washington – the number of uninsured patients at health centers increased 42% since 2000"[5] [through 2007]. The CHCs focus on service to local populations strengthening the social fabric and economic stability of Washington State communities.

[1] Health care homes, also known as "medical homes", are a "model of care delivery that includes an ongoing relationship between a provider and patient, around-the-clock access to medical consultation, respect for a patient's cultural and religious beliefs, and a comprehensive approach to care and coordination of care through providers and community services." (The Association of American Medical Colleges. (http://www.aamc.org/newsroom/reporter/march08/medicalhome.htm).

[2] Shi L, Stevens GD. (2005) Vulnerability and unmet health care needs: The influence of multiple risk factors. *Journal of General Internal Medicine*, February 2005.

[3] For the purposes of this report, the term "CHCs" is used to describe medical facilities that meet the requirements of 330 of the Public Health Service Act (42 USCS § 254b). Facilities include recognized Federally Qualified Health Centers ("FQHCs") and facilities that meet the requirements for FQHCs ("look alikes").

[4] Shi L. The Role of Health Centers in Improving Health Care Access, Quality, and Outcome for the Nation's Uninsured. Testimony at Energy and Commerce Committee, Subcommittee on Oversight and Investigations Congressional Hearing entitled "A Review of Community Health Centers: Issues and Opportunities." Washington, DC. May 25, 2005.

[5] 2007 Snapshot: Washington's Community Health Center System by Community Health Network of Washington (http://www.chnwa.org/PolicyAdvocacy/ResearchAndReports/WA%202007%20Fact%20Sheet%208%2012%2008%20(3).pdf) .

## *Purpose*

Compelling evidence suggests that primary care services exert a pronounced effect on improving clinical and functional health outcomes.[6] Recent passage of legislation by the U.S. Congress reauthorizing the CHC program through FY2012 further demonstrates widespread acceptance of the importance of CHCs in caring for Medicaid, uninsured, and medically vulnerable populations.[7]

CHCs have been recognized for their ability to reduce health disparities by providing high quality primary and preventive care to predominately low-income, uninsured, high risk patients.[8] CHCs further reduce barriers to care for these patients by customizing services to meet their patients' unique health and cultural needs.[9] CHC expenditures associated with achieving these health effects—both directly and indirectly—improve community economic vitality.

Dobson DaVanzo & Associates LLC ("Dobson | DaVanzo") was commissioned by Community Health Network of Washington in collaboration with the Washington Association of Community and Migrant Health Centers[10] to study the economic and clinical impact of CHCs within the State of Washington, including estimating the economic, employment and tax effects of CHCs on Washington State and selected counties.

An important aspect of our work was to examine CHC expenditures and county-level expenditures by Community Health Plan / Community Health Network of Washington (CHP/CHNW), a managed care plan and provider network created in 1992 by a group of community health centers across Washington State to improve access for vulnerable populations to high quality, culturally competent care. We call these combined expenditures "Washington Community Health Center System" or "WA CHC System." The acronym "CHC" refers only to CHC direct care delivery and expenditures. All our analyses were done at both the state and the county level. We believe this is the first time this type of analysis has been conducted.

The collective value of the WA CHC System demonstrates that "the whole is bigger than the sum of its parts". WA CHC System expenditures for healthcare services, salaries, and operating costs along with cost savings are put back into Washington's local communities, in contrast to health care insurers and other for-profit providers that could have obligations to shareholders or other obligations out-of-state. The health plan's collaboration with its community health center delivery system within the WA CHC

[6] World Health Organization, *Primary Health Care: A Framework for Future Strategic Directions Global Report.* 2003, WHO.
[7] HR 1343 "Health Centers Renewal Act of 2008". Passed Oct 8, 2008: Became Public Law No: 110-355. 122 Stat. 3988; 8 pages.
[8] Shin P, Markus A, Rosenbaum S, Sharac J. (2008) Adoption of health center performance measures and national benchmarks. *Journal of Ambulatory Care Management*, 31(1):69-75.
[9] National Association of Community Health Centers, Inc. and The Robert Graham Center. (2007) *Access Denied: A Look at America's Medically Disenfranchised.*
[10] The Washington Association of Community & Migrant Health Centers (WACMHC) is a non-profit organization, formed in 1985, to advocate on behalf of the low-income, uninsured, and underserved populations of Washington State served by community health centers.

System gives it the ability to holistically and effectively address the health needs of the communities it serves.

## *Study Methods*

To complete this study, we engaged in three separate activities, each with its own methodology. First, we reviewed the available research to understand the clinical contribution that CHCs make toward improving the health of their patients and the populations of their communities. The literature also provides a qualitative understanding of how CHCs support community economic development. Second, we developed a survey to collect county-level expenditure and employment data from Washington CHCs and CHP/CHNW in order to build a state and county-level database. Third, we used the input-output model IMPLAN to quantify the economic impact that the WA CHC System makes on the state and counties of Washington.

IMPLAN is a type of applied economic analysis that tracks the interdependence among various producing and consuming sectors of an economy. More specifically, it measures the relationship between WA CHC System expenditures and community and employment economic output. We chose to use IMPLAN in this study because this modeling system is widely accepted, cost-effective, readily available to other researchers, and well suited to our study objectives.

Our analyses with IMPLAN enabled us to calculate the multiplier effects of changes in final demand for the WA CHC System on all other industries within a local economic area, in this case, the counties and State of Washington. Multipliers were estimated for the entire state and all the counties in which the WA CHC System has economic activity. "Value-added" calculations representing state and county gross domestic product (GDP) were also calculated. Finally, tax impacts were estimated.

**Definitions of key IMPLAN components as applied to this study are:**

***Total economic effects*** are the combined effect or sum of WA CHC System direct, indirect, and induced effects.

- ***Direct effect*** is the initial change in revenue, earnings, and employment (jobs) for the WA CHC System.
- ***Indirect effect*** is a change in inter-industry transactions, as supplying industries respond to the direct effects of the WA CHC System.
- ***Induced effect*** is the change in downstream household spending caused by the direct and indirect effects on household income.

***Multipliers calculated by IMPLAN*** show the relationship between the direct effect and the total economic effect. The direct effect *times* the multiplier produces the total economic effect.

***Tax effects*** represent State and local, as well as federal taxes on the total economic effect.

## *Findings from the Literature Review*

Based on our review of the literature, we note distinct similarities between Washington State CHCs and CHCs nationally. Both nationally and in the State of Washington, CHCs target their health care delivery to specific populations in medically underserved areas. The national literature informs our understanding of how CHCs in Washington State deliver care that is appropriate to geography, language, and cultural context. Thus, our literature review findings generally apply to Washington State CHC missions and clinical impacts on populations or underserved areas.

- **CHCs Perform an Important Role in the Safety Net**

Over the last forty years, CHCs have, in aggregate, become the largest primary care provider in the U.S. The number and scope of CHCs have grown and evolved beyond their initial charge to become integral community resources. Although individual CHCs focus on local communities, federal law governs many aspects of Washington State CHC operations. Federal law defines a CHC and specifies who must be served, what care must be provided, and how the CHC must be governed. For example, aside from participating emergency departments under EMTALA,[11] CHCs are the only providers that are *required* to see all patients, regardless of their ability to pay.

Numerous independent experts have found CHCs' quality of care equal or better than the quality of other primary care providers. [12,13] By serving as health care homes for vulnerable populations, CHCs have been able to create an effective health care system for these challenging patients. Vulnerable populations are characterized, in part, by sporadic health seeking behaviors and greater use of more costly services.

- **Both National and Washington State CHCs Serve Vulnerable Populations**

Evidence in the literature documents that CHC patients are among the highest risk populations in the nation, including, for example, migrant farm workers and homeless persons. These patients have been described as "significantly poorer, in significantly worse health, and…more likely to be members of racial and ethnic minority groups" than patients of other providers."[14,15]

In 2007, Washington State CHCs served 594,763 patients, providing 2,330,551 distinct encounters. Ninety percent of CHC patients (whose income level is known) were at 200

[11] Emergency Medical Treatment and Active Labor Act (EMTALA). 42 USC 1395dd, part of the U.S. Code, "Examination and treatment for emergency medical conditions and women in labor."
[12] Hicks LS, et al. (2006) The quality of chronic disease care in U.S. Community Health Centers. *Health Affairs*
[13] Chin MH, et al. (2000). Quality of diabetes care in Community Health Centers. *American Journal of Public Health* 90(3): 431-4.
[14] Dor A, Pylypchuck Y, Shin P, Rosenbaum S. (2008) *Uninsured and Medicaid Patients' Access to Preventive Care: Comparison of Health Centers and Other Primary Care Providers*. Research Brief #4, Geiger Gibson Program/ RCHN Community Health Foundation Research Collaborative, August 13, 2008. (http://www.gwumc.edu/sphhs/departments/healthpolicy/chsrp/downloads/RCHN_brief4_8-13-2008.pdf)
[15] Source: *Vital Signs: The Role of Community Health Centers in Washington State*, Washington Association of Community & Migrant Health Centers, Community Health Network of Washington, and Community Health Plan of Washington, August 2008.

percent, or below, of the Federal Poverty Level[16] and approximately 30 percent were best served in a language other than English. Washington CHCs delivered approximately $25.6 million in enabling services, including case management, outreach, translation/interpretation, and eligibility assistance.[17]

The age distribution of Washington State CHC patients approximates the distribution of patients in CHCs across the Nation. Washington State CHC patients are more likely to be Asian Pacific Islander, Native American, Hispanic/Latino and White than nationally, and less likely to be African American. Washington State CHC patients are more likely to be better served in a language other than English than national CHC patients.

- **CHCs in Washington State Deliver Care that is Appropriate to Geography, Language, and Cultural Context**

The national literature contains substantial evidence that CHCs improve access to medical care and fill service needs in urban or rural areas that previously lacked services and/or provider capacity. Geographic areas that face shortages of health workers and facilities tend to be the same areas that are most underdeveloped and/or economically depressed. In turn, this economic reality aggravates workforce shortages, incenting fewer physicians to locate in these medically underserved areas.[18]

CHCs are, in many circumstances, the only professional health care option available to some patients for basic care, providing services that are often unavailable or more difficult to obtain through private health care providers. At the most basic level, the lack of other professional health services may be due to such factors as absence of transportation to a facility and/or inability to pay for services. For many patients, however, the lack of other professional health services may also include more complex factors such as language fluency, health literacy, and cultural competency.

Cultural competency generally refers to heightened awareness and knowledge of the needs of the individual patient. Often, cultural competency manifests itself in a provider's ability to accurately interpret and respond to non-verbal or other cultural cues or in the way in which health care organizations provide information to their clients.[19]

Language services for individuals with limited English proficiency are of growing importance in making treatment decisions and ensuring that patients receive appropriate care.[20] These services include the provision and appropriate use of interpreters and translated materials, both for educational and administrative purposes.

[16] For instance, in 2008, the poverty threshold is $10,400 for a single person, $14,000 for a household of two persons, and $21,200 for a household of four persons. (*Federal Register*, FR 3971–3972.)
[17] http://bphc.hrsa.gov/uds/2007data/washington/table8b.htm
[18] Expanding Care Versus Expanding Coverage: How To Improve Access To Care by Peter Cunningham and Jack Hadley in Health Affairs, July/August 2004
[19] *Measuring Cultural Competence in Health Care Delivery Settings: A Review of the Literature*. Report submitted to Health Resources and Services Administration by The Lewin Group, July 2001.
[20] Dana RH (1998). Projective assessment of Latinos in the United States: current realities, problems, and prospects. *Cultural Diversity and Mental Health*, 4(3), 165-184.

- **CHCs are Cost-effective Providers**

There is an ever increasing need in the policymaking arena for evidence of the cost-effectiveness of health care interventions. Evidence on the cost savings of CHCs is extensive.[21]

Although CHC patients tend to be more complex than the general population, there are studies that show that CHCs have been able to achieve 30% Medicaid savings by reducing avoidable hospitalization and other, more expensive care.[22] Another comparison of costs between CHCs and other primary care providers found that CHCs spent, on average, 41%, or $1,810 less per patient than the other providers.[23] Nationally, these savings, resulting from lower reliance on more costly care such as inpatient care translated into an estimated total savings of $10 billion to $18 billion in 2004 for providing care to 13 million low-income patients.

## *The WA CHC System as an "Economic Engine"*

The literature review identifies numerous qualitative assessments of CHCs' contributions to the economic vitality of their communities. From this perspective, we note six contextual reasons why WA CHC System expenditures are important to their communities. CHC expenditures represent, among other elements:

- Sizable expenditures specifically focused on low-income, medically underserved and often rural areas;
- Expenditure dollars that are "imported" from outside of the community through federal grants and public health care program spending;
- An increase of state economic leverage through federal Medicaid matching funds;
- Employment that strengthens the communities' social fabric by reducing unemployment and poverty;
- Safety net services that reduce local hospital and physician bad debt and charity care strengthen provider finances—resulting in improved care for all patients, not just WA CHC System patients; and
- A reduction in system costs since CHCs reduce more expensive inpatient care by substituting preventive care.

[21] Proser M. (2005). Deserving the spotlight: Health centers provide high quality and cost-effective care. *Journal of Ambulatory Care Management*, 28(4):321-330.
[22] Cunningham P. (2006). What accounts for differences in the use of hospital emergency departments across U.S. communities? *Health Affairs* 25: W324-W336.
[23] National Association of Community Health Centers (NACHC), The Robert Graham Center and Capital Link, 2007. Access Granted: The Primary Care Payoff. (http://www.nachc.com/client/documents/issues-advocacy/policy-library/research-data/research-reports/Access_Granted_FULL_REPORT.pdf)

## *Economic and Tax Effects at the State Level*

Within this context, our quantitative analyses point to a significant WA CHC System economic impact on the State of Washington. ***Table ES-1*** below summarizes our state level economic impact findings and demonstrates a total economic impact to Washington of $1.2 billion.

**Table ES-1 – Summary of State –level WA CHC System Economic Impacts**

| Impact | State GDP (Billions of Dollars and Millions of Jobs) | State Heath Expenditures (Billions) | Direct Expenditures (millions), Labor Income (millions) Employment (Jobs) | Direct WA CHC System Expenditures as a Percent of State Totals | Direct WA CHC System Expenditures as a Percent of State Health Expenditures | Total Expenditures (millions), Labor Income (millions) Employment (Jobs) | Total Output as a Percent of State Totals | Total WA CHC System Output as a Percent of State Health Care Expenditures | Total Economic Multiplier |
|---|---|---|---|---|---|---|---|---|---|
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Economic Output | $292 | $34 | $683 | 0.23% | 2.04% | $1,207 | 0.41% | 3.6% | 1.77 |
| Labor Income | $168 | n/a | $393 | 0.23% | n/a | $564 | 0.34% | n/a | 1.44 |
| Employment (Jobs) | 3.78 | n/a | 5,192 | 0.14% | n/a | 8,427 | 0.22% | n/a | 1.62 |

Source: Dobson | DaVanzo survey of Washington State Community Health Centers: Financial and Employment Impact calculated using IMPLAN Software.

- **Expenditures**: In 2006, the WA CHC System direct expenditures were $683 million, or about 0.23 percent of Washington State's overall GDP of $292 billion, and about 2.04 percent of Washington State's total health care spending of $34 billion.

- **Overall economic impact:** For every $1 of WA CHC System expenditures, the state realizes $1.77 in total economic output. This overall economic multiplier of 1.77 means that the total WA CHC System economic impact is $1.21 billion or 0.41 percent of the total state GDP, and 3.6 percent of state health care spending.

- **Medicaid multiplier effect:** For every $1 expenditure of state supported, federally matched Medicaid by the WA CHC System, the state realizes $3.54 in total economic output. The implicit multiplier of 3.54 is an extremely powerful economic inducement for the state to maintain, and, where possible, improve, CHC Medicaid reimbursement.

- **Direct labor income impact:** For every $1 of WA CHC System spending on labor, the state realizes $1.44 in labor income. The direct labor income impact of WA CHC System spending on labor in the state is $393 million, while the total labor income effect is $564 million.

- **Job creation and impact:** We calculate that the WA CHC System is responsible for approximately 5,192 jobs, or about 0.14 percent of the Washington State total of about 3.8 million jobs. For every one job created by the WA CHC System, 1.62 jobs are created in the state. This employment multiplier of 1.62 produces a total WA CHC System employment (jobs) impact of 8,427 or about 0.22 percent of the state total.

***Table ES-2*** below summarizes our state level tax impact findings.

**Table ES-2 – Summary of State –level Tax Impacts**

| | Federal | State/Local | Total* |
|---|---|---|---|
| Tax (in millions) | $134,594,182 | $40,993,175 | $176,076,383 |

Source: Dobson | DaVanzo survey of Washington State Community Health Centers: Financial and Employment Impact calculated using IMPLAN Software.

*The slight difference between the sum of State/Local and Federal is due to Corporate Enterprise Taxes.

- **Tax impacts:** WA CHC System economic activity produces, in total, approximately $176.1 million in total taxes including $41.0 million in state and local taxes, and $134.6 million in federal taxes.

IMPLAN also indicates how employment and economic output of other industries are affected by CHC spending. For instance, at the state level, CHC expenditures affect the following industrial sectors: 1) retail trade; 2) accommodation and food services; 3) administrative and support services; 4) waste management and remediation; 5) professional, scientific and technical services; and 6) real estate and rental leasing.

## *Economic Effects at the County Level*

WA CHC System spending has a significant impact on the Washington State economy, especially the health care sector. The WA CHC System economic impact appears particularly important at the county level. Our analyses produced a series of detailed county level analyses showing WA CHC System direct and total economic impact, labor income, employment (jobs), and tax effects.

***Table ES-3*** below summarizes the economic impact for counties in which the county WA CHC System's total economic impact is greater than two percent of the county's health care spending.

## Table ES-3 – Summary of Selected County-level Economic Effects

| State or County | Direct WA CHC System Expenditures (millions) | Direct WA CHC System Expenditures as a Percent of State/County GDP | Direct WA CHC System Expenditures as a Percent of State/County Health Expenditures | Total WA CHC System Output (millions) | Total WA CHC System Output as a Percent of State/County GDP | Total WA CHC System Output as a Percent of State/County Health Care Expenditures |
|---|---|---|---|---|---|---|
| Adams | $25 | 5.0% | 43.3% | $32 | 6.5% | 56.7% |
| Benton | $15 | 0.2% | 2.3% | $22 | 0.4% | 3.3% |
| Chelan | $26 | 1.0% | 8.2% | $39 | 1.5% | 12.5% |
| Cowlitz | $15 | 0.5% | 4.0% | $22 | 0.7% | 5.8% |
| Ferry | $0 | 0.4% | 2.5% | $1 | 0.4% | 3.0% |
| Franklin | $16 | 0.9% | 8.3% | $23 | 1.3% | 11.8% |
| Grant | $23 | 1.0% | 8.3% | $31 | 1.3% | 10.9% |
| King | $195 | 0.1% | 1.5% | $374 | 0.3% | 2.8% |
| Kitsap | $18 | 0.3% | 1.4% | $27 | 0.4% | 2.1% |
| Klickitat | $1 | 0.2% | 1.7% | $2 | 0.3% | 2.1% |
| Lewis | $6 | 0.3% | 2.3% | $9 | 0.4% | 3.4% |
| Mason | $5 | 0.5% | 2.3% | $6 | 0.6% | 3.0% |
| Okanogan | $10 | 1.0% | 6.7% | $14 | 1.4% | 9.5% |
| Pend Oreille | $2 | 0.6% | 3.6% | $2 | 0.7% | 4.4% |
| Pierce | $50 | 0.2% | 1.4% | $83 | 0.3% | 2.3% |
| Skagit | $10 | 0.2% | 1.9% | $15 | 0.4% | 2.9% |
| Spokane | $51 | 0.3% | 2.7% | $89 | 0.5% | 4.6% |
| Stevens | $10 | 1.2% | 7.0% | $13 | 1.7% | 9.8% |
| Thurston | $23 | 0.3% | 2.0% | $36 | 0.5% | 3.1% |
| Walla Walla | $6 | 0.4% | 3.0% | $9 | 0.5% | 4.4% |
| Whatcom | $16 | 0.2% | 2.0% | $26 | 0.4% | 3.3% |
| Yakima | $110 | 1.7% | 12.7% | $171 | 2.6% | 19.7% |
| **Washington** | **$683** | **0.2%** | **2.0%** | **$1,207** | **0.4%** | **3.6%** |

Source: Dobson | DaVanzo survey of Washington State Community Health Centers: Financial and Employment Impact calculated using IMPLAN Software.

WA CHC System expenditures have obvious workforce implications for affected communities as WA CHC System employees serve as mentors to local clinical staff, attract complementary clinical and professional staff into the county, and generally provide an environment conducive to overall economic development. Improved population health resulting from the provision of quality clinical care also bolsters the social fabric of the community, which then stabilizes and improves community socio-demographics. Because most WA CHC System expenditure dollars come from outside the local communities, the WA CHC System economic effects are extremely important for the individual counties.

## *Discussion and Conclusion*

The economic contribution of the WA CHC System activities to local communities is important for a variety of reasons. The first reason concerns specific targeting and the intent of the WA CHC system. We noted that WA CHC System expenditures are important to the communities because they improve the health status of low-income, medically underserved populations, often in rural areas, along with providing associated economic benefits to the communities. These impacts are not likely to be replaced if CHCs are downsized or cease to exist.

Within this broader contextual framework, our analyses indicate that the WA CHC System direct expenditures and direct employment represent a visible portion of local economies, particularly of local health care economies. The county-level analyses show that in many instances WA CHC System expenditures represent a sizable portion of local health care spending. This spending makes it possible to attract clinical and professional workers to the county. In turn, the highly-trained WA CHC System professional employees often serve as mentors to local staff. Furthermore, the WA CHC System spending enhances economic development as dollars remain within the CHC community.

The role of Medicaid deserves final mention. The federal government matches Washington State spending on most Medicaid programs which means that for every dollar spent on federally matched Medicaid health care services by Washington, the federal government also contributes a dollar toward the Medicaid costs. When this match is added to the multiplier effect for the WA CHC System it magnifies the impact of every state Medicaid dollar. As a result, for every $1 expenditure of state supported, federally matched Medicaid by the WA CHC System, the state realizes $3.54 in total economic output. The implicit multiplier of 3.54 is an extremely powerful economic inducement for the state to maintain, and, where possible, improve, CHC Medicaid reimbursement.