Executive Summary: Health Impact Review of Community Health Centers' Capital Budget Request

Request to Partially Fund the Construction of Five Community Health Centers

Evidence indicates that funding these community health centers has potential to increase access to culturally and linguistically appropriate health care and improve health outcomes for a projected 42,300 underserved patients, thereby decreasing health disparities

CAPITAL BUDGET REQUEST INFORMATION

Sponsor: Representative Ryu

Summary of Request:

- Requests 25% of the funding needed to build five community health centers (CHCs)—a total funding request of $14,700,000.
- Each project contact indicated ways their organization has secured or plans to secure the remaining funding to complete the project.
- These health centers include International Community Health Services in Shoreline, Yakima Valley Farmworkers Clinic in Toppenish, and Sea Mar Community Health Centers in Ocean Shores, Seattle, and Vancouver.
- Four of these projects would replace existing health centers with larger and more comprehensive facilities, while the fifth project would construct the first CHC in Shoreline.
- Combined, these five CHCs would provide care to a projected additional 42,300 patients once the clinics are operating at full capacity (which takes an average of three years).

HEALTH IMPACT REVIEW

Summary of Findings:

We have assumed that if these CHCs are provided with 25% of the funding for these projects, as requested, then the organizations would be able to secure the rest of the funding needed to complete these builds. This appears to be a strong assumption since each of the project contacts has indicated ways their organization has secured or plans to secure the remaining funding needed to complete the project.

This health impact review found the following evidence regarding this capital budget request:

- Very strong evidence that building these new CHCs and increasing patient capacity would likely increase access to care for underserved populations.
- Strong evidence that building these new CHCs and increasing patient capacity would likely increase access to culturally and linguistically appropriate care.
- Strong evidence that increasing access to care for underserved populations would likely improve health outcomes for these patient populations.
- Strong evidence that increasing access to culturally and linguistically appropriate services would likely improve health outcomes for diverse patient populations.
- Very strong evidence that improving health outcomes for underserved populations would likely decrease health disparities.

For more information contact:
(360)-236-4106 | hir@sboh.wa.gov
or go to sboh.wa.gov

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Health Impact Review of Community Health Centers' Capital Budget Request

Request to Partially Fund the Construction of Five Community Health Centers

February 20, 2014

Author: Sierra Rotakhina
Contributor/Reviewer: Christy Hoff
Reviewer: Michelle Davis
Reviewer: Timothy Grisham

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Introduction and Methods

A health impact review is an analysis of how a proposed legislative or budgetary change will likely impact health and health disparities in Washington state (RCW 43.20.285). For the purpose of this review 'health disparities' have been defined as the differences in disease, death, and other adverse health conditions that exist between populations (RCW 43.20.270). This document provides summaries of the evidence analyzed by State Board of Health staff during the health impact review of the Community Health Centers' Capital Budget Request.

Staff analyzed the content of the budget request and created a logic model depicting possible pathways leading from the request to health outcomes. Staff consulted with experts on health and conducted objective reviews of the literature for each component of the pathway using databases including PubMed and Google Scholar. In addition, in response to a request for data from State Board of Health staff, Community Health Services, Yakima Valley Farmworkers Clinic, and Sea Mar Community Health Centers provided data on patient demographics, clinic outcomes, and services provided.

The following pages provide:

- A detailed analysis of the budget request including a summary of the request and the logic model.
- Annotated references with summaries of the findings for each research question.

The logic model is presented both in text and through a flowchart (Figure 1). The logic model includes information on the strength of the evidence for each relationship. The strength-of-evidence has been defined using the following criteria:

- **Minimal evidence:** the literature review yielded only one study supporting the association, *or* the literature review yielded several studies supporting the association but also some studies which found no association or a negative relationship.
- **Some evidence:** the literature review yielded several studies supporting the association, but a large body of evidence was not established.
- **Strong evidence:** the literature review yielded a large body of evidence on the relationship (a majority of which supported the association) but the body of evidence contained some contradictory findings, did not incorporate the most robust study designs or data analysis, had significant but not meaningful results, or some combination of these. Any relationship where the language of the bill explicitly indicated that the work must be evidence-based was considered a strong connection.
- **Very strong evidence:** the literature review yielded a very large body of robust evidence supporting the association with few if any contradictory findings. The evidence indicates that the scientific community largely accepts the existence of the association.

The summaries in the reference list provide further explanations behind the strength-of-evidence assigned to each relationship in the pathway, including details on the breadth and robustness of the literature.

This review was subject to time constraints, which allowed for only a preliminary search of the evidence. The annotated references are only a representation of the evidence and provide examples of current research. In many cases only a few review articles or meta-analyses are referenced. One article may cite or provide analysis of dozens of other articles. Therefore the number of references included in the bibliography does not necessarily reflect the strength-of-evidence. In addition, some articles provide evidence for more than one research question so they appear more than once in the reference list.

Analysis of the Budget Request and the Scientific Evidence

Summary of the Community Health Centers' Capital Budget Request

- Requests 25% of the funding needed to build five community health centers (CHCs)—a total funding request of $14,700,000.
- Each of the project contacts has indicated ways their organization has secured or plans to secure the remaining funding to complete the project.
- These health centers include International Community Health Services in Shoreline, Yakima Valley Farmworkers Clinic in Toppenish, and Sea Mar Community Health Centers in Ocean Shores, Seattle, and Vancouver.
- Four of these projects would replace existing health centers with larger and more comprehensive facilities, while the fifth project would construct the first CHC in Shoreline.
- Combined, these five CHCs would provide care to a projected additional 42,300 patients once the clinics are operating at full capacity (which takes an average of three years).

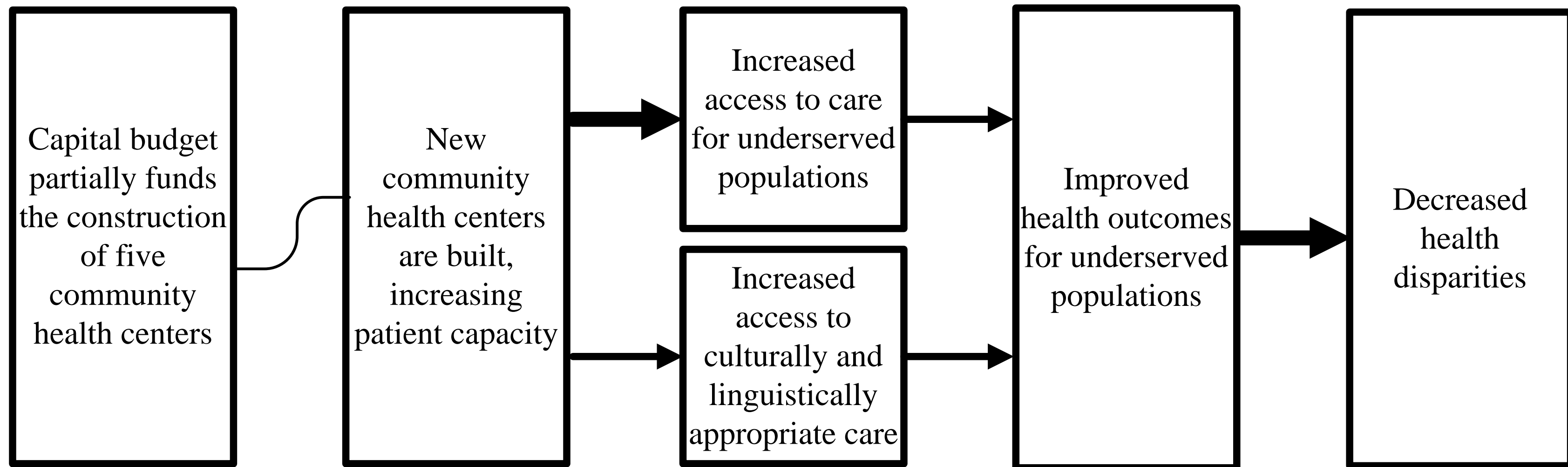
Health impact of the Community Health Centers' Capital Budget Request

Evidence indicates that funding these CHCs has potential to increase access to culturally and linguistically appropriate health care and improve health outcomes for a projected 42,300 underserved patients, thereby decreasing health disparities.

Pathways to health impacts

The potential pathways leading from the capital budget request to decreased health disparities are depicted in Figure 1.We have assumed that if these CHCs are provided with 25% of the funding for these projects, as requested, then the organizations would be able to secure the rest of the funding to complete these builds. This appears to be a strong assumption since each of the project contacts has indicated how their organization has secured or plans to secure the remaining funding needed to complete the project. Evidence indicates that building these five health centers and increasing patient capacity has strong potential to improve access to care for underserved communities,[1-7] and to increase access to culturally and linguistically appropriate care.[8-14] This increased access to culturally and linguistically appropriate care in turn has potential to improve health outcomes for underserved communities.[15-26] Evidence shows that traditionally underserved communities such as low-income and communities of color are more likely to experience poor health outcomes; therefore improving health outcomes among these populations has potential to decrease health disparities.[27-28]

Logic Model



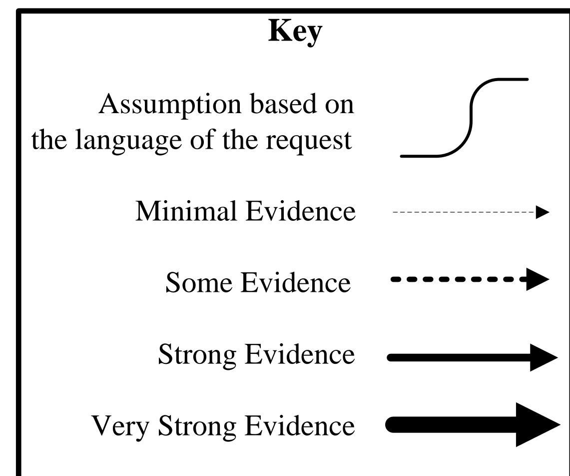


Figure 1
Community Health Centers' Capital Budget Request

Annotated References and Summaries of Findings

Evidence relating to how building new community health centers and increasing patient capacity will likely increase access to care for underserved populations

Summary of findings

There is very strong evidence that building these community health centers (CHCs) and increasing patient capacity will increase access to care for underserved populations. All five of these CHCs are Federally Qualified Health Centers (FQHCs) which by definition serve an underserved area or population and offer a sliding fee scale. Four of these projects will be expansions of existing health centers that will allow for increased patient capacity. Data from these clinics show that the current centers operating on these sites serve populations who often have the least access to health care such as low-income individuals, people of color, uninsured patients, homeless populations, migrant/seasonal farmworkers, and individuals who speak a primary language other than English. The fifth project is a new International Community Health Services (ICHS) clinic in Shoreline. ICHS's currently operating clinics serve very large percentages of patients from traditionally underserved populations. Behavioral Risk Factor Surveillance System (BRFSS) data from 2010 confirms that low-income and people of color in Washington were less likely to have access to health care than their counterparts. In addition, these five clinic sites fall into areas that are dedicated medically underserved areas or have shortages of health professionals.

Annotated references

1. **Centers for Disease Control and Prevention website. Washington State Behavioral Risk Factor Surveillance System Data. 2010. Available from http://apps.nccd.cdc.gov/s_broker/WEATSQL.exe/weat/freq_analysis.hsql?survey_year=2010. Accessed February 18, 2014.**

Washington state 2010 BRFSS data indicate that American Indian /Alaska Native (AI/AN) and Hispanic survey respondents were significantly less likely than white respondents to have any form of health care coverage and significantly more likely to report that they were unable to see a doctor because of cost. Respondents who identified as multiracial were also more likely than white respondents to report that they were unable to see a doctor because of cost. Multiracial and Hispanic participants were less likely to have visited a dentist, dental hygienist, or dental clinic in the past year than white respondents. Low-income populations were also significantly less likely than middle- and high-income populations to have access to care. This is evidenced through indicators such as lack of health insurance and not having seen a health provider in the past 12 months.

2. **International Community Health Services. 2012 Annual Report. 2012. Available from http://www.ichs.com/wp-content/uploads/2013/06/2012-Annual-Report-web-version.pdf.**

In response to a request for data from State Board of Health staff, ICHS staff provided references to pages of the ICHS 2012 Annual Report where this data could be found. In 2012 ICHS reached 20,017 patients through its clinic services and community outreach efforts. Large percentages of their patients come from traditionally underserved populations. For example, in 2012 65% of ICHS's patients had limited English proficiency and needed interpretation services, 95% were persons of color, 29% were uninsured, and 19% were homeless.

3. **Sea Mar Community Health Centers. 2013 Users and Encounters (unpublished data). 2013.**

In response to a request for data from State Board of Health staff, Sea Mar staff provided data on patient demographics, clinic outcomes, and services provided for the three counties where the health centers

they are requesting funding for are located. Clinics in Clark, King, and Grays Harbor Counties serve large percentages of traditionally underserved patients. In 2013 Sea Mar had 61,936 total patient encounters in Clark County. Over 35% of patients served were people of color; over 96% earned an annual income below 200% of Federal Poverty Level (FPL); almost 30% had no insurance; and over 67% were on Medicaid, Medicare, or Basic Health Plan. In 2013 Sea Mar had 150,054 total patient encounters in King County. Over 66% of patients served were people of color; 94% earned an annual income below 200% of FPL; nearly 46% had no insurance; and over 45% were on Medicaid, Medicare, or Basic Health Plan. In 2013 Sea Mar had 44,466 total patient encounters in Grays Harbor County. Over 19% of patients served were people of color; over 95% earned an annual income below 200% of FPL; over 25% had no insurance; and nearly 65% were on Medicaid, Medicare, or Basic Health Plan. In addition, in all three counties Sea Mar served migrant/seasonal farmworkers, homeless patients, individuals with limited English proficiency, and veterans.

4. **Shi L, Lebrun LA, Zhu J, et al. Clinical quality performance in U.S. health centers. *Health Services Research*. 2012; 47(6): 2225-2249.**

Shi et al. analyzed national 2009 data from the Uniform Data System. All FQHCs are required to submit data to this system annually. The researchers found that over 90% of the patients served had incomes below 200% of FPL, about 40% lacked insurance coverage, and about 50% were patients of color. The researchers found that a majority of the health center patients received appropriate care. The FQHCs also had rates of childhood immunization (69.0%), early prenatal care (67.3%), and low birth weight deliveries (7.3%) comparable to national performance rates. In addition they found that health center patients had higher performance rates for hypertensive patients with controlled blood pressure (63.3%) than the national rates. The researchers did find that the health center performance rates were lower than the national rates for Pap tests (58.5%), and the percentages of diabetic patients with controlled hemoglobin A1c (HbA1c) levels (71.0%). Note that these health centers had performance rates comparable to or exceeding national standards for many health measures despite the fact that they serve higher-risk patient populations.

5. **U.S. Department of Health and Human Services website. Health Information Technology and Quality Improvement: What are Federally Qualified Health Centers (FQHCs)? Available from http://www.hrsa.gov/healthit/toolbox/RuralHealthITtoolbox/Introduction/qualified.html. Accessed February 18, 2014.**

All five of the Community Health Centers included in this capital budget request are FQHCs. An FQHC must "serve an underserved area or population, offer a sliding fee scale, provide comprehensive services, have an ongoing quality assurance program, and have a governing board of directors."

6. **Washington State Department of Health website. Geographic Information Systems. Available from http://ww4.doh.wa.gov/gis/standard_maps.htm. Accessed February 18, 2014.**

The Washington State Department of Health has created maps which indicate areas of the state that are dedicated medically underserved areas or have shortages of health professionals. These maps show that Yakima County and parts of Grays Harbor, Clark, and King Counties are medically underserved. These underserved areas include the locations for four of the five CHCs included in this capital budget request. Grays Harbor and Yakima Counties are also designated shortage areas in relation to mental health care professionals, while Clark County is a shortage area for mental health care professionals that serve migrant populations. In addition, the areas of Clark County around Vancouver have health professional shortages for the low-income population while Yakima County is a shortage area for health professionals serving migrant populations. Grays Harbor County is also being considered as a potential shortage area for health care professionals serving low-income populations, but this designation is

pending approval. Yakima and Grays Harbor Counties are also designated dental health professional shortage areas for low-income populations.

7. Yakima Valley Farmworkers Clinic. Toppenish Medical-Dental Clinic: HIR Response (unpublished). 2012.

In response to a request for data from State Board of Health staff, Yakima Valley Farmworkers Clinic (YVFWC) staff provided data on demographics and health outcomes of patients served at the Toppenish Medical-Dental Clinic. In 2013 this clinic served 16,979 medical, 6,969 dental, and 1,673 program patients. Eighty-three percent of the medical patients and 89% of the dental patients were Hispanic. Ninety percent of the medical patients and 60% of the dental patients earned less than 200% of the federal poverty level. Nearly 30% of the medical patients and over 20% of the dental patients were migrant/seasonal farmworkers or their dependents. Fifty percent of the medical patients and 63% of the dental patients spoke a primary language other than English. Twenty-two percent of both the medical and dental patients were uninsured. Fifty percent of the medical and 65% of the dental patients were insured through Medicaid.

Evidence relating to how building new community health centers and increasing patient capacity will likely increase patient access to culturally and linguistically appropriate care

Summary of findings

There is strong evidence indicating that building these new CHCs and increasing patient capacity will increase patient access to culturally and linguistically appropriate care. All three of these organizations (Sea Mar, ICHS, YVFWC) have missions focused on serving diverse patient populations using culturally and linguistically appropriate care and/or were established expressly for serving diverse populations. These organizations offer interpretation services for their patients, multicultural and multilingual providers, and educational services and resources that are culturally tailored and available in multiple languages. In addition, at least one study found that providers who reported the availability of culturally and linguistically tailored patient education materials at their clinic were more likely to have attitudes reflecting a motivation to learn about cultures within their practice and society, and had a higher frequency of cultural competence behaviors than their counterparts. The National Association of Community Health Centers found that 84% of CHCs provided clinical services to non-English speaking patients using bilingual clinical staff without the aid of an interpreter.

Annotated references

8. International Community Health Services website. Available from http://www.ichs.com/. Accessed February 18, 2014.

ICHS's mission is to "provide culturally and linguistically appropriate health services to improve the health of Asian Pacific Islanders and the broader community." ICHS provides free on-site interpretation in several languages and dialects such as Amharic, Chinese (including Cantonese, Mandarin, and Toisanese), Filipino (including Ilocano, Tagalog, and Visayan), French, Japanese, Khmer, Korean, Lao, Mien, Samoan, Spanish, Taiwanese, Thai, Tigrinya, and Vietnamese. The International District Medical & Dental Clinic also offers Chinese Traditional Medicine services. In addition they offer resources catered to unique cultures such as cookbooks of healthy Asian recipes that provide nutritional guidance for patients with diabetes. These cookbooks as well as other educational materials are offered in multiple languages.

9. **National Association of Community Health Centers. Serving Patients with Limited English Proficiency: Results of a Community Health Center Survey. Available from http://www.nachc.com/client//LEPReport.pdf. Accessed February 18, 2014.**
This report indicates that in 2001, 95% of CHC patients surveyed reported that their clinicians spoke their language. In 2007 the National Association of Community Health Centers, in partnership with the National Health Law Program surveyed its member health centers. The survey data indicate that 87% of CHCs inquired about a patient's need for language services during intake while 84% of CHCs provided clinical services to non-English speaking patients using bilingual clinical staff without the aid of an interpreter.

10. **Paez KA, Allen JK, Carson KA, Cooper LA. Provider and clinic cultural competence in a primary care setting. *Social Science & Medicine*. 2008; 66(5): 1204-16.**
Paez et al. conducted a cross-sectional survey of clinicians participating in interventions to enhance patient-provider communication (n=49). The sample was drawn from 23 community-based clinics in Maryland and Delaware. Providers who reported a higher percent of nonwhite staff at their clinic and those who reported the availability of culturally and linguistically tailored patient education materials at their clinic where more likely than their counterparts to: a) have attitudes reflecting a motivation to learn about cultures within their practice and society, and b) have a higher frequency of culturally competent behaviors.

11. **Sea Mar Community Health Centers. Description of Services (unpublished). 2014.**
In response to a request for data from State Board of Health staff, Sea Mar staff provided data on patient demographics, clinic outcomes, and services provided for the three counties where the health centers they are requesting funding for are located. Sea Mar provides a number of services tailored to a diverse patient population. For example they provide outreach and assistance to elderly Latino clients who have difficulty accessing services due to language and/or cultural difficulties with services providers; residential treatment for alcohol and substance abuse to adults and youth, including the only Spanish-language inpatient substance-abuse treatment program in the state; bilingual, bicultural long-term skilled nursing care to elderly and convalescent residents including Alzheimer's patients; childcare services that build on the Latino cultural tradition of intergenerational learning; safe, adequate, low-cost seasonal housing for migrant farmworkers and their families; and licensed bilingual, bicultural outpatient mental health and substance abuse counseling to individuals, groups, and families.

12. **Sea Mar Community Health Centers website. Available from http://www.seamarchc.org/index.php. Accessed February 18, 2014.**
Sea Mar's mission is to provide "quality, comprehensive health, human and housing services to diverse communities, specializing in services to Latinos." In addition, the organization is committed to providing care with respect and sensitivity to persons of "all cultural and socio-economic backgrounds." Its website is available in both English and Spanish.

13. **Slack KS, Holl JL, Yoo J, Amsden LB, Collins E, Bolger K. Welfare, work, and health care access predictors of low-income children's physical health outcomes. *Children and Youth Services Review*. 2007; 29(6): 782-801.**
Slack et al. cite research in their introduction indicating that uninsured patients with access to CHCs are less likely than uninsured people receiving care in other health settings to delay care, go without needed care, or fail to fill prescriptions. In addition Slack et al. cite evidence that CHCs provide more culturally competent care, improve access to care, and provide higher quality care than other health care settings. The researchers analyzed data from the Illinois Family Study, a six-year longitudinal study of Temporary Assistance to Needy Families (TANF) recipients. They found that receiving care at a CHC

was associated with positive health measures (although unrelated to ratings of 'excellent' health). The researchers also found that lapses in health care coverage were associated with worse general health for children.

14. Yakima Valley Farmworkers Clinic. Toppenish Medical-Dental Clinic: HIR Response (unpublished). 2012.

In response to a request for data from State Board of Health staff, YVFWC staff provided data on demographics and health outcomes of patients served at the Toppenish Medical-Dental Clinic as well as programs available for these patients. An estimated two-thirds of the YVFWC staff members are bilingual/bicultural. A number of programs available at the YVFWC Toppenish Medical-Dental clinic help educate patients about chronic disease in their native language. The asthma home visiting program provides patients assistance in decreasing asthma triggers in their environment and provides personalized training in appropriate usage of their inhalers. The Tomando de Sus Salud classes (developed at Stanford University) are available to anyone with a chronic illness. Staff from YVFWC has indicated that this program is both culturally and linguistically appropriate for Spanish-speaking immigrant patients. Survey data indicate that completion of this program is associated with improvements in stage of change (more commitment to taking medication, exercising and eating appropriately), self-care (for their chronic illness), and attitude (toward the chronic illness). The majority of patients who completed these classes also saw improved HbA1c numbers.

Evidence relating to how increasing access to care for underserved populations will likely improve health outcomes for these patients

Summary of findings

There is strong evidence that improving access to health care is associated with improved health outcomes, and that CHCs result in health and quality care outcomes that are comparable to or exceed those of other care settings. For example, evidence indicates that patients, who receive care at FQHCs when compared to non-FQHC patients, had lower rates of multi-day admission, emergency department visits, and readmission rates, and higher rates of controlled blood pressure. FQHC- patients also had rates comparable to non-FQHC patients for rates of childhood immunization, early prenatal care, and low birth weight deliveries. Data indicate that CHCs are associated with health outcomes comparable or exceeding those of other health care settings despite the fact they the serve higher-risk patient populations.

Annotated references

15. California Primary Care Association. Value of Community Health Centers Study: Partnership HealthPlan of California Case Study. 2013. Available from http://www.cpca.org/cpca/assets/File/Announcements/2013-01-29-ValueofCHCStudy.pdf. Accessed February 18, 2014.

The California Primary Care Association analyzed data from patients who had been a part of Partnership HealthPlan of California in order to determine if outcomes differed for patients using an FQHC as a usual source of care versus non-FQHC patients. Compared to non-FQHC adult patients, adult FQHC patients had 64% lower rates of multi-day admissions, 18% lower rates of emergency department visits, 4.9% lower 30-day readmission rates, and about one-fourth the total inpatient bed days. Data also show that CHCs have comparable or better rates of childhood immunization, early prenatal care, and low birth weight deliveries.

16. Goldman LE, Chu PW, Tran H, Romano MJ, Stafford RS. Federally Qualified Health Centers and private practice performance on ambulatory care measures. *American Journal of Preventive Medicine*. 2012; 43(2): 142-9.

Goldman et al. took a cross-sectional analysis of visits in the 2006-2008 National Ambulatory Medical Care Survey in order to determine if FQHCs and FQHC look-alikes compared with private practice primary care physicians (PCPs) on 18 quality measures. They found that FQHCs and look-alikes demonstrated better or equal performance when compared to private practice PCPs on many measures, despite the fact that they server higher-risk populations. Without adjusting for patient characteristics, FQHCs and look-alikes performed better on six measures, lower on one measure (diet counseling in at-risk adults), and comparably to private practice PCPs on 11 measures. FQHCs and look-alikes performed better on measures including pharmacologic management of common chronic disease and appropriate use of screening tests. Note that all 18 of these measures were quality of care measures not health outcome measures.

17. Lee SL, Shekherdimian S, Chiu VY, Sydorak RM. Perforated appendicitis in children: Equal access to care eliminates racial and socioeconomic disparities. *Journal of Pediatric Surgery*. 2010; 45(6): 1203-1207.

Lee et al. cite previous evidence of racial/ethnic and socioeconomic disparities in appendiceal perforation rates. They analyzed data from the Southern California Kaiser Permanente Discharge Abstract Database. The researchers assumed that all patients in this sample would have equal access to care since they all have access to Kaiser clinics. They found that lower socioeconomic background and being a person of color was not associated with higher appendiceal perforation rates among this sample of children with assumed equal access to care. The researchers conclude that disparities in pediatric appendicitis outcomes are preventable in a system that offers equal access to health care. Several limitations exist in this study design including that the sample only included children with insurance and that the design did not take into account barriers to accessing care outside of being uninsured.

18. Shi L, Lebrun LA, Zhu J, et al. Clinical quality performance in U.S. health centers. *Health Services Research*. 2012; 47(6): 2225-2249.

Shi et al. analyzed national 2009 data from the Uniform Data System. All FQHCs are required to submit data to this system annually. The researchers found that over 90% of the patients served had incomes below 200% of FPL, about 40% lacked insurance coverage, and about 50% were patients of color. The researchers found that a majority of the health center patients received appropriate care. The FQHCs also had rates of childhood immunization (69.0%), early prenatal care (67.3%), and low birth weight deliveries (7.3%) comparable to national performance rates. In addition they found that health center patients had higher performance rates for hypertensive patients with controlled blood pressure (63.3%) than the national rates. The researchers did find that the health center performance rates were lower than the national rates for Pap tests (58.5%), and the percentages of diabetic patients with controlled hemoglobin A1c (HbA1c) levels (71.0%). Note that these health centers had performance rates comparable to or exceeding national standards for many health measures despite the fact that they serve higher-risk patient populations.

19. Slack KS, Holl JL, Yoo J, Amsden LB, Collins E, Bolger K. Welfare, work, and health care access predictors of low-income children's physical health outcomes. *Children and Youth Services Review*. 2007; 29(6): 782-801.

Slack et al. cite research in their introduction indicating that uninsured patients with access to CHCs are less likely than uninsured people receiving care in other health settings to delay care, go without needed care, or fail to fill prescriptions. In addition Slack et al. cite evidence that CHCs provide more culturally

competent care, improve access to care, and provide higher quality care than other health care settings. The researchers analyzed data from the Illinois Family Study, a six-year longitudinal study of Temporary Assistance to Needy Families (TANF) recipients. They found that receiving care at a CHC was associated with positive health measures (although unrelated to ratings of 'excellent' health). The researchers also found that lapses in health care coverage were associated with worse general health for children.

20. Yakima Valley Farmworkers Clinic. Toppenish Medical-Dental Clinic HIR Response.
In response to a request for data from State Board of Health staff, YVFWC staff provided data on demographics and health outcomes of patients served at the Toppenish Medical-Dental Clinic as well as programs available for these patients. Patients seen at the Toppenish Medical clinic in 2012, 2013, and early 2014 showed comparable or better health outcomes on many measures when compared to national averages. For example diabetic patients seen at Toppenish Medical in 2013 (n = 1,613) had outcomes in line with national averages for blood pressure and HbA1c levels while Toppenish Medical patients age 50 – 75 years (n = 3,137) had colorectal cancer screening rates higher than the national average. A number of programs available at the Toppenish Medical-Dental clinic help educate patients about their chronic disease in their native language. The asthma home visiting program provides patients assistance in decreasing asthma triggers in their environment and provides personalized training in appropriate usage of their inhalers. The Tomando de Sus Salud classes (developed at Stanford University) are available to anyone with a chronic illness. Staff from YVFWC indicated that this program is both culturally and linguistically appropriate for Spanish-speaking immigrant patients. Survey data indicate that completion of this program is associated with improvements in stage of change (more commitment to taking medication, exercising and eating appropriately), self-care (for their chronic illness), and attitude (toward the chronic illness). The majority of patients who completed these classes also saw improved HbA1c numbers.

Evidence relating to how access to culturally and linguistically appropriate care will likely improve patient health outcomes

Summary of findings

There is strong evidence that culturally and linguistically appropriate care is associated with improved health and health care outcomes—particularly among diverse patient populations. Research has found a link between culturally competent care and outcomes such as: increased access to services, active participation in the care, greater satisfaction, improved clinical outcomes, decreased patient stress, increased treatment adherence, increased engagement in a health promoting lifestyle, increased dietary adherence, increased quality of life measures, high self-efficacy, and HIV viral suppression. At least one study also found that cultural sensitivity of the provider had a larger direct impact on both patient satisfaction and dietary adherence for the African American patient group than for the white patient group studied. Another study found that while racial disparities were observed for health outcomes among patients of providers with low cultural competence scores, these disparities did not exist among patients of moderate and high culturally competent providers.

Annotated references

21. Browne A, Varcoe C, Wong S, et al. Closing the health equity gap: Evidence-based strategies for primary health care organizations. International Journal for Equity in Health. 2012;11(1).
Browne et al. conducted a mixed methods ethnographic study of primary health care centers in Canada. They collected data through interviews and focus groups with patients and staff (n=114), participant

observation (900 hours), and analysis of organizational documents. They identified four dimensions of equity-oriented services which lead to “improvements in the quality of care, an improved 'fit' between people's needs and services, enhanced trust and engagement by patients, and a shift from crisis-oriented care to continuity of care.” The dimensions of equity-oriented care that they identified are: inequity-responsive care (addressing the social determinants of health); trauma- and violence-informed care (recognizing that many marginalized populations are affected by trauma and violence and provided care should be empowering); contextually-tailored care (expanding care from being patient centered to also include community context and resources); and culturally-competent care (taking into account how culture and experiences of discrimination impact the patient). Participants (both patients and providers) linked these strategies to short-term outcomes (increases in patients’ capacity to manage their own health, and increased access to resources essential to support health) as well as longer-term improvements in health and quality of life that have the potential for reducing health disparities at the population level.

22. Hawthorne K, Robles Y, Cannings-John R, Edwards AG. Culturally appropriate health education for Type 2 diabetes in ethnic minority groups: A systematic and narrative review of randomized controlled trials. Diabetic Medicine: A Journal of the British Diabetic Association. 2010;27(6):613-623.

Hawthorne et al. conducted a systematic meta-analysis of the literature to determine if culturally relevant health education is more effective than ‘usual’ health education for individuals from diverse backgrounds living with diabetes. They included randomized controlled trials of specific diabetes health education interventions conducted with participants in high- and upper-middle-income countries. Eleven articles fit their strict inclusion criteria (seven of which were conducted in the United States). Hawthorne et al. provide a detailed description of the measures and methods used in these studies, as well as meta-analysis of the results for measures that were comparable across multiple studies. They indicate that culturally competent health education was associated with significantly higher improvements in clinical and quality of life measures as well as in improved knowledge scores when compared with the control programs.

23. Mancoske RJ, Lewis ML, Bowers-Stephens CFA. Cultural competence and children's mental health service outcomes. Journal of Ethnic & Cultural Diversity in Social Work. 2012;21(3):195-211.

Mancoske et al. conducted a thorough literature review on the research looking at the associations between cultural competence of health care personnel and medical and health outcomes. They identified a number of studies and reviews which highlight several studies which have shown a connection between culturally relevant care and positive health outcomes (such as symptom reductions) or a connection between care that is not culturally competent and poor health outcomes. The researchers also indicate though, that more research is needed on this topic. The study conducted by Mancoske et al. in a children’s mental health program explored the relationship between clients’ perceptions of their mental health provider’s cultural competency and outcomes such as client satisfaction and positive mental health outcomes for children and their families. The child’s caregiver provided information on their experiences and perceptions of the provider’s cultural competency/sensitivity through interviews (n=111). They found that clients who reported greater perceived culturally competence of care also reported significantly greater levels of access to services, active participation in the care, and greater satisfaction. Higher perceived cultural competence was also significantly associated with improved clinical outcomes (using measures such as, “child better off, better at handling life, gets along with family, gets along with others, better in school, coping, and family life satisfaction.”)

24. Saha S, Korthuis PT, Cohn JA, Sharp VL, Moore RD, Beach MC. Primary care provider cultural competence and racial disparities in HIV care and outcomes. J Gen Intern Med. 2013;28:622-629.
Saha et al. evaluated the impact of cultural competence among primary care providers at four HIV care sites across the United States on patient outcomes. They recruited providers to participate and then recruited five to 10 patients of each participating provider. They measured the cultural competence of each provider using an instrument that they developed. The researchers also measured patient outcome data. They found that, after adjusting for clinical and demographic variables, nonwhite patients whose providers scored in the middle or highest third on the cultural competence evaluation were more likely than those with providers in the lowest third to be on antiretrovirals (ARVs), have high self-efficacy, and report complete ARV adherence. The data also indicate that while racial disparities were observed in receipt of ARVs, self-efficacy, and viral suppression among patients of providers with low cultural competence scores, these disparities did not exist among patients of moderate and high culturally competent providers.

25. Tucker CM, Marsiske M, Rice KG, Nielson JJ, Herman K. Patient-centered culturally sensitive health care: Model testing and refinement. Health psychology : Official Journal of the Division of Health Psychology, American Psychological Association. 2011; 30(3):342-350.
Tucker et al. recruited predominantly low-income African American (n=110) and non-Hispanic white American (n=119) patients from community-based primary care clinics to complete written questionnaires about perceived provider cultural sensitivity, and their own adherence to treatment. They used the Tucker Culturally Sensitive Health Care Inventory and other instruments. The researchers found that patient's perceptions of provider cultural sensitivity and treatment adherence were less than optimal for both racial/ethnic groups. The researchers used statistical modeling and found significant links between perceived provider cultural sensitivity and decreased patient stress and increased treatment adherence variables (i.e., engagement in a health promoting lifestyle, medication adherence, and dietary adherence). They also found that cultural sensitivity had a larger direct impact on both patient satisfaction and dietary adherence for the African American patient group that for the white patient group.

26. Yakima Valley Farmworkers Clinic. Toppenish Medical-Dental Clinic HIR Response.
In response to a request for data from State Board of Health staff, YVFWC staff provided data on demographics and health outcomes of patients served at the Toppenish Medical-Dental Clinic as well as programs available for these patients. Patients seen at the Toppenish Medical clinic in 2012, 2013, and early 2014 showed comparable or better health outcomes on many measures when compared to national averages. For example diabetic patients seen at Toppenish Medical in 2013 (n = 1,613) had outcomes in line with national averages for blood pressure and HbA1c levels while Toppenish Medical patients age 50 – 75 years (n = 3,137) had colorectal cancer screening rates higher than the national average. A number of programs available at the Toppenish Medical-Dental clinic help educate patients about their chronic disease in their native language. The asthma home visiting program provides patients assistance in decreasing asthma triggers in their environment and provides personalized training in appropriate usage of their inhalers. The Tomando de Sus Salud classes (developed at Stanford University) are available to anyone with a chronic illness. Staff from YVFWC have indicated that this program is both culturally and linguistically appropriate for Spanish-speaking immigrant patients. Survey data indicate that completion of this program is associated with improvements in stage of change (more commitment to taking medication, exercising and eating appropriately), self-care (for their chronic illness), and attitude (toward the chronic illness). The majority of patients who completed these classes also saw improved HbA1c numbers.

Evidence relating to how improving health outcomes for underserved communities will likely decrease health disparities

Summary of findings

There is very strong evidence that traditionally underserved communities disproportionately experience poor health outcomes. There is a very broad body of evidence documenting these disparities nationally and in Washington state. A brief highlight of Washington state data is presented here. For example, 2010 state data indicate that low-income and people of color were more likely to be effected by obesity, asthma, limited activity due to health problems, heart disease, and diabetes. Evidence indicates that these five CHCs would likely improve health outcomes by providing care to these underserved populations, thereby decreasing health disparities.

Annotated references

27. Centers for Disease Control and Prevention website. Washington State Behavioral Risk Factor Surveillance System Data. 2010. Available from http://apps.nccd.cdc.gov/s_broker/WEATSQL.exe/weat/freq_analysis.hsql?survey_year=2010. Accessed February 18, 2014.

Washington state BRFSS data from 2010 indicate that multiracial and Hispanic respondents were significantly more likely to report fair or poor overall health than white respondents. Black, AI/AN, and Hispanic respondents were more likely to have a Body Mass Index (BMI) in the obese range than white and Asian respondents. There was not a large enough sample size to report this measure for Native Hawaiian or Pacific Islander (NHOPI) participants. AI/AN adults were significantly more likely to report currently suffering from asthma than white and Asian respondents. Respondents who identified as AI/AN, multiracial, or as a race other than the categories offered were significantly more likely to report that they had limited activity due to health problems than white, Asian, NHOPI, and Hispanic respondents. AI/AN and Hispanic respondents were less likely than white respondents to have been vaccinated against influenza that year. When considering disparities by income, BRFSS data indicate that low-income populations are significantly more likely than middle- and high-income populations to experience a number of adverse health outcomes such as: adult asthma, heart disease, obesity, diabetes, activity limitation due to health problems, and fair or poor general health.

28. Kaiser Family Foundation. Putting Women's Health Care Disparities on the Map: Examining Racial and Ethnic Disparities at the State Level. 2009. Available from http://kaiserfamilyfoundation.files.wordpress.com/2013/01/7886.pdf.

The Kaiser Family Foundation has calculated disparity indexes for women for a number of health conditions by state. Researchers calculated the disparity index by comparing the ratio between non-Hispanic white women and women of all other racial/ethnic groups combined. The ratio was calculated using appropriate and available data (e.g. prevalence, incidence, or frequency data). The index reveals that non-Hispanic white women in Washington have higher access to health care services and lower rates of adverse health outcomes such as low birth weight deliveries, cardiovascular disease, diabetes, late or no initiation of prenatal care, and fair or poor health status.