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Characterizing Pediatric Primary Care In Greater New Haven

Meredith Ann Camp Binford
Yale University, meredith.binford@yale.edu

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Characterizing pediatric primary care in greater New Haven

A Thesis Submitted to the
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Degree of Doctor of Medicine

By
Meredith Ann Camp Binford
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Abstract

Characterizing pediatric primary care in greater New Haven
Meredith Binford and Marjorie Rosenthal, Department of Pediatrics, Yale School of Medicine, New Haven, CT

Healthcare access is a complex concept that involves more than insurance coverage and resource utilization. Influenced by milieu, an understanding of the local dimensions of access is essential to develop community strengths as well as create appropriate solutions to access gaps. Accordingly, the objectives of the study were to identify, enumerate, and characterize medical practices delivering primary care to children within greater New Haven.

In partnership with community leaders, a community-based participatory approach was used to design a 57-question and 21-observation item, practice-based survey. The survey was administered in-person to 17 pediatric practices and 19 school-based health centers (SBHCs) in greater New Haven. Summary statistics and workforce data were calculated using Excel. The Mann-Whitney U test for non-normal distributions (M test) was used to observe associations between practice characteristics and percent Medicaid panel. Interactive maps were created using ArcGIS.

Participation included 89% of practices and 100% of SBHCs. Seventy-seven percent of practices accepted new Medicaid patients, and 47.0% had a Medicaid panel over 50%. Regarding accessibility at practices, all offered same day visits, most offered in-hospital care (88.2%), many had extended hours (82.4%), and the vast majority were located less than a 5-minute walk from a bus stop (82.4%). Regarding on-site services, few practices offered specialty mental healthcare (41.2%), dental (29.4%), social work (29.4%), or nutritionist (41.2%) resources. SBHCs provided more specialty mental healthcare (100%), social work (94.7%), and care management services (68.4%) but fewer dental (31.6%) and nutritionist (0%) services on site. At practices, 52.9% had Spanish-speaking providers, and 47.1% had Spanish-speaking staff. At SBHCs, no providers and 68.4% of staff spoke Spanish. The practices that offered adult primary care, mental health services, dental services, social services, and a Spanish-speaking provider had a statistically significant higher Medicaid panel than those practices that did not offer such services (M< 0.05). Regarding required trainings at practices, although mandated customer service was high for staff, mandatory cultural competency and trauma-informed care training for providers and staff was limited. Mandatory customer service, cultural competency, and trauma-informed care trainings at SBHCs was higher, although trauma-informed care training for staff was inadequate. Triage privacy was achieved at 23.5% of practices and 10.5% of SBHCs. Forty-seven percent of practices had an automatic door to the main entrance, and 17.6% had a check-in counter at a handicap-accessible height. Most practices (76.5%) and all SBHCs used an EMR. Forty percent of practices were patient centered medical homes and another half were seeking designation. Few practices used an online patient portal (35.3%). Regarding workforce, there were 124 pediatric primary care providers (MD, DO, physician associate, advance practice registered nurse) with only 1 in West Haven. The Health Professional Shortage Area (HPSA) pediatric population: provider full time equivalent (FTE) ratio was 3,548:1 in East Haven and 29,778:1 in West Haven, both of which meet the HPSA geographic designation threshold. When calculated for the Medicaid population, the ratio of high needs children to provider FTE in West Haven was 8,425:1.
and increased to 11,233:1 when adjusted for the practice panel percent Medicaid. Providers at SBHCs constituted 14.8% of the workforce yet delivered 20.0% of primary care and 22.1% of primary care to Medicaid patients. State licensing data grossly overestimates the primary care workforce.

In addition to numerous community strengths, PCare4NHv2 has clearly identified four local needs: increased access to nutritionists, improved mandatory trainings for providers at practices, enhanced patient privacy, and improved handicap accessibility at practices. Subsequent policy priorities include communication of the East Haven and West Haven HPSA geographic findings to the appropriate agencies and dissemination of the improved workforce calculation methods. Additional research is needed on the state of local dental care access well as the impact of SBHCs.
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# Table of Contents

## Introduction
- History of Medicaid/CHIP .................................................. 2
- Health access and outcomes after Medicaid/CHIP .................. 3
- Medicaid/CHIP versus private insurance ............................... 4
- Access to dental care nationally ........................................... 4
- Access to mental health services nationally ............................ 5
- Insurance coverage does not equal access ............................. 5
- Child health in Connecticut .................................................. 6
- Demographics of Greater New Haven ..................................... 7
- Infant and fetal mortality rates in Greater New Haven ............. 8
- Low birth weight in Greater New Haven ............................... 9
- Obesity in Greater New Haven ............................................. 9
- School-based health centers (SBHCs) .................................... 9
- National Census Report of SBHCs ........................................ 10
- National impact of SBHCs on health access and outcomes ....... 11
- Mental health and SBHCs .................................................... 11
- Dental health and SBHCs .................................................... 12
- Asthma and SBHCs ............................................................ 12
- Obesity and SBHCs ........................................................... 12
- SBHCs in greater New Haven .............................................. 13
- Patient Centered Medical Home (PCMH) model of care .......... 14
- Health Professional Shortage Area (HPSA) designation .......... 14
- Definitions of required information for HPSA designation request 15
- HPSA designation requirements ........................................... 16

## Statement of purpose
- Hypotheses ........................................................................... 18

## Methods
- Community engagement ....................................................... 19
- Survey design ....................................................................... 19
- Enumerating practices ......................................................... 20
- Conducting surveys ............................................................. 20
- Record keeping ..................................................................... 21
- Practice characteristics analysis ......................................... 22
- Workforce analysis ............................................................. 22

## Results
- Participation .......................................................................... 23
- Basic characteristics ........................................................... 23
- On-site services .................................................................... 23
- Trainings .............................................................................. 24
- Patient experience ............................................................... 24
- Practice innovation ............................................................. 24
- Physical characteristics ....................................................... 25
- Workforce ............................................................................ 25
Discussion

Insurance coverage does not equal access  
Access to and choice among covered services, clinicians, and healthcare institutions  
Access to a consistent source of primary care  
Access to referral services  
Delivery of high-quality healthcare services  
Workforce estimates  
Strengths of study  
Limitations of study  
Next steps

Tables

Table 1: Practice insurance  
Table 2: Percent practice panel with Medicaid insurance  
Map 1: Patient panel percent Medicaid  
Table 3: On-site services  
Table 4: On-site services by practice panel % Medicaid  
Map 2: On-site specialty mental healthcare services  
Map 3: On-site dental services  
Map 4: On-site social work services  
Map 5: On-site care management services  
Map 6: On-site nutritionist  
Table 5: Trainings  
Map 7: Mandatory trauma informed care trainings for providers  
Table 6: Languages  
Table 7: Languages by practice panel % Medicaid  
Map 8: Spanish-speaking providers  
Table 8: Practice innovation  
Table 9: Physical characteristics  
Table 10: Practices and practitioners  
Table 11: FTE estimates  
Table 12: HRSA estimates  
Table 13: Licensing file comparisons  
Table 14: Real FTE analysis

References

Appendices
Introduction

Primary care access is a trendy topic in the current healthcare climate, both nationally and locally. Health insurance expansion under the Affordable Care Act, burgeoning healthcare costs, and the merger of many smaller healthcare entities into large conglomerates have intensified the national conversation. In greater New Haven, Connecticut, the merger of Yale-New Haven Hospital and Saint Raphael Hospital as well as the city’s reinvigorated commitment to community health have created an impetus to develop local solutions to primary care access problems. Additionally, New Haven’s City Transformation Plan has a particular focus on healthy, safe, and thriving children.1

Facilitating healthcare access is concerned with helping people to command appropriate health resources in order to preserve or improve their health. Access is a complex concept. There must be access to and a choice among covered services, clinicians, and healthcare institutions; access to a consistent source of primary care; access to referral services; and delivery of high-quality healthcare services to guarantee that children receive safe and effective care.2 New Haven and neighboring West Haven are designated Primary Care Health Professional Shortage Areas (HPSA), but inaccurate data may underestimate the shortage, and very little is known specifically about pediatric access. Furthermore, the city must fully understand the dimensions of access, the strengths as well as the weaknesses, in order to prioritize solutions to access gaps.

To explore the multifaceted situation of primary care access in greater New Haven, a core team of four Robert Wood Johnson Foundation Clinical Scholars, including Arjun Venkatesh (AV), Jen Voorhees (JV), Jason Lott (JL), and Ilse Wiechers (IW); research assistant Christina Cutter; and their advising faculty including Marjorie Rosenthal, Joseph Ross, and Georgina Lucas created, implemented, and disseminated PCare4NHV (an abbreviation for Primary Care for New Haven). This parent project, which focused on adult primary care access, particularly adults with Medicaid, was completed between July 2012 and May 2014.

Subsequently, PCare4NHVv2 (short for Primary Care for New Haven version 2) was designed to expand upon the parent project and focus exclusively on pediatric primary care access; it is the topic of this manuscript. The core team initiated the pediatric expansion project but took on an advisory role after they graduated from the fellowship in May 2014. Meredith Binford (MB) with faculty leadership from Marjorie Rosenthal (MR) and community leadership from Gregory Germain (GG) constitute the expansion team and are responsible for the implementation and dissemination of the project described below.

PCare4NHV and PCare4NHVv2 implement community-based participatory research (CBPR) techniques. Community-level insights are largely absent in the design and implementation of much of the research evaluating primary care resources and needs for Medicaid populations. This trend has resulted in knowledge gaps regarding which characteristics Medicaid-eligible community members value and seek in primary care delivery and what barriers, if any, are encountered. To successfully achieve patient-centered care, garnering an understanding of primary care from the viewpoints of local communities of patients is essential. CBPR provides a unique approach through which to capture these viewpoints. An alternative approach to traditional investigator-led research, CBPR establishes equitable relationships with community partners who are involved at every research phase, spanning study design, implementation, evaluation, and dissemination.3 4 Engaging communities that will be most affected by research,
particularly marginalized populations such as the Medicaid-eligible population, leads to research questions and outcomes that resonate with and are meaningful to the local community. A CBPR approach is especially suited for understanding the complexities of primary care access as it can provide deeper insights into how the community defines access.

The introduction to follow reviews the national state of pediatric primary care access historically and currently followed by local demographics and health statistics with an emphasis on how access compares for Medicaid versus privately insured children as well as access to dental and mental healthcare services. It is evident that insurance coverage does not necessarily translate into access to care. The introduction will then discuss the role of school based health centers (SBHCs) nationally and locally and outline HPSA designation criteria.

*History of Medicaid/CHIP and QHPs*

Title XIX of the Social Security Act, known as Medicaid, became law in 1965 as a cooperative venture jointly funded by the federal and state governments to assist states in furnishing medical assistance to eligible needy persons. Medicaid is the largest source of funding for medical and health-related services for America’s poorest people. Within broad national guidelines established by federal statutes, regulations, and policies, each state establishes its own eligibility standards; determines the type, amount, duration, and scope of services; sets the rate of payment for services; and administers its own program. Medicaid policies for eligibility, services, and payment are complex and vary considerably, even among states of similar size or geographic proximity. Thus, a person who is eligible for Medicaid in one state may not be eligible in another state, and the services provided by one state may differ considerably in amount, duration, or scope from services provided in a similar or neighboring state. In addition, state legislatures may change Medicaid eligibility, services, and/or reimbursement at any time.

Title XXI of the Social Security Act, the Children’s Health Insurance Program (CHIP, known from its inception until March 2009 as the State Children’s Health Insurance Program or SCHIP), is a program initiated by the Balanced Budget Act of 1997. This act provided $40 billion in federal funding through fiscal year (FY) 2007 to be used to provide healthcare coverage for low-income children (generally those in families with income below 200% of the federal poverty level (FPL)) who do not qualify for Medicaid and would otherwise be uninsured. Subsequent legislation, including the Children’s Health Insurance Program Reauthorization Act of 2009 and the Patient Protection and Affordable Care Act as amended by the Health Care and Education Reconciliation Act of 2010 (collectively referred to as the Affordable Care Act (ACA)), extended CHIP funding through FY 2015. Under CHIP, states may elect to provide coverage to qualifying children by expanding their Medicaid programs or through a state program separate from Medicaid. A number of states have also been granted waivers to cover parents of children enrolled in CHIP. While cost-sharing is allowed in CHIP and Medicaid, family contributions to costs cannot exceed 5% of income.7

The Affordable Care Act also added a third option for low and middle income families through the creation of qualified health plans (QHPs). These are sold on the federal and state exchanges and subsidized for individuals and families with incomes of up to 400% of the FPL. While QHPs are required to include a package of essential health benefits, including pediatric benefits, these
benefits are not defined consistently across states. In addition, the QHPs reflect benefit and cost-sharing standards in the private market, which may lead to higher out-of-pocket expense.

Health access and outcomes after Medicaid/CHIP

Combined, Medicaid and CHIP (Medicaid/CHIP) have made a significant impact on insurance coverage for children. From its inception in 1997 to 2012, the uninsured rate fell by half, from 14% to 7%. The decline was concentrated among children below 200% of the FPL; the uninsured rate dropped from 25% to 15% over this period in this target group. The reduction was also sharper for Hispanic children, who are more likely to be uninsured. In total, more than 8 million low-income children were covered by CHIP at some point during 2012. Medicaid/CHIP now cover more than 1 in every 3 children in the U.S.

Medicaid/CHIP play an especially important coverage role for children of color, whose families are more likely to be low-income compared to Whites. As such, the two programs have reduced racial disparities in children’s health insurance coverage. They cover more than half of Hispanic children (52%) and Black children (56%), compared to about one-quarter of White (26%) and Asian (25%) children.

Federal data show high performance in Medicaid/CHIP with respect to utilization of primary care. Across 43 states reporting in FY 2012, the median percentage of Medicaid/CHIP children with a visit to a primary care provider was 97%. Additionally, evidence from three diverse states, Florida, Kansas, and New York, showed that CHIP increased access to and satisfaction with healthcare among enrolled low-income children.

Given that children are mostly healthy, far healthier than adults at least, and there is no expert consensus on what child outcomes should be measured and how, researchers have found it difficult to statistically prove that coverage translates into better health outcomes. The results are mixed but generally positive. One synthesis of the evidence reviewed 12 studies that compiled the impacts on any of four outcome measures: perceived health status, restricted activity days, avoidable hospitalizations, and child mortality. Only one study of the four that studied perceived health status showed an effect, and neither of the two studies that looked at restricted activity days showed an effect. However, of the five studies looking at the impact of Medicaid/CHIP on avoidable hospitalizations and/or child mortality, all but one found a reduction in avoidable hospitalizations, and two of two showed a positive impact on child mortality.

There is also evidence that Medicaid/CHIP confer benefits beyond improved health for children. An assessment of California’s CHIP program followed newly enrolled children who were in the poorest health over a two years and examined physical and psycho-social aspects of their health, including social, emotional, and school functioning. The parents of these children reported significant, sustained gains in their children’s ability to pay attention in class and keep up in school activities. In addition, an evaluation of Kansas’ CHIP program found that children missed fewer days of school due to illness or injury after they were enrolled in the program for one year.
Medicaid/CHIP versus private insurance

In 2013, at least 91% of U.S. children were insured; approximately 53% were covered by private health insurance and 38% were covered by Medicaid/CHIP.18

An analysis prepared for the Medicaid and CHIP Payment and Access Commission found that rates of access to and use of primary and preventive care among children with Medicaid/CHIP were comparable to the rates for privately insured children. About 95% of both groups had a usual source of care, although Medicaid/CHIP children were less likely than privately insured children to have a usual source with after-hours access. The vast majority of children in both insurance groups were usually or always able to get care that was needed right away and routine appointments. Furthermore, when health and socio-demographic differences between Medicaid/CHIP and privately insured children were controlled (such as chronic conditions, disability, race/ethnicity, income, and citizenship), Medicaid/CHIP children were more likely to receive a well-child check-up.19

Furthermore, in FY 2011 the National Committee for Quality Assurance for private plans as well as at least 25 states reported that Medicaid/CHIP and private insurance were fairly comparable on five of eight process measures: a PCP visit in the past year; well-child visit rates for adolescents 12-21 years; childhood immunization status, adolescent immunization status; and Chlamydia screening rate.20

Interestingly, however, for children in households with low to moderate incomes (household incomes between 100% and 300% of the FPL), a large repeated cross sectional analysis of several National Surveys of Children's Health (NSCH) found better caregiver reported outcomes for Medicaid/CHIP versus privately insured children. Among the 80,655 children included in the surveys, 57.3% had private insurance, 13.6% had Medicaid, 18.4% had CHIP, and 10.8% were uninsured. Children insured by Medicaid/CHIP were significantly more likely to receive a preventive medical and dental visit than were privately insured children. Caregivers of privately insured children were also significantly more likely to experience out-of-pocket costs than were caregivers of children insured by Medicaid or CHIP.21

Access to dental care nationally

As CHIP has covered dental care since 2009, low-income children were previously less likely than higher-income children to lack coverage for dental services. In fact, in 2009, nearly 30% of children under age 19 with private health insurance lacked any dental coverage.22 Beginning in 2014, however, the ACA included pediatric oral healthcare among the ten “essential health benefits” that all QHPs were required to cover for children. Therefore, in theory, Medicaid/CHIP and privately insured children should now have equal access to dental care.

However, insurance coverage is only a part of what defines access, which is a repeated theme. In 2010, of those who were insured, approximately 80% of low-income children had a dental visit within the last year, with the rate slightly higher among Medicaid children (84%) than privately insured children (82%).
Dentists’ participation in Medicaid is particularly low, and many dentists who do participate in Medicaid limit the number of Medicaid patients they accept. The geographic maldistribution of the dental workforce also contributes to shortfalls in access to care. Fifteen percent of the U.S. population lives in Dental Health HPSAs. Even in urban areas where the supply of dentists is concentrated, a lack of alignment between the location of low-income communities and dental practices contributes to disparities in access.

Furthermore, cost sharing may be prohibitively expensive for insured patients. In 2009, dental out-of-pocket spending per dental user was $245 overall, but the amount varied from about $50 for poor children and those covered by Medicaid, to over $300 for children with private health insurance, and $400 for uninsured children.

Access to mental health services nationally

All CHIP programs cover outpatient and inpatient mental health services, without limits in most states. All also provide some level of outpatient substance abuse treatment services, and almost all cover inpatient substance abuse treatment.

Privately insured children should also have guaranteed coverage to mental health services. The Mental Health Parity and Addiction Equity Act passed in 2008 requires that all QHPs provide coverage for services for mental health, behavioral health and substance-use disorders that are comparable to physical health coverage.

Despite theoretical coverage, physicians experience much greater difficulty referring Medicaid/CHIP children for mental health services compared to privately insured children; again, access is not equal. According to a Government Accountability Office physician survey, more than three times as many participating physicians experienced difficulty referring Medicaid/CHIP children to specialty care (84%) as privately insured children (26%). Physicians most frequently cited difficulty with specialty referrals for mental health, dermatology, and neurology.

Insurance coverage does not equal access

There is little doubt that Medicaid/CHIP have increased low-income children’s healthcare coverage, use, and outcomes. Unfortunately, however, coverage is far from sufficient to ensure access and even farther to ensure healthy outcomes. Health disparities are pervasive, whether associated with race/ethnicity, income, geography, or other characteristics.

Using two nationally representative healthcare databases from 2001, the Medical Expenditure Panel Survey and the Nationwide Inpatient Sample, researches focused on differences by income in insurance coverage, healthcare utilization, expenditures, and quality of care for children in the U.S. Low income was defined as less than 200% of the FPL. They concluded that efforts beyond insurance coverage might be needed to improve access and quality for low income children overall and for racial/ethnic minorities despite income.
Children from low-income families were less likely to have had a medical office visit or a dental visit than children from middle-high-income families. They were less likely to have had medicines prescribed or have utilized hospital outpatient services. However, they were more likely to have made trips to the emergency department.

Low-income children were more likely than middle-high-income children to have their parents report a big problem getting necessary care and getting a referral to a specialist. Low-income children were at least twice as likely as middle-high-income children to have their parents report that health providers never/sometimes listened carefully to them, explained things clearly to the parents, and showed respect for what the parents had to say.

Children from low-income families were more likely to experience ambulatory-sensitive hospitalizations. Significant differences by income also occurred in admissions through the emergency department, expected payer, mean total charges per day, and reasons for hospital admission. Although low-income children comprise almost 40% of the child population, one quarter of total medical expenditures were for these children.26

**Child health in Connecticut**

Although there is a lack of local knowledge on primary care access for kids in greater New Haven, the NSCH provides state-level data snapshots on various access indicators. The most recent NSCH is from 2007 and provides the following statistics. Fifty-five percent of Hispanics, 41.7% of Blacks, and 11.2% of Whites had Medicaid/CHIP, called Husky in the state of Connecticut, at the time of the census. Medicaid/CHIP and Husky will be used interchangeably.

Of the children with private insurance, 1.4% were uninsured in the previous 12 months. Of the children with Husky, 11.9% were uninsured in the previous 12 months. Fourteen percent of Hispanics, 18% of Blacks, and 6.3% of Whites were uninsured in the previous 12 months, indicating a vast disparity in insurance coverage by race/ethnicity in Connecticut.

Of the children with private insurance, 25.3% said that the insurance did not adequately meet their needs, cover needed providers, or have reasonable costs. Of the children with Husky, 16.2% said that the insurance did not adequately meet their needs. Interestingly, these numbers indicate greater satisfaction in insurance coverage among publically versus privately insured children in Connecticut. Among insured children, 23.8% of Hispanics, 27.5% of Blacks, and 21.4% of Whites said that the insurance did not adequately meet their needs.

Eighty-eight percent of children graded their overall health status as excellent or very good. By insurance status, 93.2% with private insurance, 73.6% with Husky, and 83.9% with no insurance graded their health as excellent or very good. By race/ethnicity, 75.1% Hispanic, 82.7% Black, and 92.5% White children graded their overall health status as excellent or very good. Twenty-two percent with private insurance, 35.1% with Husky, and 45.5% with no insurance were overweight or obese (BMI above 85th percentile).

Ninety-six percent with private insurance, 95.2% with Husky, and 84.2% with no insurance had one or more preventative medical visit in the previous 12 months. This mirrors the national data with equal use indicators among publically versus privately insured children. Ninety-five percent
of Hispanics, 96.5% of Blacks, and 95.5% of Whites had one or more preventative medical visit in the previous 12 months. There does not appear to be a use disparity by race/ethnicity in Connecticut.

Eighty-eight percent with private insurance, 77.5% with Husky, and 80% with no insurance had one or more preventative dental visit in the previous 12 months. Eighty percent of Hispanics, 81.5% of Blacks, and 84.5% of Whites had one or more preventative dental visit in the previous 12 months. Five percent with private insurance, 9.5% with Husky, and 10.7% with no insurance reported two or more oral health problems in the preceding 6 months.

Among children needing referrals in the previous 12 months, 86.3% with private insurance, 68.5% with Husky, and 19.1% with no insurance had no problem getting needed referrals. This also parallels the national Government Accountability Office physician survey that showed difficulty referring publically compared to privately insured kids. Seventy percent of Hispanics, 63.8% of Blacks, and 86.5% of Whites had no problem getting needed referrals in the preceding 12 months.

Among children needing mental healthcare in the previous 12 months, however, 72.4% with private insurance and 85.1% with Husky received care from a mental health professional. Therefore, Connecticut may have less difficulty referring publically compared to privately insured kids to mental health services than other specialty services. Five percent with private insurance, 7.2% with Husky, and 5.2% with no insurance took medication because of difficulties with emotions, concentration, or behavior.27,28

Demographics of Greater New Haven

DataHaven conducted a survey in 2015 of 800 New Haven residents and 16,820 Connecticut residents on general wellbeing using random digit dialing. When participants were asked how they would rate New Haven as a place to raise children, 9% answered excellent, 28% answered good, 32% answered fair, 23% answered poor, and 7% answered they didn’t know enough in order to say. Connecticut residents at large had a more optimistic viewpoint; 34% answered excellent, 36% answered good, 16% answered fair, 8% answered poor, and 5% answered they didn’t know enough in order to say.

When given the statement “I do not feel safe to go on walks in my neighborhood at night,” 33% of New Haven residents strongly agreed, 21% somewhat agreed, 19% somewhat disagreed, 25% strongly disagreed, and 1% didn’t know. Of Connecticut residents, 16% strongly agreed, 12% somewhat agreed, 16% somewhat disagreed, 55% strongly disagreed, and 1% didn’t know.

Fifteen percent of New Haven residents (9% of Connecticut residents) had someone deliberately vandalize, try to steal, steal property, or attempt to break into their home in the last year. Nineteen percent of these households had children. Eight percent (4% of Connecticut residents) had an experience during which someone attacked them, tried to steal with force, or physically threaten them in the last year; 21% had this happen twice and 29% three or more times.29

Below are statistics from the American Community Survey data in 2013 and 2014.30 As a reference, Connecticut has 10.8% of its population living below the FPL and ranks 49th in the
country; the U.S. at large averages 15.5%. Connecticut has 14.9% of its children living below FPL and ranks 44th in the country; the US average is 21.7%. However, according to Connecticut Voices for Children, both figures are up from the 2000 census.31

East Haven is a town of 29,139 people, including 5,676 children. Ninety percent of its residents are White, 2.8% are Black, and 10% identify as Hispanic or Latino. Eighty-seven percent have a high school diploma or GED and 6.2% are unemployed. The median household income is $63,673, 11.2% used food stamp/SNAP benefits in last 12 months, and 12.2% of families with children younger than 18 had an income in the last 12 months below the FPL. Four percent of children are uninsured and 22.1% have Husky.

Hamden is a town of 61,605 people, including 11,665 children. Seventy percent of its residents are White, 18.8% are Black, and 8.8% identify as Hispanic or Latino. Ninety-three percent have a high school diploma or GED and 5.8% are unemployed. The median household income is $68,794, 6.8% used food stamp/SNAP benefits in last 12 months, and 6.4% of families with children younger than 18 had an income in the last 12 months below the FPL. Three percent of children are uninsured and 22.3% have Husky.

North Haven is a town of 23,997 people, including 4,777 children. Ninety percent of its residents are White, 2.8% are Black, and 4.1% identify as Hispanic or Latino. Ninety-three percent have a high school diploma or GED and 5.7% are unemployed. The median household income is $86,250, 3.3% used food stamp/SNAP benefits in last 12 months, and 2.9% of families with children younger than 18 had an income in the last 12 months below the FPL. Four percent of children are uninsured and 11.9% have Husky.

New Haven is noticeably disadvantaged compared to its neighbors. It is a town of 130,553 people, including 28,723 children. Forty-five percent of its residents are White, 34.5% are Black, and 25.8% identify as Hispanic or Latino. Eighty-one percent have a high school diploma or GED and 9.2% are unemployed. The median household income is $37,428, 24.7% used food stamp/SNAP benefits in last 12 months, and 32.0% of families with children younger than 18 had an income in the last 12 months below the FPL. Six percent of children are uninsured and 68.3% have Husky.

West Haven is also marginalized. It is a town of 55,290 people, including 11,911 children. Seventy-two percent of its residents are White, 19.2% are Black, and 14% identify as Hispanic or Latino. Eighty-seven percent have a high school diploma or GED and 8.7% are unemployed. The median household income is $52,535, 14.9% used food stamp/SNAP benefits in last 12 months, and 16.9% of families with children younger than 18 had an income in the last 12 months below the FPL. The number of uninsured children is the lowest of the area at 2.5% and 28.3% have Husky.32,33

*Infant and fetal mortality rates in Greater New Haven*

From 2006 to 2010, the combined infant and fetal mortality rate in New Haven was 18.9 per 1000 births, much higher than the Healthy People 2020 target of 12 per 1000 births. Infant mortality is defined as the death of a child less than one year of age. Fetal mortality is defined as any death of a fetus after 20 weeks of gestation or 500 grams and is most commonly caused by
preterm birth or birth before 37 weeks of gestation. Conditions originating in the perinatal period contributed to a total of 4,742 lost years of life from 2006 to 2010 (cutoff age 65), more than heart disease, cancer, violence, or accidents. Furthermore, the fetal and infant mortality rate among babies of Black women was above 30 per 1,000 births. This was considerably higher than that among the babies of White (10.6 per 1,000 births) and Hispanic women (13.6 per 1,000 births), indicating significant disparity by race/ethnicity.

When considering infant mortality rates alone between 2003 and 2009, New Haven measured much higher than neighboring towns. New Haven had 12 deaths per 1,000 live births, whereas West Haven, East Haven, and Hamden each had 7 deaths per 1,000 live births, equal to the national average, and North Haven had less than 5 deaths per 1,000 live births.34

*Low birth weight in Greater New Haven*

Low birth weight increases the risk of fetal and infant mortality as well as the development of chronic diseases later in life, such as high blood pressure, diabetes, and heart disease. Certain health behaviors, like smoking and using alcohol or drugs, may increase the risk of premature births and low birth weight infants. Low birth weight infants are born weighing less than 2,500 grams (5.5 pounds). In the U.S., Connecticut, New Haven County, and high-income neighborhoods within New Haven, roughly 8% of all infants were born with a low birth weight between 2003 and 2009. However, in middle and low-income neighborhoods within New Haven, 11% of all infants were born with a low birth weight. Black women were much more likely to have low birth weight babies than White or Hispanic women. Lower birth weights account for most of the excess deaths in the premature infants of Black women. However, controlling for birth weight, the infants of Black mothers did not have lower survival. This suggests that social factors rather than healthcare access were responsible for the higher fetal and infant mortality rate for the infants of Black women.34

*Obesity in Greater New Haven*

One out of every three children in the U.S. is overweight or obese. When the Community Alliance for Research and Engagement (CARE) studied 1,048 5th and 6th graders in New Haven public school, they found that almost one of every two children were overweight or obese; 18.1% qualified as overweight and 28.9% qualified as obese. A higher BMI was associated with living further from a grocery store, living in a neighborhood with more property crime, and living within a 5-minute walk of a fast food outlet. Furthermore, students reported an average 2.4 hours of screen time in a workday; the American Academy of Pediatrics recommends no more than 2 hours per day of high quality content.35

*School-based health centers (SBHCs)*

SBHCs may provide an entry point and source of primary care for children who do not otherwise have access to consistent care. They may also provide additional needed care for those youth who already have primary pediatric providers, such as dental and mental healthcare services. Furthermore, a health educator working as part of the SBHC may provide valuable
reinforcement of health education messages delivered by the clinician and may help in monitoring ongoing compliance with recommended medications, such as asthma action plans and lifestyle modification plans.

The ACA included an appropriation for SBHCs. This appropriation represents the first time that SBHCs have been nationally recognized to this degree as entities that provide significant contributions to the health and well-being of children and adolescents.36

National Census Report of SBHCs

The School-Based Health Alliance conducts a triennial national survey of school-based, school-linked, mobile health, and telehealth programs called the National Census of School-Based Health Centers. The most recent report is from 2010-2011 and analyzes 1384 SBHCs (76.9% completion rate) that provide primary care in 50 states.

Over half of SBHCs are located in urban settings (54.2%), 27.8% are located in rural settings, and 18% are located in suburban settings. SBHCs exist in all types of schools including public, alternative, and charter schools. SBHCs serve elementary, middle, and high school-aged students; the majority (82.7%) report serving at least one grade of adolescents (grade six or higher). The racial composition of students at schools served by a SBHC is 35.9% Hispanic, 28.6% Black, and 29.8% White.

Most SBHCs are open five days a week (77.8%), with 66.6% open 31 hours or more during the week. Nearly all SBHCs (99.7%) are open during school hours, 60.8% are open to patients before school, and 73.1% are open after school. Additionally, 70.6% of SBHCs have a pre-arranged source of after-hours care for patients.

One-third are staffed by a primary care provider such as an APRN, PA, or physician; 33.4% are staffed by a primary care provider in partnership with a mental health professional such as a licensed clinical social worker, psychologist, or substance abuse counselor; and 37.4% are staffed by primary care and mental health staff as well as other provider types to complement the healthcare team such as a health educator, oral health provider, social service case manager, and/or a nutritionist. In addition, 42.5% have a school nurse located in the school separate from the SBHC, 34.8% have a school nurse co-located in the SBHC, and 22.6% do not have a school nurse in the school.

SBHCs are typically sponsored by local healthcare organizations including community health centers (CHCs) (33.4%), hospitals (26.4%), and local health departments (13.3%). During the past ten years there has been an increasing trend toward CHCs serving as sponsors and a decreasing trend in the percentage of school system-sponsored SBHCs. More than half of SBHCs use electronic medical records (EMR) (52.7%). CHC-sponsored SBHCs are leading the way in adopting EMR in their centers with 80.9% currently in use.

According to the report, most SBHCs (87.9%) report billing at least one insurance program. The majority of SBHCs bill a state Medicaid agency (81.6%), Medicaid managed care organizations (71.4%), CHIP (63%), and private insurance (64%).37
National impact of SBHCs on health access and outcomes

A retrospective cohort study of Denver public high schools students who were either uninsured or insured by Medicaid/CHIP found both increased access and quality of care among SBHC users. Although SBHC users (n=790) were less likely than other users (n=925) to be insured (37% vs 73%), they were more likely to have made ≥3 primary care visits (52% vs 34%), less likely to have used emergency care (17% vs 34%), and more likely to have received a health maintenance visit (47% vs 33%), an influenza vaccine (45% vs 18%), a tetanus booster (33% vs 21), and a hepatitis B vaccine (46% vs 20).  

A study of immunization registry data in Denver also found higher immunization completion rates among patients aged 12 to 18 years from SBHCs than from CHCs, even though the SBHC population had limited insurance coverage. SBHC users had significantly higher completion rates for hepatitis B, Tdap, inactivated poliovirus, varicella, measles/mumps/rubella, HPV for ages 16-18 years, and for the combination of HPV, Tdap, and MCV4 for ages 16-18 years.  

Additionally, demonstrated increases in quality of life measures among students who use SBHCs may translate into cost savings. In a study of 290 students, pediatric health-related quality of life (HRQOL) total measurements were broken down into physical and psychosocial categories. After adjustment for gender, age, SBHC status, and Medicaid type, researchers found significant cost reductions for every 1-point increase of parent-reported total, physical, and psychosocial HRQOL. Significant cost reductions were also associated with student-reported total and psychosocial HRQOL increases.  

Similarly, in a cost benefit analysis in four school districts in Cincinnati, the researches estimated that the social benefits of the SBHC program were $1,352,087 over three years. Therefore, they estimated that the SBHCs could have saved Medicaid about $35 per student per year.  

Many of the benefits of SBHCs may be due to accessibility and approachability of staff. Student focus group participants from 12 SBHCs in California noted that SBHCs helped improve access to services students might not seek out otherwise, particularly counseling and family planning services. Furthermore, students noted that they liked SBHCs because of their confidentiality, free services, convenience, and youth-friendly staff.  

Mental health and SBHCs

According to the National Census of School-Based Health Centers, nearly one thousand SBHCs have a mental health provider on staff. Of those, 78% provide crisis interventions, 73.4% provide comprehensive individual evaluation and treatment, and 68.7% provide case management.  

SBHCs increase use of mental health services, which translate into cost savings. After implementation of a SBHC program in Cincinnati, proportions of students using mental healthcare services for urban and rural SBHC intervention schools increased significantly by 3.6% and 5.7%, respectively. Using data from 109 students with mental health problems based on Medicaid claims, the study found SBHC students had significantly lower total healthcare costs and lower costs of mental health services compared with non-SBHC students.
The increased use may be due to preference. Several older studies found that adolescents were 10 to 21 times more likely to prefer visiting a SBHC over a CHC for mental healthcare, and enhanced availability of care was cited as one of the likely reasons for this preference.\textsuperscript{44,45}

There is also evidence to support improvement in mental health outcomes. A pilot study in a SBHC in Baltimore showed improvements in self-concept and decreased depression scores following the receipt of individual therapy services (augmented for some students with group therapy).\textsuperscript{46}

\textit{Dental health and SBHCs}

According to the National Census of School-Based Health Centers, more than one-third of all SBHCs provide dental examinations by either a dentist or dental hygienist (n=1264). The majority of SBHCs provide oral health education (83.6%) and dental screenings with or without an oral health provider (72.5%). Services are expanding both on site and through mobile units.\textsuperscript{37}

SBHCs appear to increase use of dental services. A retrospective cohort analysis of parent surveys from an urban elementary school in Denver with a SBHC and a comparable school without a SBHC found that having access to a SBHC was associated with 1.4 times greater likelihood of having obtained routine dental examinations in the past year.\textsuperscript{47}

\textit{Asthma and SBHCs}

As previously mentioned, the increased accessibility and approachability of providers in SBHCs optimize their ability to reinforce health education and monitor medication compliance in chronic disease management, as exemplified by asthma action plans. In a study comparing SBHC and non-SBHC school districts in Cincinnati, the relative risk of hospitalizations for students with asthma decreased 2.4-fold after the SBHCs opened. Study investigators estimated the potential cost savings of these results as approximately $970 per asthmatic child per school year.\textsuperscript{48}

Some studies also demonstrated decreased rates of absenteeism related to asthma. One longitudinal study of children with asthma in 6 elementary schools in the Bronx found that children with asthma in schools with an SBHC missed fewer days of school per year than those in a non-SBHC school.\textsuperscript{49}

\textit{Obesity and SBHCs}

Approximately 90% of SBHCs offer individual nutrition, fitness, and/or weight management services to students and sometimes to their families as well. An additional 43.7% provide group sessions in the schools. As with chronic diseases such as asthma, SBHCs can provide consistent follow-up counseling and reinforcement for students struggling with weight loss or maintenance, as well as implement primary prevention efforts before children become overweight or obese.\textsuperscript{36}
As an innovative example, the Healthy Hearts program in a California high school SBHC enrolled 55 students who had a BMI at or above the 85th percentile or blood pressure at or above the 90th percentile. Participants met with a clinician to create a plan for their personal nutrition and physical activity. Physical activities such as yoga, salsa dancing, and conditioning were provided after school. SBHC staff called students out of class if they missed an appointment and helped to resolve obstacles to continued participation. Students learned how to prepare nutritious meals at Free Lunch Fridays. The program also reached families through workshops on healthy eating, cooking, and reading nutrition labels. After one year, 60% of the students had lowered their body mass index score, with a mean reduction of 0.9 points.\(^{50}\)

**SBHCs in greater New Haven**

The first SBHC in New Haven, the Body Shop, was established in 1981 with initial funding from the Robert Wood Johnson Foundation (RWJF) as a joint venture between the New Haven Board of Education, the Fair Haven Community Health Center, and the Yale Adolescent Medicine Department. The Body Shop is still in operation at Wilbur Cross High School. In 1986, after the grant from the RWJF ended, the Connecticut State Department of Public Health (DPH) awarded the Board of Education a grant to continue the School Based Health Center Program. In the same year, another DPH grant was secured to establish the second school based health center at Jackie Robinson Middle School (now King/Robinson K-8 Magnet School). Since then, another 14 health centers have opened in public elementary, middle, and high schools in New Haven.\(^{51}\) Additionally, there are two SBHCs in Hamden and one in East Haven.

The SBHCs in greater New Haven are operated in collaboration with the following agencies:

- Fair Haven Community Health Clinic
- Cornell Scott Community Health Center
- Yale-New Haven Hospital, York Street Campus and Hospital of Saint Raphael Campus
- Yale Child Studies Center
- Quinnipiac Valley Health District
- Community Health Center, Inc.

Each SBHC consists of a primary care provider, usually a family medicine or pediatric advance practice registered nurse, alongside a licensed clinical social worker. Their hours are independently coordinated and vary by SBHC; some providers are in the clinic every day for the entire school day and some split time between various sites or work part time.

The SBHCS follow an opt-in model of care; parents must sign a release for students to receive services. They bill Husky for services. However, grant funding, through the Connecticut Department of Public Health, in combination with local Board of Education, municipal, and local private funds, is used to cover co-pays, deductibles, rejected claims, and visits with no insurance. A large portion of these grant funds are used to provide primary care to uninsured, immigrant children. Additionally, Connecticut SBHCs are recognized by the health insurance exchange known as Access Health CT, and certain SBHCs are eligible to become patient centered medical homes, as described below.\(^{52}\)
**Patient Centered Medical Home (PCMH) model of care**

In 2007, the Joint Principles of the Patient Centered Medical Home were released by the four primary care physician societies (American Academy of Family Physicians, American Academy of Pediatrics, American College of Physicians, and American Osteopathic Association) and have since been endorsed by 19 additional physician organizations, including the American Medical Association, as well as the Patient Centered Primary Care Collaborative, a multi-stakeholder coalition with a mission to develop and advance the patient centered medical home. Following the release of these Joint Principles, the Patient Centered Medical Home (PCMH) concept has become a fast-growing model of primary care redesign across the country, with many demonstrations and pilot projects underway or in development.

The PCMH is a care delivery model whereby patient treatment is coordinated through the primary care physician to ensure patients receive the necessary care when and where they need it in a manner they can understand. The objective is to have a centralized setting that facilitates partnerships between individual patients, their personal physicians, and when appropriate, the patient’s family. Registries, information technology, and health information exchange ensures that that patients get the indicated care in a timely, culturally, and linguistically appropriate manner. Quality and safety are hallmarks of the medical home; there is an emphasis on evidence-based medicine and on continuous quality improvement through performance measurement and improvement.53

The model has different names based upon the accrediting organization. The National Committee for Quality Assurance (NCQA) uses the term Patient Centered Medical Home whereas the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) uses the term Primary Care Medical Home and the Connecticut Department of Social Services (CT DSS) uses the term Person-Centered Medical Home.

**Health Professional Shortage Area (HPSA) designation**

The US Health Resources and Services Administration (HRSA) Office of Shortage Designation provides guidelines for determining health professional shortage areas (HPSAs). The HPSAs identify an area or population as having a shortage of primary care, dental, or mental health providers; here the focus is primary care. HPSAs may be geographic, population group, facility, or automatic; here the focus are geographic and population group.

A HPSA geographic designation demonstrates a shortage of providers for the total population of an area. A population group HPSA designation demonstrates a shortage of providers for specific population groups such as low income (greater than 30% of population with incomes at or below 200% of the FPL); migrant and/or seasonal farmworkers and families; Medicaid-eligible; Native Americans/Native Alaskan; homeless; or other populations isolated from access by means of a specified language, cultural barriers, or handicaps.54

The designations provide both federal and state government benefits for communities, providers, and healthcare facilities that participate in the federal loan repayment programs,
including the National Health Service Corps. Medicare incentivizes providers to practice in these select areas with a 10% increase in reimbursement of allowed services on a quarterly basis.\textsuperscript{55}

\textit{Definitions of required information for HPSA designation request}

A rational service area is a county or a group of contiguous counties whose population centers are within 30 minutes travel time of each other. Within inner portions of metropolitan areas, information on the public transportation system will be used to determine the distance corresponding to 30 minutes travel time.

A population count is the number of persons in the requested area based on the latest available census.

Practitioners are counted as the number of full-time-equivalent (FTE) non-federal practitioners available to provide patient care to the area or population group. Non-federal means practitioners who are not federal employees and are not obligated-service members of the National Health Service Corps. Practitioner refers to allopathic (M.D.) or osteopathic (D.O.) primary medical care physicians; mid-level providers such APRNs and PAs are not included. Patient care for primary care physicians includes seeing patients in the office, on hospital rounds and in other settings, and activities such as interpreting laboratory tests and X-rays and consulting with other physicians. To develop a comprehensive list of practitioners in an area, HRSA suggests checking state licensure lists, state and local medical or dental society directories, local hospital admitting physician listings, Medicaid and Medicare practitioner lists, and the local yellow pages listings.

If only a physician's office hours are known, an upward adjustment must be made from the number of office hours per week to obtain the total estimated number of hours spent in direct patient care per week. For a pediatric practice, the average number of hours per week spent providing patient care in the office setting is 31.9, and the average number of hours spent in all direct patient care per week is 46, making the ratio of office hours to all direct patient care hours is 0.693. Therefore, the adjustment factor is the reciprocal of that ratio or 1.4; it is the factor by which the total weekly office hours should be multiplied to obtain the total weekly hours in direct patient care. If this calculation yields a number greater than 40, the physician should be considered as 1.0 FTE; otherwise, this number of hours should be divided by 40 to obtain the physician’s FTE rounded to the nearest 0.1 FTE.

Alternatively, if a physician’s weekly bookable hours are known, this number can be divided by 32, a number agreed upon by the HPSA workforce workgroup, to estimate the physician’s FTE, again with a maximum of 1.0.\textsuperscript{56}

Practitioners who are semi-retired, who operate a reduced practice due to infirmity or other limiting conditions, or who provide patient care services to the residents of the area only on a part-time basis will be discounted through the use of full-time equivalency figures. A 40-hour work week will be used as the standard for determining full-time equivalents in these cases. For practitioners working less than a 40-hour week, every four (4) hours (or 1/2 day) spent providing
patient care, in either ambulatory or inpatient settings, will be counted as 0.1 FTE (with numbers obtained for FTE's rounded to the nearest 0.1 FTE), and each physician providing patient care 40 or more hours a week will be counted as 1.0 FTE physician. (For cases where data are available only for the number of hours providing patient care in office settings, equivalencies will be provided in guidelines.)

Hospital staff physicians involved exclusively in inpatient care or emergency room care will be excluded. Those physicians engaged solely in administration, research, and teaching will be excluded.

Physician residents are counted as 0.1 FTE. This FTE should be counted only at locations where the resident provides primary care, such as a hospital outpatient clinic. If the clinic has slots that residents rotate through during the year, then that slot is counted at 0.1 FTE.

Contiguous resources incorporate the availability and accessibility of primary care providers in neighboring areas. Primary care providers in areas contiguous to an area being considered for designation will be considered excessively distant, overutilized, or inaccessible to the population of the area under consideration if one of the following conditions prevails: they are more than 30 minutes travel time from the population center; the population: provider FTE ratio is in excess of 2000:1, indicating that they cannot be expected to help alleviate the shortage situation; there are non-economic access barriers such as significant demographic or socio-economic differences; there are economic barriers, as indicated where a very high proportion of the population of the area under consideration is poor (more than 20% of the population has income below the FPL and Medicaid-covered services are not available.

An area will be considered as having unusually high needs for primary healthcare services if at least one of the following criteria is met: more than 100 births per year per 1,000 women aged 15 to 44; more than 20 infant deaths per 1,000 live births; more than 20% of the have incomes below the FPL.

An area's existing primary care providers will be considered to have insufficient capacity if at least two of the following criteria are met: more than 8,000 office or outpatient visits per year per FTE primary care physician serving the area; unusually long waits for appointments for routine medical services (i.e., more than 7 days for established patients and 14 days for new patients); excessive average waiting time at primary care providers (longer than one hour where patients have appointments or two hours where patients are treated on a first-come, first-served basis); evidence of excessive use of emergency room facilities for routine primary care; a substantial proportion (2/3 or more) of the area’s physicians do not accept new patients; abnormally low utilization of health services, as indicated by an average of 2.0 or less office visits per year on the part of the area's population.\textsuperscript{57,58}

\textit{HPSA designation requirements}

Geographic:
1. Be a rational area for the delivery of primary medical care services
2. Meet one of the following conditions:
a. Have a population to FTE primary care physician ratio of at least 3,500:1
b. Have a population to FTE primary care physician ratio of less than 3,500:1 but greater than 3,000:1 and have unusually high needs for primary care services or insufficient capacity of existing primary care providers

3. Demonstrate that primary medical professionals in contiguous areas are overutilized, excessively distant, or inaccessible to the population under consideration

Population group (focus on low-income or Medicaid-eligible):
1. Reside in an area that is rational for the delivery of primary medical care services
2. Have a minimum of 30% of the service area's population at or below 200% FPL
3. Have access barriers that prevent the population group from use of the area's primary medical care providers. Barriers may be economic or non-economic, such as minority status, language differences, or cultural differences.
4. Have a ratio of persons in the population group to number of primary care physicians practicing in the area and serving the population group ratio of at least 3,000:1
   a. \[ R = \frac{\text{Low-income populations population-to-practitioner ratio}}{\text{Population with incomes at or below 200 percent of the poverty level}} \]
   \[ N = \text{Population with incomes at or below 200 percent of the poverty level} \]
   \[ D = \text{FTE non-Federal practitioners serving the Medicaid population + FTE non-Federal practitioners offering care on a sliding-fee- scale, ability-to-pay basis, or free-of-charge basis} \]
   \[ R = \frac{N}{D} \]
   b. \[ R = \frac{\text{Medicaid-eligible populations population-to-practitioner ratio}}{\text{Population eligible for Medicaid under applicable state's medical assistance program}} \]
   \[ N = \text{population eligible for Medicaid under applicable state's medical assistance program} \]
   \[ D = \text{FTE non-Federal practitioners accepting Medicaid} \]
   \[ R = \frac{N}{D} \]

5. Members of Federally recognized Native American tribes are automatically designated. Other groups may be designated if they meet the basic criteria described above.
**Statement of Purpose**

The purpose of the study was to use a CBPR approach to identify and enumerate medical practices and SBHCs delivering pediatric primary care within the greater New Haven area and to describe and characterize primary care provision at each of these sites so as to highlight the assets and challenges in pediatric primary care access in greater New Haven and prioritize local advocacy for improvement.

**Hypotheses**

1. Compared to small private practices, more comprehensive services are available at Federally Qualified Community Health Centers (FQCHC)
2. SBHCs provide a large proportion of pediatric primary care in greater New Haven
3. State licensing data overestimates the primary care workforce
4. There are areas within greater New Haven where the pediatric population is medically under-served
Methods

Community engagement

The PCare4NHV project originated from discourse on the state of primary care in greater New Haven among 30 members of the New Haven community, including representatives from community-based organizations serving uninsured and Medicaid populations, 35 healthcare providers, and 12 representatives from city and state governments, between July 2012 and February 2013. Ten of these key stakeholders then assumed responsibility of the Primary Care Advisory Team (PCAT) to provide continuous guidance on the design, implementation, and dissemination of the PCare4NHV project.

Survey design

In order to identify factors most important to community-based organizations’ members and constituencies regarding access to primary care, the core team organized facilitated discussions with five community-based organizations between February and April 2013: Christian Community Action Health Kitchen Cabinet, New Haven Family Alliance Male Involvement Network, New Haven Healthy Start Consortium, Project Access, and community health surveyors of the Yale School of Public Health Community Alliance for Research and Engagement. These discussions resulted in a prioritized factor list that the core team then translated into a data collection tool with binary and categorical responses. The discussions also concluded that the relevant study population was New Haven plus four adjacent towns: East Haven, West Haven, North Haven, and Hamden. The core team used the data collection tool to assess adult primary care in the greater New Haven area in the parent project PCare4NHV.

In PCare4NHv2, the expansion team used the same foundation and tools developed by the first phase with adult practices to expand the practice-based survey to pediatric practices with the following modifications. The factor list was customized to reflect the pediatric-specific discussion points from the focus group meeting notes. Additionally, IW and MR re-engaged the New Haven Healthy Start Consortium to discuss pediatric-specific survey topics. Finally, two pediatricians (MR and GG) and the PCAT reviewed the modified tool to ensure that the questions were appropriately tailored to pediatric practices.

Topics specific to pediatric primary care included:

- Availability of lactation consultant on site
- Participation in the Connecticut Immunization Registry and Tracking System (CIRTS)
- Policy to fill out camp, daycare, and sports physical forms
- Policy to authorize disclosure of health information to non-parent/guardian caregivers
- Separate waiting rooms for sick and well patients
- Television in waiting room
- Cleanliness of toys in waiting room
- Stroller accessibility
- Availability of a lactation room and diaper changing station
The final pediatric data collection tool included 57 practice-based questions (referred to as the interview) and 21 observation-only questions (referred to as the physical assessment) (Appendix pediatric data collection tool).

As a pilot, MR and MB independently completed the survey questions relating to practice physical space at three adult practices. There were 2 discordant responses resulting in an inter-rater reliability of 0.97.

The Yale University Human Investigation Committee (HIC) determined that the study was exempt from HIC review in August 2013 under protocol number 1308012511. The HIC approved the amendment to the protocol to tailor the survey to pediatric practices in June 2014.

Enumerating practices

AV generated a Physician/Surgeon roster from the State of Connecticut e-Licensing Website on 5/18/2014. The advance practice registered nurse (APRN) and physician associate (PA) files were not used given they did not provide specialty designation. The roster was sorted and cut to include only Pediatricians and Medicine-Pediatric providers in greater New Haven. Family medicine providers were not included as they were previously counted in the parent project.

The Yale Medical Group (YMG) Strategic Planning Department provided a current directory of referring providers to their specialty services from New Haven County on 5/20/2014. APRNs and PAs were included on this list although the data were known to be less reliable.

Beginning with the licensing data, MB performed a Google search on each provider between 6/18/2014 and 6/20/2014. The search terms were “first name last name pediatrics new haven.” Credible websites included hospital or university biography pages, practice websites, obituaries, and published research articles. A provider was excluded if the search found that s/he currently worked outside of greater New Haven, had a specialty designation (except allergy and behavioral), or was a resident or hospitalist. For the providers on the YMG referral directory not included in the licensing data, MB subsequently performed an identical Google search.

MB then combined vetted providers from both data sets confirmed to provide pediatric primary care in greater New Haven to create a merged list. Finally, MB added providers listed on the practice websites not found on the licensing or YMG referral lists to the merged dataset to create a working list of all MD, DO, APRN, and PA providers.

Conducting surveys

Initial work focused solely on the practices as school was out of session and therefore practitioners at the SBHCs could not be reached. In June and July 2014, MB contacted each practice by phone or email in attempt to describe the study, its purpose, and the consent process as well as to gauge interest in participation. Most frequently, messages were left for the practice manager or medical director and the phone call was later returned. In several instances, the core team had email contacts within the practices that facilitated communication. In follow up, MB either emailed or faxed the information sheet and consent to the practice
MB contacted each SBHC by phone and email in a similar approach to the practices. However, the interviews for the fifteen SBHCs run by one of the three FQHCs were completed by the FQHC director or nurse manager. Therefore, only the physical assessments were completed at the site meetings. Given the small size of the SBHCs, the site representatives were the sole primary care providers. MB visited the SBHCs when school was back in session in October 2014. The known SBHCs not associated with a FQHC were more difficult to contact and therefore these two were visited in January 2015; both interview and physical assessment were completed on site. Finally, to assure completeness, MB called the Department of Education in North Haven, East Haven, West Haven, and Hamden in May 2015 to confirm the number of SBHCs. This process identified two additional SBHCs; MB completed these interviews and physical assessment in summer 2015.

To manage meeting time efficiently, MB emailed each site representative in advance a list of providers assumed to be working at the practice per the vetted, merged data set and/or the practice website and asked the site representative to confirm each providers’ bookable hours per week, specialty designation, and Medicaid acceptance as well as the percent Medicaid of the practice panel before the meeting. As this was the most time-intensive part of the interview, it was possible to complete the remainder of the survey on site in less than 20 minutes.

MB conducted the majority of the interviews in-person at the practice or SBHC site. However, three practice representatives insisted on phone interviews for convenience and four practice representatives preferred the meeting at a location separate from the clinic space (either at another clinic space, a health department office, or an administrative office). MB therefore visited these sites at a later time to complete the physical assessment.

Site representatives had the option of 1) not participating, 2) participating and releasing identifiable practice-level data publically, or 3) participating and not authorizing public release of practice-level data. MB explained that the identified data would be published on a public, searchable database. MB obtained written consent at the time of interview.

MB answered requests to clarify the meaning of survey questions using established a priori definition criteria (Appendix interview guide).

Record keeping

MB recorded interview responses by hand on printed copies at the time of the interviews then input the responses into Qualtrics for electronic management and later exported to Excel for analysis. Printed copies of consents and surveys were stored in a locked drawer in a secure office in the Yale RWJF main office. Electronic copies were stored on Yale’s secure server.
Each site was given a three-digit code for anonymity. The first number represented the city code:

1: East Haven
2: Hamden
3: New Haven
4: North Haven
5: West Haven

The second two numbers represented the order in which the site was interviewed. For the one practice and one SBHC that chose not to authorize public release of their practice-level data, only the three-digit code was recorded in association with the survey response.

**Practice characteristics analysis**

MB calculated descriptive characteristics using Excel. The Mann-Whitney U test for non-normal distributions (M test) was used to observe associations between practice characteristics and percent Medicaid panel. Statistical tests were 2-tailed with alpha equal to 0.05. Google maps was used to calculate walking distance from the nearest bus stop. MB created interactive maps using ArcGIS. Yale CSSSI Statistical Consultants provided statistical guidance.

**Workforce analysis**

The rational service area was defined as the city of New Haven and the contiguous areas of West Haven, East Haven, North Haven, and Hamden, all of which have city centers that are within 30 minutes travel time of each other (Map Rational service area).

Population counts were taken from the 2014 American Community Survey including the pediatric population count, the percent of the population below the FPL (very poor), the percent of the population below 200% of the FPL (poor), birth rate, and infant mortality rate.

As previously discussed, HPSA designation guidelines outline how to convert a practitioner’s office hours into patient care hours using an adjustment factor. However given weekly bookable hours for each practitioner was collected during the interviews and this information provides a much more accurate estimate of the workforce, 32 bookable hours was converted to 1.0 FTE, and the FTEs were rounded to the nearest tenth and capped at 1.0 following the HRSA workforce workgroup consensus mentioned previously. Total FTEs were calculated for physicians (MD and DO), APRNs, PAs, and resident physicians. For HPSA FTE calculations, however, only physicians were counted and resident slots were calculated as 0.1 FTE per the HRSA designation guidelines. MB used Excel to tabulate total FTE for each city and provider type and adjust for practice panel percent Medicaid.

Staywell Health Center in Waterbury was chosen as the contiguous resource as it is the nearest FQHC outside of the rational service area. Google maps was used to calculate travel times.
Results

Participation

Participation included 17 of 19 practices (89%) and 19 of 19 SBHCs (100%). One practice in New Haven and one practice in West Haven declined to participate. Combined, participation totaled 36 of 38 practices and SBHCs (95%). Of the participating sites, 16 of 17 practices chose to be identified, and one practice participated anonymously. Eighteen of 19 SBHCs chose to be identified, and one SBHC participated anonymously.

Basic characteristics

A majority (9/17, 52.9%) of practices were concentrated in one geographic area, the city of New Haven. One practice was in West Haven, one in East Haven, two in North Haven, and four in Hamden. The SBHCs were also concentrated in New Haven (16/19, 84.2%) with one in East Haven, two in Hamden, and none in West Haven or North Haven (Table 10, Appendix site map). Eighty-two percent of practices were located within a 5-minute walk from a public bus stop.

The panel size of most practices was between 2500 - 4999 children (47.1%) or 5000 - 9999 children (35.3%). One hundred percent of practices and SBHCs reported they were accepting new patients, 94.1% of practices and 100% of SBHCs reported they were accepting Medicaid insurance, 76.5% of practices and 100% of SBHCs reported they were accepting new patients with Medicaid insurance, and 52.9% of practices and 73.7% of SBHCs reported they saw patients on a sliding scale or free of charge basis (Table 1). Forty-one percent of practices had a Medicaid panel at or below 25%, 11.8% had a Medicaid panel between 26 and 50%, 17.6% had a Medicaid panel between 51 and 74%, and 29.4% had a Medicaid panel equal to or over 75% (Table 2, Map 1).

On-site services

Less than half of practices offered on-site specialty mental healthcare (41.2%), dental (29.4%), radiology (17.6%), social work (29.4%), nutritionist (41.2%), and home visit (17.6%) resources. Conversely, lab work (52.9%), lactation consultants (52.9%), same day visits (100%), and in-hospital care (88.2%) were more often available on site at practices, defined as in the same physical location, either in the same office building or an adjacent building if it is owned, leased, or occupied by the practice.

All SBHCs offered on-site specialty mental healthcare and same day visits. Eighty-four performed lab draws, 94.7% offered social work services, 68.4% provided care management services such as asthma or life style modification follow-up, and 94.7% offered group educational visits. SBHCs did not frequently offer dental care (31.6%) or nutrition counseling by a nutritionist (0%) (Table 3, Maps 2-6).

The Mann-Whitney U test (M test) for non-normal distributions associated practice characteristics and percent Medicaid panel. Practices that provided adult primary care, mental
health services, dental services, and social services saw statistically significantly more Medicaid patients than other practices (M< 0.05) (Table 4).

Trainings

Although 88.2% of practices mandated customer service training for staff, only 41.1% mandated customer service training for providers. Mandatory cultural competency training for providers (47.1%) and staff (35.1%) as well as mandatory trauma-informed care training for providers (29.4%) and staff (17.6%) was also limited. More SBHCs mandated customer service training for providers (57.9%) and staff (84.2%), cultural competency training for providers (100%) and staff (68.5%), and trauma informed training for providers (58.8%). However, only 26.3% of SBHCs mandated trauma-informed care training for staff (Table 5, Map 7).

Patient experience

About half of practices had Spanish-speaking providers (52.9%) and staff (47.1%). Most practices (76.5%) used interpreter services available by phone. Although Spanish-speaking providers were much less common at SBHCs (5.3%), Spanish-speaking staff were a significant resource (68.4%). One hundred percent of SBHCs used interpreter services by phone. Few practices (29.4%) and SBHCs (5.3%) had interpreters on site (Table 6, Map 8). Other languages available included Chinese, Arabic, American Sign Language, Japanese, Gujarati, Hindi, French Creole, Russian, Vietnamese, Marathi, Yoruba, Portuguese, Bengali, Hebrew, German, Tamil, Telugu, Italian, and French.

The Mann-Whitney U test (M test) for non-normal distributions associated practice characteristics and percent Medicaid panel. Practices that had Spanish-speaking providers saw statistically significantly more Medicaid patients than other practices (M< 0.05) (Table 7).

Regarding schedule, 76.5% of practices were open after 6pm and 41.2% were open on the weekends; combined 82.4% offer flexible hours outside of normal business hours.

Both during (76.5%) and after hours (82.4%), most practices triaged through a direct phone call to a non-clinical provider.

Practice innovation

Most practices (76.5%) and SBHCs (100%) used an EMR; 47.2% used EPIC and 41.7% used an EMR other than EPIC. Of those who did not use EPIC, all practices and 62.5% of SBHCs had access to EPIC. Few practices (35.3%) and SBHCs (5.3%) provided an online portal for patients to access their own medical records. Forty-one percent of practices were PCMHs, and of those who were not designated, half were seeking designation. No SBHCs were designated PCMHs (Table 8).
Physical characteristics

Although all practices had curb cuts in front of the main entrance making the sidewalk wheelchair and stroller accessible, less than half had an automatic door to the main entrance (41.2%), a wheelchair accessible entrance (41.2%), or appropriate counter height for wheelchair accessibility at check-in (17.6%). Private information was heard at triage in 76.5% of practices and 89.5% at SBHCs. Signs were available in Spanish at 41.2% of practices and 21.1% of SBHCs (Table 9).

Workforce

Counting all physicians (MD and DO), PAs, APRNs, and resident physicians, 124 providers were identified as providing pediatric primary care in the greater New Haven area. Stratified by city, there were 81 providers in New Haven (65.3%), 30 in Hamden (24.2%), 11 in North Haven (8.9%), 4 in East Haven (3.2%), and 1 in West Haven (0.8%) Of note, three providers worked in more than one city and were therefore subtracted from the total to avoid overestimation. The bulk of the workforce consisted of physicians (45.9%, not including residents) and APRNs (37.9%). Providers at SBHCs constituted 14.8% of the workforce. Although there were 60 Yale pediatric residents in total, only 17 were providing primary care in the clinic setting at any given time (10 residents at York Street Campus Primary Care Clinic, 5 at Saint Rafael Campus Primary Care Clinic, and 2 at the Yale Adolescent Clinic) (Table 10).

The practice bookable hours (including MD, APRN, PA, resident physicians) totaled 2644 or 76.4 FTEs. The SBHC bookable hours totaled 559.75 or 16.7 FTEs. The total (practice + SBHC) bookable hours were 3203.57 or 93.1 FTEs. Therefore, by FTEs, SBHCs provided 20.0% of all pediatric primary care in greater New Haven.

Almost all providers accepted some Medicaid insurance, but the percent of the practice panel comprised of patients with Medicaid insurance ranged from 2.5% to 95.0% (Table 2). The number of practice FTEs dedicated to Medicaid patients was 43.5 (52.7% of all practice FTEs). The number of SBHC FTEs that served Medicaid patients was 11.8 (67.5% of all SBHC FTEs). The total (practice + SBHC) number of FTEs for Medicaid patients was 55.3. Therefore, by FTEs, SBHCs provided 22.1% of the pediatric primary care for Medicaid patients in greater New Haven (Table 11).

The following calculations demonstrate HPSA designation recommendations. There were 57 physicians (MD/DO) in greater New Haven providing 38.6 FTEs. When adjusted for the percent of the practice panel dedicated to Medicaid patients, FTEs fell to 14.0. Given there were 17 resident slots in New Haven, they provided 1.7 FTEs for a combined total of 40.3 FTEs per HPSA guidelines. The pediatric population to provider ratio was 3,548:1 in East Haven and 29,778:1 in West Haven, both of which meet the HPSA geographic designation threshold of less than 3,500:1. When calculated using the Medicaid population, the ratio of high needs children to provider in West Haven was 8,425:1 and increased to 11,233:1 when adjusted for the practice panel percent Medicaid, indicating that West Haven far surpasses the threshold of 3,000:1 for a high needs population as well. However, given the ratio in both East Haven and West Haven was above 3,500:1, there is no need to prove unusually high needs for primary care services or
insufficient capacity of existing primary care providers in order to qualify for HPSA geographic designation. Furthermore, primary medical professionals in the contiguous area, Staywell Health Center in Waterbury, are excessively distant given travel time is over 30 minutes, therefore fulfilling the final criteria. Although New Haven had 45.1% of the population living below 200% of the FPL in 2014, which exceeds the threshold of 30%, New Haven’s pediatric population to provider ratio was 1,614:1 which is above the threshold of 3,000:1; therefore New Haven does not meet all of the HPSA geographic designation criteria (Table 12).

The licensing data overestimated the total number of providers in greater New Haven by 534%. The highest overestimation of physicians occurred in New Haven (293%) and West Haven (300%) (Table 13).

When providers were counted as individuals rather than calculated FTE, the total time dedicated to primary care in greater New Haven was overestimated by 34%. The percentage was greatest in New Haven (42%) and West Haven (163%) (Table 14).
Discussion

In this CBPR comprehensive characterization of pediatric primary care services in greater New Haven, the practice-based survey found that practices have high acceptance rates of Medicaid and extended office hours; almost all practices are patient centered medical homes or currently seeking designation; there are more comprehensive services on site at practices that see a higher percentage of Medicaid patients; SBHCs are a noteworthy source of healthcare access, especially for specialty mental healthcare, social work, and care management; there is a gap in nutritionist resources and a possible gap in dental resources that needs further research; there is room to improve privacy at practices and SBHCs as well as trainings and handicap accessibility at practices; there are good resources for Spanish-only speaking patients; the pediatric East Haven and West Haven populations are medically underserved and may be eligible for a HPSA geographic designation and therefore a higher Medicaid reimbursement rate; and state licensing data grossly overestimates the primary care workforce.

Insurance coverage does not equal access

In theory, children in greater New Haven with both private and Husky insurance have adequate access to primary healthcare services. The pediatric uninsured rate is low. Husky covers about 1 in 4 children, although less in North Haven and many more in New Haven. Nine out of 10 sites accept new Medicaid patients. National data indicates that privately insured and publically insured kids have similar utilization and outcomes. All sites offer same day visits, most have extended hours, and most are located less than a 5-minute walk from bus stop. Additionally, there are strong language resources to facilitate access for Spanish speaking patients.

However, as previously discussed, income disparities impact access. New Haven is particularly disadvantaged compared to its neighbors as 32.0% of families with children under 18 had income below the FPL in the 12 months before the most recent census as compared to 12% statewide. The NSCH 2007 also indicates significant race/ethnicity disparities; 14% of Hispanics and 18% of Blacks but only 6.3% of Whites in Connecticut were uninsured in the previous 12 months. Therefore, the high acceptance rates of Medicaid and accessibility indicators of individual practices may not translate into access.

In addition to enrollment in available insurance plans, scholars have defined access in several categories. There must be access to and a choice among covered services, clinicians, and healthcare institutions; access to a consistent source of primary care; access to referral services; and delivery of high-quality healthcare services to guarantee that children receive safe and effective care. This discussion that follows will use these access categories to interpret the study findings and better define assets and challenges in pediatric primary care access in greater New Haven and prioritize local advocacy for improvement.

Access to and choice among covered services, clinicians, and healthcare institutions

Children in East Haven and West Haven have limited access to and no choice among covered services, clinicians, and healthcare institutions given there are so few pediatric providers in the
area such that the towns qualify for a HPSA geographic designation. In West Haven, there is only one provider to care for the 8,421 with Husky. Furthermore, when the number of pediatric provider FTEs is adjusted for the percent of the practice panels dedicated to Medicaid patients, the ratio falls astronomically; there is only one time slot with one provider to care for 11,233 kids with Husky. This is obviously an enormous barrier to access that must be addressed through a formal HPSA designation request to the Connecticut State Department of Public Health Office of Primary Care. Once HPSA designation is obtained, pediatricians who provide primary care in East and West Haven will receive a 10% increase in Medicaid reimbursement as well as access to additional state and federal funding. In turn, this will incentivize more practices and pediatricians to work in the underserved areas.

Access to a consistent source of primary care

Consistency is a defining feature of the PCMH model of care. Most practices in greater New Haven are either designated PCMHs or are currently seeking designation. As part of the designation criteria, most practices use an EMR. However, very few pediatric practices use an online patient portal. There may be concerns of patient privacy when patients reach adolescence; providers want patients to feel comfortable seeking contraception and sexually transmitted infection testing, among other delicate topics. To be a consistent source of primary care, which entails open and effective communication but also sensitivity and trust, there is a compromise.

The survey found that more comprehensive services on site, such as adult primary care, mental health, dental care, social services, and Spanish-speaking providers, are available at practices that see a higher percentage of Husky patients. These practices tend to be FQHCs and hospital-based primary care centers and also tend to have PCMH designation. This may indicate an undue burden on such practices.

As providers of patient centered, accessible, and culturally responsive care, SBHCs already possess core qualities of the PCMH. In fact, the 15 SBHCs in greater New Haven that are associated with a FQHC or a hospital-based primary care center and are therefore well integrated into systems of care in the community could be considered PCMHs.

The SBHCs in greater New Haven carry a disproportionate burden of primary care delivery; they make up 14.8% of the workforce yet deliver 20.0% of the primary care, and this number increases to 22.1% after adjusting for the percentage of the practice panels dedicated to Medicaid patients. They are a noteworthy source of primary care in the area.

Additionally, they provide the majority of the on-site specialty mental healthcare and social work services in the area. As previously described, each SBHC in greater New Haven follows the model of a primary care provider paired with a licensed clinical social worker. Given the documented difficulty of referring Medicaid/CHIP children to mental health services nationally despite theoretical coverage, but the greater use of mental health services among Husky versus privately insured children in Connecticut, and the improved access to mental health services seen with a SBHC intervention, SBHCs likely contribute significantly to access to mental healthcare services in greater New Haven.
SBHCs in greater New Haven also likely contribute significantly to the management of children with chronic conditions. Many more SBHCs than practices provide care management services, defined as on-site personnel with time dedicated to patient care management such as a diabetes care manager. Chronic conditions like asthma and obesity require frequent and repeated education, screening, follow-up, and management changes. SBHCs are an ideal environment, and a proven success for a more comprehensive and youth-centered approach to these interventions as a setting in which medical, mental health, and school professionals can all work together to support youth in preventing and managing these conditions in a timely and continuous manner.

Given appropriations for SBHCs in the ACA, the national emphasis on advancing the PCMH model of care, and the subjective contributions of SBHCs in greater New Haven to primary care, especially mental healthcare and chronic disease management, activists in greater New Haven may want to actively pursue opportunities to expand the SBHC model of integrated physical and mental health services. Doing so may improve health outcomes by investing in prevention and relatively low-cost primary healthcare delivery, especially if emergency department visits can be avoided and Husky dollars saved. Future research is needed to quantify the impact of SBHCs in greater New Haven.

**Access to referral services**

NSCH 2007 showed that around 80% of children in Connecticut, across race/ethnicity, had one or more preventative dental visits in the preceding 12 months. However, this unlikely represents the state of dental healthcare in greater New Haven as this local survey found that less than a third of practices and SBHC provide dental services on site. Furthermore, New Haven/West Haven has dental HPSA population designation and therefore has limited independent dental resources outside of the medical setting. Access to dental care in greater New Haven is likely a challenge that should be investigated further in future local studies.

Likewise, few practices and no SBHCs have a nutritionist on site. This is an exceptional challenge given that CARE found that one out of every two children in New Haven public schools was overweight or obese. Although primary care providers are likely addressing obesity prevention and management during routine medical visits, their time is already limited. Increasing access to nutritionists at practices and SBHCs should be a priority of local advocacy efforts.

**Delivery of high-quality healthcare services**

Patients are often able to get necessary blood work drawn on site at both practices and SBHCs. The availability of laboratory services is a convenience for patients and an asset to accessibility. However, there is room to improve trainings and handicap accessibility, especially at practices, as well as privacy at both practices and SBHCs in order to improve the quality of healthcare services delivered in greater New Haven.

Customer service, cultural competency, and trauma-informed care trainings for providers at practices are inadequate. The trainings are required at most of the larger, FQHCs and hospital-based primary care clinics but are not offered at the smaller, independent practices. Conversely,
the majority of trainings for providers at SBHCs are mandated, including trauma-informed care. Trauma-informed care is an approach to engaging people with histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role of trauma in everyday life. Trauma includes physical, sexual, and institutional abuse, neglect, intergenerational trauma, and disasters that induce powerlessness, fear, recurrent hopelessness, and a constant state of alert. The prevalence of trauma-informed care training in schools is in part due to the work of the New Haven Trauma Coalition which includes New Haven Public Schools, the City of New Haven, United Way BOOST!, and Clifford Beers Clinic. The Coalition screens children for stress; provides direct care to address PTSD, depression and behavioral problems; delivers care coordination to students and their families; and trains the school workforce in trauma. Expanding the trauma-informed care training to providers at practices is a logical next step.

There is room to improve handicap accessibility at practices; only 47.1% have an automatic door to the main entrance, and only 17.6% have a check-in counter at an appropriate height. Again many of the inadequacies occurred at the smaller, independent practices. Handicap accessibility at schools was almost always satisfactory due to greater enforcement of the Americans with Disabilities Act. This is unacceptable and should be a priority of local advocacy efforts.

Finally, drastic improvement in triage privacy is needed at both practices and SBHCs. At the overwhelming majority of sites, at least a patient’s name was overheard at check-in, and occasionally detailed private information, such as illness, symptoms, financial issues or insurance, was overheard. This is unacceptable and should be a priority of local advocacy efforts as a cornerstone of high quality healthcare service.

Workforce estimates

HRSA suggests using state licensure lists to enumerate primary care providers for their workforce calculations. However, this study demonstrates that the state licensing data grossly overestimates the pediatric workforce in greater New Haven. The outdated state licensure list includes many practitioners who have moved out of the area, specialized, retired, or cut back on their hours in primary care to teach or pursue other interests. Although this seems to be a universal issue with state licensing data, the problem may be compounded in New Haven and other locations with training hospitals due to the yearly influx and efflux of residents. HRSA also recommends using an adjustment factor to convert practice hours into patient care hours. However, this method overestimates part-time practitioners. It also does not take into account practices with flexible hours that my have one provider stay late one day of the week or offer Saturday hours.

Both the state licensing data and the HPSA calculations overlook the importance of midlevel providers (APRNs and PAs); the state licensing data does not distinguish midlevel specialty and the HPSA calculation does not include midlevels in any form. However, this study found that APRNs constitute 37.9% of the workforce. Furthermore, the SBHCs in greater New Haven are run by APRNs, provide 20.0% of all pediatric primary care, and provide 22.2% of the pediatric primary care for Medicaid patients.

Therefore, this study demonstrates the need for real-time workforce data that includes midlevel providers in order to provide accurate workforce estimates. A precise estimate is vitally
important to correctly identify primary care shortage areas. New Haven and West Haven currently have HPSA population designations due to high poverty rates, but they do not qualify for HPSA geographic designation as the population to provider FTE ratio is under the cutoff. This study confirms these findings. However, neither East Haven nor West Haven currently has a HPSA geographic designation, and this study finds that the ratios surpass the cutoff. The state licensing data may overestimate the workforce in these cities by counting practitioners that are not actually delivering primary care in the area. This study outlines an alternative method for estimating workforce. Although labor intensive, it is accurate, and identifies primary care shortage areas that are missed using HRSA suggested calculation methods.

**Strengths of study**

As a CBPR project, PCare4NHV engaged the community most affected by the research, particularly marginalized families with Husky insurance, to inform and design a project in line with their priorities. Additionally, PCare4NHV developed new partnerships between patients, community organizations, local healthcare providers, the city of New Haven, and the state of Connecticut. These relationships build a framework for population health that seeks to effectively match resources for primary care to community-defined needs. The outcome is a unique set of recommendations that reflects current challenges and future opportunities that can be used by stakeholders to guide local pediatric primary care delivery.

The participation rate was 95%. This may have been due to the perceived importance of the topic, visible support from well-respected community pediatricians, and/or in-person, on-site completion of the survey rather than relying on mail or email responses. In addition, because the survey was conducted in-person, any question clarifications could be verified with standard definitions rather than relying on individual interpretations of certain phrases. This limited information bias.

**Limitations of study**

Two pediatric practices refused to participate, one of which was located in West Haven where there was one MD and 2 APRNs, which may introduce a sample bias. However, if each of these providers worked 0.6 FTE, the average of the other providers in the study, the ratio of children to pediatricians would still be 5,414:1, well below the HPSA geographic threshold. This sensitivity analysis shows the HPSA designation conclusions would have been similar had they participated.

The sample size was small (n=36) which limits the power of statistical analysis. However, there are 130 incorporated places in the U.S. with a population size similar to New Haven (between 100,000 and 150,000). Therefore, the small sample size may be especially relevant to similar environments.

Given these providers were included in the parent project, the study did not include family medicine practitioners. This contributes to the limited sample size and may introduce another sample bias. However, the only practice in greater New Haven with family medicine
practitioners that see children is the York Street Campus Primary Care Center, which is also included in this study.

This is a cross-sectional study; primary care access and resources are a constantly changing landscape, and as such the data is only accurate for the moment at which it is collected.

Finally, though the in-person interview allowed for some clarification of responses, this data is self-reported and is therefore subject to recall and a social desirability bias. Since the socially desirable answer would be to accept Medicaid and provide various services, the availability of providers for the population with Medicaid and the services available may be less than what the data reflect.

Next steps

Consistent with the principles of CBPR, where research results must be disseminated to both the community from whence they came and those who are most capable of turning the results into action, the next phase of the project is to communicate the findings with relevant stakeholders so as to collectively discuss priorities for next steps. The results have been presented to the following groups: New Haven Healthy Start at the Community Foundation for Greater New Haven, Infant and Toddler committee meeting at the United Way of Greater New Haven, Clifford Beers and Trauma Coalition members, Help Me Grow breakfast of the Connecticut Office of Early Childhood, leadership of New Haven community pediatricians, Educating Practices in the Community staff of the Child Health and Development Institute of Connecticut, and leadership of New Haven’s City Transformation Plan (Appendix Community product- English and Spanish). The results have also been communicated to individual practices and SBHCs with a comparison of each site to its peers for quality improvement purposes. Finally, the data are published on a public, searchable database housed and maintained by Project Access-New Haven at http://pa-nh.org/resources/ (Appendix Searchable database).

In addition to numerous community strengths, PCare4NHv2 has clearly identified four local needs - increased access to nutritionists, improved mandatory trainings for providers at practices, enhanced patient privacy, and improved handicap accessibility at practices - which will be combined with priorities identified through discussions with stakeholders to create recommendations to guide local and state policy decisions on pediatric primary care delivery in greater New Haven.

Subsequent policy priorities of the project include communication of the East Haven and West Haven HPSA geographic findings to the appropriate agencies and dissemination of the improved workforce calculation methods. Additional research is needed on the state of local dental care access to better define barriers as well as the impact of SBHCs in greater New Haven.

This study mostly addressed access to pediatric primary care by defining the number of providers, acceptance of Husky, and provision of various services defined by the local community. A recurrent theme has made clear that access, despite insurance coverage, is modified by social determinants of health such as income and race/ethnicity. Moreover, comprehensive access to insurance and services does not guarantee that children will receive high-quality, safe, and effective care. Children will not fully realize the benefits of almost
universal coverage until quality is addressed. Access has been the focus of the health policy debate (along with cost) for several decades. Quality is still too often overlooked and should be a focus of future satisfaction and health outcomes research. If the policy community can build and maintain a firm, enduring commitment to both access and quality, then children may eventually get the healthcare system they need and deserve.
### Tables and Figures

#### Table 1: Practice insurance

<table>
<thead>
<tr>
<th></th>
<th>Practice (N=17, %)</th>
<th>SBHC (N=19, %)</th>
<th>Total (N=36, %)</th>
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<tr>
<td><strong>New patients</strong></td>
<td>17 (100)</td>
<td>19 (100)</td>
<td>36 (100)</td>
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<td><strong>Medicaid</strong></td>
<td>16 (94.1)</td>
<td>19 (100)</td>
<td>35 (97.2)</td>
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<td><strong>New Medicaid patients</strong></td>
<td>13 (76.5)</td>
<td>19 (100)</td>
<td>32 (88.9)</td>
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<td><strong>Sliding scale or free of charge</strong></td>
<td>9 (52.9)</td>
<td>14 (73.7)</td>
<td>23 (63.9)</td>
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#### Table 2: Percent practice panel with Medicaid insurance (N=17, %)

<table>
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<tr>
<th>Percent practice panel</th>
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<tbody>
<tr>
<td>&lt;= 25%</td>
<td>7 (41.2)</td>
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<tr>
<td>26 to 50%</td>
<td>2 (11.8)</td>
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<tr>
<td>51 to 74%</td>
<td>3 (17.6)</td>
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<td>&gt;= 75%</td>
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Map 1: Patient panel percent Medicaid
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<th>Practice (N=17, %)</th>
<th>SBHC (N=19, %)</th>
<th>Total (N=36, %)</th>
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<tr>
<td>Adult primary care</td>
<td>7 (41.2)</td>
<td>1 (5.3)</td>
<td>8 (22.2)</td>
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<td>Specialty mental healthcare</td>
<td>7 (41.2)</td>
<td>19 (100)</td>
<td>26 (72.2)</td>
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<td>Dental</td>
<td>5 (29.4)</td>
<td>6 (31.6)</td>
<td>11 (30.6)</td>
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<td>Lab work</td>
<td>9 (52.9)</td>
<td>16 (84.2)</td>
<td>25 (69.4)</td>
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<td>Radiology</td>
<td>3 (17.6)</td>
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<td>3 (8.3)</td>
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<td>Social work</td>
<td>5 (29.4)</td>
<td>18 (94.7)</td>
<td>23 (63.9)</td>
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<td>Care management</td>
<td>8 (47.1)</td>
<td>13 (68.4)</td>
<td>21 (58.3)</td>
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<td>Dispensing pharmacy</td>
<td>3 (17.6)</td>
<td>11 (57.9)</td>
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<td>Clinical pharmacist</td>
<td>4 (23.5)</td>
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<td>Complementary/alternative services</td>
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<td>Nutritionist</td>
<td>7 (41.2)</td>
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<td>10 (58.8)</td>
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<td>Home visits</td>
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<td>Lactation consultant</td>
<td>9 (52.9)</td>
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<td>OB/GYN care</td>
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<td>Same day visits</td>
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<td>19 (100)</td>
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<td>In hospital care</td>
<td>15 (88.2)</td>
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<td>15 (41.7)</td>
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<td>Appointment reminders</td>
<td>17 (100)</td>
<td>13 (68.4)</td>
<td>30 (83.3)</td>
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<td>Med samples</td>
<td>10 (58.8)</td>
<td>5 (26.3)</td>
<td>15 (41.7)</td>
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<td>Table 4: On-site services by practice panel % Medicaid</td>
<td>Mean practice panel % Medicaid of those who offer service</td>
<td>Mean practice panel % Medicaid of those who do NOT offer service</td>
<td>M test</td>
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<td>Adult primary care</td>
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<td>0.01</td>
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<td>&lt;0.01</td>
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<td>0.12</td>
</tr>
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<td>46.1</td>
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<td>36.0</td>
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</tr>
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<td>47.2</td>
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</tr>
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<td>43.4</td>
<td>0.31</td>
</tr>
<tr>
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<td>46.6</td>
<td>NA</td>
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</tr>
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<td>66.6</td>
<td>0.06</td>
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Map 2: On-site specialty mental healthcare services
Map 3: On-site dental services
Map 4: On-site social work services
Map 5: On-site care management services
Map 6: On-site nutritionist
<table>
<thead>
<tr>
<th>Table 5: Trainings</th>
<th>Practice (N=17, %)</th>
<th>SBHC (N=19, %)</th>
<th>Total (N=36, %)</th>
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<tr>
<td><strong>Customer service training for providers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandatory repeated</td>
<td>4 (23.5)</td>
<td>6 (31.6)</td>
<td>10 (27.8)</td>
</tr>
<tr>
<td>Mandatory once</td>
<td>3 (17.6)</td>
<td>5 (26.3)</td>
<td>8 (22.2)</td>
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<tr>
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<tr>
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<td>9 (52.9)</td>
<td>8 (42.2)</td>
<td>17 (47.2)</td>
</tr>
<tr>
<td><strong>Cultural competency training for providers</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mandatory repeated</td>
<td>7 (41.2)</td>
<td>13 (68.4)</td>
<td>20 (55.6)</td>
</tr>
<tr>
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<td>6 (31.6)</td>
<td>7 (19.4)</td>
</tr>
<tr>
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<td>2 (5.6)</td>
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<td>7 (19.4)</td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
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<td>2 (5.6)</td>
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<tr>
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<td>10 (58.8)</td>
<td>13 (36.1)</td>
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<tr>
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<td>11 (30.6)</td>
</tr>
<tr>
<td>Not offered</td>
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<td>2 (10.5)</td>
<td>10 (27.8)</td>
</tr>
<tr>
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<td></td>
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<td>6 (31.6)</td>
<td>15 (42.9)</td>
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<tr>
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<td>16 (45.7)</td>
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<td>0 (0)</td>
<td>0 (0)</td>
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<td>2 (10.5)</td>
<td>4 (11.4)</td>
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<td><strong>Cultural competency training for staff</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>5 (29.4)</td>
<td>12 (63.2)</td>
<td>17 (48.6)</td>
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<tr>
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<td>1 (5.9)</td>
<td>1 (5.3)</td>
<td>2 (5.7)</td>
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<td>1 (2.8)</td>
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<tr>
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<td>10 (58.8)</td>
<td>5 (26.3)</td>
<td>15 (42.9)</td>
</tr>
<tr>
<td><strong>Trauma informed care training for staff</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
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<td>0 (0)</td>
<td>3 (8.6)</td>
</tr>
<tr>
<td>Mandatory once</td>
<td>0 (0)</td>
<td>5 (26.3)</td>
<td>5 (14.3)</td>
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<tr>
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<td>1 (5.9)</td>
<td>7 (36.8)</td>
<td>8 (22.9)</td>
</tr>
<tr>
<td>Not offered</td>
<td>13 (76.5)</td>
<td>6 (31.6)</td>
<td>19 (54.3)</td>
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Map 7: Mandatory trauma informed care trainings for providers
### Table 6: Languages

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<tr>
<th></th>
<th>Practice (N=17, %)</th>
<th>SBHC (N=19, %)</th>
<th>Total (N=36, %)</th>
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</thead>
<tbody>
<tr>
<td>Spanish speaking providers</td>
<td>9 (52.9)</td>
<td>1 (5.3)</td>
<td>10 (27.8)</td>
</tr>
<tr>
<td>Spanish speaking staff</td>
<td>8 (47.1)</td>
<td>13 (68.4)</td>
<td>21 (58.3)</td>
</tr>
<tr>
<td>On-site interpreting services</td>
<td>5 (29.4)</td>
<td>1 (5.3)</td>
<td>6 (16.7)</td>
</tr>
<tr>
<td>Interpreter available by phone</td>
<td>13 (76.5)</td>
<td>19 (100)</td>
<td>32 (88.9)</td>
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</table>

### Table 7: Languages by practice panel % Medicaid

<table>
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<tr>
<th></th>
<th>Mean practice panel % Medicaid of those who offer service</th>
<th>Mean practice panel % Medicaid of those who do NOT offer service</th>
<th>M test</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spanish speaking providers</td>
<td>58.3</td>
<td>34.9</td>
<td>0.05</td>
</tr>
<tr>
<td>Spanish speaking staff</td>
<td>65.4</td>
<td>24.7</td>
<td>0.11</td>
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<tr>
<td>On-site interpreting services</td>
<td>60.8</td>
<td>43.5</td>
<td>0.34</td>
</tr>
<tr>
<td>Interpreter available by phone</td>
<td>54.7</td>
<td>28.9</td>
<td>0.19</td>
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</table>
Map 8: Spanish-speaking providers
<table>
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<th>Table 8: Practice innovation</th>
<th>Practice (N=17, %)</th>
<th>SBHC (N=19, %)</th>
<th>Total (N=36, %)</th>
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</thead>
<tbody>
<tr>
<td>EMR, Epic</td>
<td>6 (35.3)</td>
<td>11 (57.8)</td>
<td>17 (47.2)</td>
</tr>
<tr>
<td>EMR, other</td>
<td>7 (41.2)</td>
<td>8 (42.1)</td>
<td>15 (41.7)</td>
</tr>
<tr>
<td>If not Epic, access to Epic</td>
<td>11/11 (100)</td>
<td>5/8 (62.5)</td>
<td>16/19 (84.2)</td>
</tr>
<tr>
<td>Written clinical summary</td>
<td>11 (64.7)</td>
<td>12 (63.2)</td>
<td>23 (63.9)</td>
</tr>
<tr>
<td>Online patient portal</td>
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<td>1 (5.3)</td>
<td>7 (19.4)</td>
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<td>PCMH</td>
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<td>7 (19.4)</td>
</tr>
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<td>If not PCMH, seeking PCMH designation</td>
<td>5/10 (50.0)</td>
<td>0/19 (0)</td>
<td>5/29 (17.2)</td>
</tr>
<tr>
<td>Orientation</td>
<td>11 (64.7)</td>
<td>18 (94.7)</td>
<td>29 (80.6)</td>
</tr>
<tr>
<td>Photo ID</td>
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<td>1 (5.3)</td>
<td>10 (27.8)</td>
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<tr>
<td>Affiliated with an organization</td>
<td>7 (41.2)</td>
<td>19 (100)</td>
<td>26 (72.2)</td>
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<td>Participate in CIRTS</td>
<td>17 (100)</td>
<td>16 (84.2)</td>
<td>33 (91.7)</td>
</tr>
<tr>
<td>Policy to fill out forms in &lt;2 weeks</td>
<td>17 (100)</td>
<td>18 (94.7)</td>
<td>35 (97.2)</td>
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<tr>
<td>Policy to authorize disclosure to non-parent/guardian caregivers</td>
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<td>14 (73.7)</td>
<td>28 (77.8)</td>
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<tr>
<td>Table 9: Physical characteristics</td>
<td>Practice (N=17, %)</td>
<td>SBHC (N=19, %)</td>
<td>Total (N=36, %)</td>
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<tr>
<td>----------------------------------</td>
<td>------------------</td>
<td>---------------</td>
<td>----------------</td>
</tr>
<tr>
<td>Parking in garage or lot</td>
<td>16 (94.1)</td>
<td>19 (100)</td>
<td>35 (97.2)</td>
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<tr>
<td>Free parking</td>
<td>15 (88.2)</td>
<td>19 (100)</td>
<td>34 (94.4)</td>
</tr>
<tr>
<td>Streets clean of litter</td>
<td>5 (29.4)</td>
<td>6 (31.6)</td>
<td>11 (30.6)</td>
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<tr>
<td>Sidewalks without cracks</td>
<td>3 (17.6)</td>
<td>9 (47.4)</td>
<td>12 (33.3)</td>
</tr>
<tr>
<td>Exterior building clean and fresh</td>
<td>7 (41.2)</td>
<td>14 (73.7)</td>
<td>21 (58.3)</td>
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<tr>
<td>Curb cuts in front of main entrance</td>
<td>17 (100)</td>
<td>19 (100)</td>
<td>36 (100)</td>
</tr>
<tr>
<td>Automatic door to main entrance</td>
<td>8 (47.1)</td>
<td>14 (73.7)</td>
<td>22 (61.1)</td>
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<td>Wheelchair accessible main entrance</td>
<td>7 (41.2)</td>
<td>11 (57.9)</td>
<td>18 (50.0)</td>
</tr>
<tr>
<td>Privacy at triage</td>
<td>4 (23.5)</td>
<td>2 (10.5)</td>
<td>6 (16.7)</td>
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<tr>
<td>Separate sick and well waiting rooms</td>
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<td>7 (19.4)</td>
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<tr>
<td>Television on in waiting room</td>
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<td>0 (0)</td>
<td>4 (11.1)</td>
</tr>
<tr>
<td>Signs in waiting room in English and Spanish</td>
<td>7 (41.2)</td>
<td>4 (21.1)</td>
<td>11 (30.6)</td>
</tr>
<tr>
<td>Reading material in waiting room in English and Spanish</td>
<td>7 (41.2)</td>
<td>4 (21.1)</td>
<td>11 (30.6)</td>
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<tr>
<td>Floors in waiting room clean</td>
<td>3 (17.6)</td>
<td>2 (10.5)</td>
<td>5 (13.9)</td>
</tr>
<tr>
<td>Furniture and toys in waiting room clean</td>
<td>6 (35.3)</td>
<td>1 (5.3)</td>
<td>7 (19.4)</td>
</tr>
<tr>
<td>Walls in waiting room clean</td>
<td>6 (35.3)</td>
<td>0 (0)</td>
<td>6 (16.7)</td>
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<tr>
<td>Wheelchair accessible bathroom</td>
<td>13 (76.5)</td>
<td>19 (100)</td>
<td>32 (88.9)</td>
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<td>Adequate space for wheelchair in waiting room</td>
<td>17 (100)</td>
<td>19 (100)</td>
<td>36 (100)</td>
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<tr>
<td>Appropriate counter height for wheelchair accessibility at check in</td>
<td>3 (17.6)</td>
<td>13 (68.4)</td>
<td>16 (44.4)</td>
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<td>Diaper changing station available</td>
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<td>Lactation room available</td>
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### Table 10: Practices and practitioners

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<th>City</th>
<th>Number of Practices</th>
<th>Number of SBHCs</th>
<th>MD and DO</th>
<th>PA</th>
<th>APRN</th>
<th>Residents</th>
<th>Total providers</th>
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<td>2</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>4</td>
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<tr>
<td>Hamden</td>
<td>4</td>
<td>2</td>
<td>20</td>
<td>2</td>
<td>8</td>
<td>0</td>
<td>30</td>
</tr>
<tr>
<td>New Haven</td>
<td>9</td>
<td>16</td>
<td>27 *</td>
<td>2</td>
<td>35</td>
<td>17 $</td>
<td>81</td>
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<tr>
<td>North Haven</td>
<td>2</td>
<td>0</td>
<td>8</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>11</td>
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<tr>
<td>West Haven</td>
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<td>0</td>
<td>1 +</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>17</strong></td>
<td><strong>19</strong></td>
<td><strong>57</strong></td>
<td><strong>3</strong></td>
<td><strong>47</strong></td>
<td><strong>17</strong></td>
<td><strong>124</strong>**</td>
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</tbody>
</table>

+ 1 MD overlap  
* 1 PA overlap  
^ 1 APRN overlap 
$ At any one time, there are 10 residents at York Street Campus Primary Care Center, 5 at Saint Rafael Campus Primary Care Center, and 2 in the adolescent clinic.  
** Total adjusted for overlapping providers

### Table 11: FTE estimates

<table>
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<th></th>
<th>East Haven</th>
<th>Hamden</th>
<th>New Haven</th>
<th>North Haven</th>
<th>West Haven</th>
<th>Total</th>
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<td><strong>MD/DO FTE total</strong></td>
<td>1.6</td>
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<td>16.1</td>
<td>6.1</td>
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<td>16.3</td>
<td>0.0</td>
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<td>16.3</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td>3.5</td>
<td>21.1</td>
<td>43.2</td>
<td>9.1</td>
<td>0.4</td>
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<td><strong>% Medicaid x Total FTE</strong></td>
<td>2.2</td>
<td>7.3</td>
<td>39.4</td>
<td>1.7</td>
<td>0.3</td>
<td>50.7</td>
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</tr>
<tr>
<td>% Black*</td>
<td>34.5%</td>
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<td>2.8%</td>
<td>18.8%</td>
<td>19.2%</td>
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<tr>
<td>% Hispanic*</td>
<td>25.8%</td>
<td>10.0%</td>
<td>4.1%</td>
<td>8.8%</td>
<td>14.0%</td>
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</tr>
<tr>
<td>% population &lt;200% FPL#</td>
<td>45.1%</td>
<td>20.6%</td>
<td>11.7%</td>
<td>17.1%</td>
<td>29.1%</td>
<td></td>
</tr>
<tr>
<td>% all people &lt;FPL*</td>
<td>26.4%</td>
<td>9.9%</td>
<td>4.0%</td>
<td>8.4%</td>
<td>13.2%</td>
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<tr>
<td>% families with children &lt;FPL*</td>
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</tr>
<tr>
<td>% children uninsured*</td>
<td>5.9%</td>
<td>3.90%</td>
<td>3.90%</td>
<td>5.1%</td>
<td>2.50%</td>
<td></td>
</tr>
<tr>
<td>Birth rate (per 1,000 women age 15-50)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Infant Mortality Rate (per 1000 live births)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Population Count</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total population*</td>
<td>300,584</td>
<td>130,553</td>
<td>29,139</td>
<td>23,997</td>
<td>61,605</td>
<td>55,290</td>
</tr>
<tr>
<td>Total pediatric population (under 18 years)*</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>% pediatric population</td>
<td>22.0%</td>
<td>19.9%</td>
<td>19.9%</td>
<td>18.9%</td>
<td>21.5%</td>
<td></td>
</tr>
<tr>
<td>Total Husky A Enrollment (2009)*</td>
<td>26.199</td>
<td>19.199</td>
<td>1,054</td>
<td>502</td>
<td>2,388</td>
<td>3,045</td>
</tr>
<tr>
<td>Total Husky B Enrollment (2009)</td>
<td>1,211</td>
<td>424</td>
<td>188</td>
<td>67</td>
<td>208</td>
<td>594</td>
</tr>
<tr>
<td>% Husky A-*</td>
<td>68.3%</td>
<td>22.1%</td>
<td>11.9%</td>
<td>22.3%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Care Providers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># M/D/DO</td>
<td>57*</td>
<td>27</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>M/D/DO total FTE</td>
<td>38.6</td>
<td>16.1</td>
<td>1.6</td>
<td>0.1</td>
<td>14.4</td>
<td>0.7</td>
</tr>
<tr>
<td>% accepting Medicaid</td>
<td>89.5%</td>
<td>81.5%</td>
<td>100.0%</td>
<td>100.0%</td>
<td>98.0%</td>
<td>100.0%</td>
</tr>
<tr>
<td>M/D/DO total FTE accepting Medicaid</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># residents</td>
<td>1.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Resident total FTE**</td>
<td>1.7</td>
<td>1.7</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>% practices accepting sliding scale</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary Care HPSA Calculations</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td># M/D/DO + resident</td>
<td>58.7</td>
<td>78.7</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>M/D/DO + residents total FTE</td>
<td>40.3</td>
<td>17.8</td>
<td>1.6</td>
<td>0.1</td>
<td>14.4</td>
<td>0.7</td>
</tr>
<tr>
<td>Pediatric population to provider ratio</td>
<td>1,207</td>
<td>1,014</td>
<td>55%</td>
<td>763</td>
<td>810</td>
<td>2,777</td>
</tr>
<tr>
<td>Medicaid population to provider ratio</td>
<td>680</td>
<td>1,102</td>
<td>783</td>
<td>93</td>
<td>310</td>
<td>4,425</td>
</tr>
<tr>
<td>Medicaid population to provider ratio adjusted for % Medicaid panel</td>
<td>1,958</td>
<td>2,886</td>
<td>1,253</td>
<td>517</td>
<td>541</td>
<td>11,853</td>
</tr>
<tr>
<td>Average travel time to contiguous resource***</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*1 M/D worked in both New Haven and West Haven
**0.1 FTE per resident slot
#Family Well-Being Estimates for All Connecticut Cities and Towns 2006-2013

Table 12: HPSA estimates
Table 13: Licensing file comparison

<table>
<thead>
<tr>
<th>License File Data</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>678</td>
<td>338</td>
<td>37</td>
<td>76</td>
<td>182</td>
<td>45</td>
</tr>
<tr>
<td>Total MD/DO</td>
<td>156</td>
<td>106</td>
<td>2</td>
<td>9</td>
<td>35</td>
<td>4</td>
</tr>
<tr>
<td>Total APRN*</td>
<td>345</td>
<td>163</td>
<td>22</td>
<td>40</td>
<td>89</td>
<td>31</td>
</tr>
<tr>
<td>Total PA *</td>
<td>177</td>
<td>69</td>
<td>13</td>
<td>27</td>
<td>58</td>
<td>10</td>
</tr>
</tbody>
</table>

* No specialty designation

<table>
<thead>
<tr>
<th>Field Collected Data</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>107</td>
<td>64</td>
<td>4</td>
<td>11</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Total MD/DO*</td>
<td>57</td>
<td>27</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Total APRN*</td>
<td>47</td>
<td>35</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total PA *</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

*1 overlap each

<table>
<thead>
<tr>
<th>Licensing File Accuracy</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>534%</td>
<td>428%</td>
<td>825%</td>
<td>591%</td>
<td>507%</td>
<td>4400%</td>
</tr>
<tr>
<td>Total MD/DO</td>
<td>174%</td>
<td>293%</td>
<td>0%</td>
<td>13%</td>
<td>75%</td>
<td>300%</td>
</tr>
<tr>
<td>Total APRN</td>
<td>634%</td>
<td>366%</td>
<td>1000%</td>
<td>1233%</td>
<td>1013%</td>
<td>N/A</td>
</tr>
<tr>
<td>Total PA</td>
<td>5800%</td>
<td>3350%</td>
<td>N/A</td>
<td>N/A</td>
<td>2800%</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Table 14: Real FTE analysis

<table>
<thead>
<tr>
<th>Total Provider Counts</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>107</td>
<td>64</td>
<td>4</td>
<td>11</td>
<td>30</td>
<td>1</td>
</tr>
<tr>
<td>Total MD/DO*</td>
<td>57</td>
<td>27</td>
<td>2</td>
<td>8</td>
<td>20</td>
<td>1</td>
</tr>
<tr>
<td>Total APRN*</td>
<td>47</td>
<td>35</td>
<td>2</td>
<td>3</td>
<td>8</td>
<td>0</td>
</tr>
<tr>
<td>Total PA *</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>0</td>
</tr>
</tbody>
</table>

*one overlap each

<table>
<thead>
<tr>
<th>Total FTE Counts</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>79.79</td>
<td>45.13</td>
<td>3.40</td>
<td>9.79</td>
<td>21.09</td>
<td>0.38</td>
</tr>
<tr>
<td>Total MD/DO</td>
<td>41.24</td>
<td>17.84</td>
<td>1.70</td>
<td>6.41</td>
<td>14.91</td>
<td>0.38</td>
</tr>
<tr>
<td>Total APRN</td>
<td>36.80</td>
<td>26.04</td>
<td>1.70</td>
<td>3.38</td>
<td>5.68</td>
<td>0.00</td>
</tr>
<tr>
<td>Total PA</td>
<td>1.75</td>
<td>1.25</td>
<td>0.00</td>
<td>0.00</td>
<td>0.50</td>
<td>0.00</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Total Count overestimation</th>
<th>Total</th>
<th>New Haven</th>
<th>East Haven</th>
<th>North Haven</th>
<th>Hamden</th>
<th>West Haven</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Providers</td>
<td>34%</td>
<td>42%</td>
<td>18%</td>
<td>12%</td>
<td>42%</td>
<td>163%</td>
</tr>
<tr>
<td>Total MD/DO</td>
<td>38%</td>
<td>51%</td>
<td>18%</td>
<td>25%</td>
<td>34%</td>
<td>163%</td>
</tr>
<tr>
<td>Total APRN</td>
<td>28%</td>
<td>34%</td>
<td>18%</td>
<td>-11%</td>
<td>41%</td>
<td>N/A</td>
</tr>
<tr>
<td>Total PA</td>
<td>71%</td>
<td>60%</td>
<td>N/A</td>
<td>N/A</td>
<td>300%</td>
<td>N/A</td>
</tr>
<tr>
<td>Average overestimation</td>
<td>43%</td>
<td>47%</td>
<td>18%</td>
<td>9%</td>
<td>104%</td>
<td>163%</td>
</tr>
</tbody>
</table>
References


3. Israel BA, Coombe CM, Cheezum RR, et al. Community-based participatory research: a capacity-building approach for policy advocacy aimed at eliminating health disparities. (1541-0048 (Electronic)).


13. Dick AW, Brach C, Allison R, et al. SCHIP’s impact in three states: how do the most vulnerable children fare? (0278-2715 (Print)).


40. Wade TJ, Guo JJ. Linking improvements in health-related quality of life to reductions in Medicaid costs among students who use school-based health centers. (1541-0048 (Electronic)).
44. Juszczak L, Melinkovich P, Kaplan D, Kaplan D. Use of health and mental health services by adolescents across multiple delivery sites. (1054-139X (Print)).
45. Kaplan DW, Calonge B, Guernsey BP, Hanrahan MB. Managed care and school-based health centers. Use of health services. (1072-4710 (Print)).
47. Kaplan DW, Phibbs SL, Melinkovich P, Naylor K, Ahlstrand K. A comparison study of an elementary school-based health center: effects on health care access and use. (1072-4710 (Print)).
49. Webber MP, Carpiniello K, Oruwariye T, Lo Y, Burton WB, Appel DK. Burden of asthma in inner-city elementary schoolchildren: do school-based health centers make a difference? (1072-4710 (Print)).


Appendices are attached in the following order:

Pediatric data collection tool
Information sheet
Consent
Interview guide
Site map
Community product- English and Spanish
Searchable database
Practice ID # ________________

Pediatric Medical Practice: Interview Data Collection Tool

1. Which of the following types of services are available on site at this practice?

   a. Adult Primary Care
   b. Specialty mental health care
   c. Dental
   d. Lab work
   e. Radiology
   f. Social work services
   g. Care management services
   h. Dispensing pharmacy
   i. Clinical pharmacist
   j. Complementary and alternative medicine services
   k. Nutritionist
   l. Group visits
   m. Educational space
   n. Home visits
   o. Lactation consultant
   p. OB/GYN care
   q. Same-day visits
   r. In-hospital care
s. Appointment reminders  
   □ Yes  □ No

t. Medication samples  
   □ Yes  □ No

2. Which of the following types of trainings are offered for this practice’s **primary care providers**?

<table>
<thead>
<tr>
<th>Type of training</th>
<th>Mandatory, repeated occurrence (e.g. annually)</th>
<th>Mandatory, once</th>
<th>Optional</th>
<th>Not offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Customer service</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. Cultural competency</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. Trauma-informed care</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>

3. Which of the following types of trainings are offered for this practice’s **staff**?

<table>
<thead>
<tr>
<th>Type of training</th>
<th>Mandatory, repeated occurrence (e.g. annually)</th>
<th>Mandatory, once</th>
<th>Optional</th>
<th>Not offered</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Customer service</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>b. Cultural competency</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>c. Trauma-informed care</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
4. a. Does this practice have bilingual primary care providers?  □ Yes  □ No

   If no, skip to question 5

   b. If so, what languages?  □ Spanish  □ Others ________

5. a. Does this practice have bilingual staff?  □ Yes  □ No

   If no, skip to question 6

   b. If so, what languages?  □ Spanish  □ Others ________

6. Does this practice office provide interpreter services?

   a. On site in person  □ Yes  □ No

   If no, skip to question 6c

   b. If so, what languages?  □ Spanish  □ Others ________

   c. By phone  □ Yes  □ No

7. How many pediatric patients does this practice serve?

   □ < 2,500
   □ 2,500 – 4,999
   □ 5,000 – 9,999
   □ 10,000 +
8. Does this practice accept new pediatric patients? □ Yes □ No

9. a. Does this practice accept Medicaid insurance? □ Yes □ No

*If no, skip to question 10*

b. Does this practice accept **new** pediatric patients with Medicaid insurance? □ Yes □ No

c. What percentage of the current pediatric practice panel has Medicaid insurance?

□ 0 – 5%
□ 5% – 25%
□ > 25%

10. a. Does this practice see patients on a sliding fee scale or free-of-charge basis? □ Yes □ No

*If no, skip to question 11*

b. What percentage of the current practice panel is on sliding fee scale or free-of-charge basis?

□ 0 – 5%
□ 5% – 25%
□ > 25%
11. For each primary care provider working in this practice, how many bookable hours of pediatric primary care do they provide each week at this location? Do they accept Medicaid?

*Sample Table: Workforce assessment [Pre-populated with data we have gathered from existing workforce lists and attribution, etc. We will ask each practice to confirm staffing list and then enter hours per week for each provider]*

<table>
<thead>
<tr>
<th>First Name</th>
<th>Last Name</th>
<th>Provider Type</th>
<th>Specialty Designation</th>
<th>Bookable hours of pediatric primary care per week @ this location</th>
<th>Accepts Medicaid? Yes / No</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>FTE equivalent residents</em></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

12. For each day of the week, what are this practice’s hours?

<table>
<thead>
<tr>
<th></th>
<th>Mon</th>
<th>Tue</th>
<th>Wed</th>
<th>Thu</th>
<th>Fri</th>
<th>Sat</th>
<th>Sun</th>
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</thead>
<tbody>
<tr>
<td>Open time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>First appointment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last appointment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Close time</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
13. During office hours, how are patient calls with medical questions triaged?

☐ Direct line to clinical provider (any level)

☐ Live person (non-clinical) takes message, clinical provider calls back

☐ Voicemail/message, patient leaves message, clinical provider calls back

☐ Other ______________________________

14. After office hours, how are patient calls with medical questions triaged?

☐ Direct line to clinical provider (any level)

☐ Live person (non-clinical) takes message, clinical provider calls back

☐ Voicemail/message, patient leaves message, clinical provider calls back

☐ Outgoing message only, no clinical provider call back

☐ Other ______________________________

15. a. Does this practice use an electronic medical record?

☐ EPIC

☐ Other

☐ None

b. If not EPIC, do your primary care providers have access to EPIC? ☐ Yes ☐ No
16. Does this practice provide a written clinical summary, which includes a problem list, vital signs, medication list, new orders and follow up care plan, for patients upon completion of office visits? □ Yes □ No

17. Does this practice have an online access portal for patients to access their own health records? □ Yes □ No

18. a. Is this practice a designated Patient Centered Medical Home? □ Yes □ No

   If no, skip to question 18f

   If yes, by what organization(s)?

   b. NCQA □ Yes □ No

   c. JCAHO □ Yes □ No

   d. State of Connecticut Department of Social Services □ Yes □ No

   e. Other ________________________________

   f. If no, is this practice in the process of obtaining PCMH designation? □ Yes □ No

19. a. Does this practice have a new patient orientation process? □ Yes □ No

   If no, skip to question 20

   If yes, what does it consist of?

   b. Printed materials □ Yes □ No

   c. In person education session □ Yes □ No
d. Tour of facilities

20. Does this practice require photo ID for patients to obtain care here?

21. a. Is this practice affiliated with another organization?

   If no, skip to question 21c

   b. If yes, with what organization? ________________________________

   c. Are you currently seeking to establish an affiliation with another organization?

22. Does this practice participate in CIRTS?

23. a. Does this practice have a policy to fill out camp/daycare/sport physical exam forms?

   b. If so, how long does it take?

      □ Less than 2 weeks

      □ 2 weeks or more

24. Does your practice have a policy to authorize disclosure of health information to non-parent/guardian caregivers?
25. Who helped in the completion of this survey?

a. Office/practice manager
b. Medical director
c. Nursing director
d. Primary care provider
e. Other ____________________________

☐ Yes   ☐ No
☐ Yes   ☐ No
☐ Yes   ☐ No
☐ Yes   ☐ No

__________________________

__________________________
Practice ID # __________________

Medical Practice: Physical Assessment Data Collection Tool

Exterior

Parking

1. On-site parking
   - garage or parking lot
   - street only
   - none

2. Cost of parking
   - Free to patient
   - Not free to patient

Cleanliness

3. Streets
   - streets are clean
   - streets are fairly tidy, with minimal litter
   - streets are dirty, with much litter

4. Sidewalks
   - no cracks
   - some mild cracks
   - lots of cracks and/or uneven pavement
5. Building
   - exterior is very clean, fresh looking
   - exterior is fairly clean, some stains
   - exterior is dirty and/or graffiti on walls

Disability Access

6. Curb cuts
   - curb cuts in front of main entrance
   - no curb cuts in front of main entrance

7. Automatic door
   - automatic, handicap/stroller accessible door to main entrance
   - no automatic, handicap/stroller accessible door to main entrance

8. Stairs
   - zero stairs to main entrance or ramp accessible main entrance
   - stairs to main entrance
**Interior Privacy**

9. Triage observation (observe one check-in while sitting in nearest available seat to the triage/check-in area)
   - heard nothing private
   - heard some private information (name)
   - heard detailed private information (illness, symptoms, money issues, insurance)

**Overall Waiting Room Space**

10. Separate waiting rooms
   - separate waiting rooms, clearly identified, for sick and well patients
   - no separate waiting rooms for sick and well patients

11. a. Television on/off
   - television turned on in the waiting room
   - television turned off or no television in the waiting room

   b. If on, program content: (open response) __________________________

**Language**

12. Signage in waiting room/lobby
   - signs and information in languages other than English
   - English-only signs and information

13. Reading materials (e.g. patient information booklets, magazines)
   - reading materials in languages other than English
   - English-only reading materials
Cleanliness

14. Floor

- clean with no litter/particles, no stains/scuffs, and undamaged
- mostly clear of litter/particles, minimal stains/scuffs, and/or mild damage (e.g. broken tiles, tears in carpet)
- dirty, major stains/scuffs, and/or major damage

15. Furniture and toys

- clean, no stains, and undamaged
- mostly clean, minimal stains, and/or mild damage
- dirty, major stains, and/or major damage

16. Walls

- clean, no scuffs, and undamaged
- mostly clean, minimal scuffs, and/or mild damage
- dirty, major scuffs, and/or major damage

Disability & Infant Access

17. Handicap bathroom

- Handicap accessible bathroom near the waiting area or lobby
- No handicap accessible bathroom near the waiting area or lobby

18. Wheelchair/stroller space in the waiting room

- adequate space for a wheelchair/stroller to maneuver (4 ft x 4 ft space)
- inadequate space for a wheelchair/stroller to maneuver (< 4 ft x 4 ft space)
19. Counter height at triage/check in
   - appropriate height for wheelchair-bound patient (≤36 inches)
   - inappropriate height for wheelchair-bound patient (>36 inches)

20. Diaper changing station
   - available in bathroom near the waiting area or lobby
   - not available in bathroom near the waiting area or lobby

21. Lactation room
   - available near the waiting area or lobby
   - not available near the waiting area or lobby
PCare4NHV: Primary Care for New Haven, Pediatric Expansion

Objectives
PCare4NHV is a community-informed, patient-centered, scientifically rigorous approach to determine primary care assets and needs in greater New Haven. The first phase of PCare4NHV completed in 2013 focused on adults with Medicaid. This second phase aims to identify, enumerate, and characterize medical practices delivering primary care to children (age less than 18) within the greater New Haven area.

Community-Wide Engagement
Many factors including health insurance expansion by the Affordable Care Act, the merger of Yale-New Haven Hospital and Saint Raphael Hospital, and the City of New Haven’s focus on community health created an impetus to develop solutions to primary care access problems. To explore these issues, we met with over 100 stakeholders representing community-based organizations serving vulnerable populations, healthcare providers, and city and state government. Together we identified key stakeholders to form the PCare4NHV Primary Care Advisory Team that provides ongoing project guidance. We also partnered with 5 community organizations and performed facilitated discussions with their members about experiences accessing primary care. These discussions led to the creation of our data collection tool that we have now modified, under the guidance of community and provider stakeholders, to survey pediatric practices. These partnerships and discussions ensure that the community defines how we measure primary care resources in New Haven.

Methods of Data Collection
Data will be collected through on-site visits including an in-person interview of a practice representative as well as a physical assessment. The 46- question data collection tool addresses basic information regarding practice organization and physical characteristics as well as information concerning care delivery (e.g. axillary services and policies). Representatives from the 30 pediatric practices identified from licensing and referral data will have the option of 1) not participating, 2) participating and releasing identifiable practice-level data publically, or 3) participating and not authorizing public release of practice-level data. Representatives will have the ability to not answer any questions they do not wish to answer. The unit of analysis is the medical practice; we will not be gathering individual subjects’ data.

What We Will Deliver
- A set of community-defined, patient-centered measures of pediatric primary care access
- A detailed inventory of the current pediatric primary care workforce and resources
- A set of recommendations reflecting current challenges and future opportunities that can be used by stakeholders to guide pediatric primary care delivery

Implications for the New Haven Community
This project has developed new partnerships between patients, community organizations, local healthcare providers, the City of New Haven, and the State of Connecticut. These relationships build a framework for population health that seeks to effectively match resources for primary care to community-defined needs.

Timeline
July- Aug 2014: Begin on-site visits to pediatric practices
Winter 2015: Report inventory to community and stakeholders
Spring 2015: Develop and disseminate recommendations

Contact: Meredith Camp Binford, MHS
PCare4NHV Research Assistant
MD Candidate 2016, Yale School of Medicine
678-761-4964
meredith.binford@yale.edu
pcare4NHV@gmail.com
twitter: @PCare4NHV
http://pcare4nhv.wordpress.com/
CONSENT FOR PARTICIPATION IN A RESEARCH PROJECT
YALE UNIVERSITY SCHOOL OF MEDICINE – YALE-NEW HAVEN HOSPITAL

Study Title: Primary Care for New Haven (PCare4NHV)
Principal Investigator: Ilse R. Wiechers, MD, MPP, MHS
Funding Source: Robert Wood Johnson Foundation Clinical Scholars Program, Yale Center for Clinical Investigation, Yale School of Medicine, and the Veterans Administration

Invitation to Participate and Description of Project
Your practice is invited to participate in a research study designed to understand and characterize primary care practices in greater New Haven with the goal of identifying opportunities for improving primary care access and delivery for patients with Medicaid.

In order to decide whether or not your practice wishes to be a part of this research study, your practice should know enough about its risks and benefits to make an informed judgment. This consent form gives your practice detailed information about the research study, which a member of the research team will discuss with you. This discussion should go over all aspects of this research: its purpose, the procedures that will be performed, any risks of the procedures, and possible benefits. Once you understand the study, you will be asked if your practice wishes to participate; if so, you will be asked to sign this form.

This community-informed and patient-centered research project is the result of a collaborative effort involving over 150 interested stakeholders (including community-based organizations serving vulnerable populations, health care providers, the City of New Haven, and the State of Connecticut) who have expressed a desire to better understand and characterize primary care access and assets in the greater New Haven area.

This study consists of a primary care practice survey which addresses basic information regarding practice location and physical characteristics, as well as information concerning actual care delivery (e.g. number and types of providers, availability of after-hours care, etc). The results of this survey will be used to create a detailed inventory of current primary care workforce and resources in greater New Haven. This will inform future city and state policies to expand primary care access for patients with Medicaid.

This study does not involve collection of patient data. However, this study does involve the collection of information, which identifies practices. We plan to use the results of this study to characterize and compare primary care practices in the greater New Haven area. The results of this study may be disseminated in academic journals, community reports, policy briefs, and other media.

In order to decide whether or not you wish to be a part of this research study you should know enough about its risks and benefits to make an informed decision. This consent form gives you detailed information about the research study, which a member of the research team will discuss with you. This discussion should go over all aspects of this research: its purpose, the procedures that will be performed, any risks of the procedures, possible benefits. Once you understand the study, you will be asked if you wish to participate; if so, you will be asked to sign this form.
Description of Procedures

If your practice agrees to participate, a member of our research team will conduct a survey (either in-person and/or over telephone) and an on-site assessment of your physical practice.

Your practice will be asked to identify one or more individuals who are most appropriate to answer questions regarding your practice characteristics and aspects of primary care delivery. Your answers to our survey questions will be recorded on our survey form and then transcribed into a digital database.

Following completion of our study, we will contact your practice again for dissemination of our results, which are expected to include survey results for all primary care practices in the greater New Haven area. We will provide you with your own results and how they compare with aggregate data from all practices that have participated in greater New Haven. Practices who agree to be identified for the purposes of this survey will be identified accordingly in our survey results. Practices who do not agree to be identified for the purposes of this study will remain de-identified in dissemination of any survey results.

Risks and Inconveniences

There are no known risks for your practice associated with participation in this survey. Additionally, there are no known risks for your practice associated with dissemination of de-identified survey data collected from this study.

Dissemination of identified survey data from your practice may have associated risk, including potential financial and/or reputational harm. However, we believe these risks to be minimal given the purpose and intent of this study. The practice-level data elements collected will not include any trade secrets, private business practice or financial information, or data not potentially available to the public through other means.

Benefits

The results of this study may benefit your practice by assisting your practice in understanding how its primary care assets and delivery compare with other primary care practices in the greater New Haven area. These results may aid your practice in recognizing areas of both strength and weakness. Additionally, your practice may indirectly benefit from participation in this study from potential future health policy reform aimed at increasing primary care access for patients with Medicaid.

Economic Considerations

There will be no cost for your practice associated with participation in this study.

Confidentiality

Data from practices who agree to participate in this study will be maintained in secure computer files requiring a password for access. Only the primary investigator and research staff will have access to these files. Representatives from the Yale Human Research Protection Program, the Yale Human Investigation Committee (the committee that reviews, approves, and monitors research on human
subjects) may inspect study records during internal auditing procedures. However, these individuals are required to keep all information confidential.

Should you agree to participate and agree to disclose your practice identity for the purposes of dissemination of our study results, then the data collected from your practice in this study will not be confidential.

Should you agree to participate but do not wish to disclose your practice identity for the purposes of dissemination of our study results, then the data collected from your practice in this study will remain confidential, and will be disclosed only with your permission or as required by U.S. or State law. Examples of information that we are legally required to disclose include abuse of a child or elderly person, or certain reportable diseases.

Voluntary Participation and Withdrawal

Participating in this study is voluntary. Your practice is free to choose not to take part in this study. Refusing to participate will involve no penalty or loss of benefits to which you are otherwise entitled (such as your health care outside the study, the payment for your health care, and your health care benefits).

Should your practice choose to participate in our study, your practice is free to choose to decline disclosure of your practice identity for the purposes of dissemination of our study results.

Should your practice choose to participate in our study, your practice is free to choose to disclose your practice identity for the purposes of dissemination of our study results.

If your practice chooses not to participate, or if your practice chooses to participate but declines to disclose your practice identity, or if your practice withdraws from this study, it will not harm your relationship with your own doctors, the Yale University School of Medicine or with Yale-New Haven hospital.

Your practice is free to choose not to answer any questions in our survey, and you are free to withdraw from this study at any time during its course. Additionally, your practice may choose to decline to disclose the identity of your practice at any time during this study.

Withdrawing From the Study

If you do become a subject, you are free to stop and withdraw from this study at any time during its course. To withdraw from the study, you can call a member of the research team at any time and tell them that you no longer want to take part. Withdrawing from the study will involve no penalty or loss of benefits to which you are otherwise entitled. It will not harm your relationship with your own doctors or with Yale University School of Medicine or with Yale-New Haven Hospital.
When you withdraw from the study, no new information identifying you will be gathered after that date. Information that has already been gathered may still be used and given to others until the end of the research study, as necessary to insure the integrity of the study and/or study oversight.

Questions

Please feel free to ask about anything you don't understand and to consider this research and the consent form carefully – as long as you feel is necessary – before you make a decision.
Authorization

I have read (or someone has read to me) this form and have decided on behalf of my practice to participate in the project described above. Its general purposes, the particulars of involvement and possible hazards and inconveniences have been explained to practice’s satisfaction. My signature also indicates that my practice has received a copy of this consent form.

Name of Practice: __________________________

Name of Individual Consenting on Behalf of Practice: __________________________

Consent for Disclosure of Identified Practice Data

Signature: __________________________

Date: __________________________

OR

Consent for Disclosure of De-Identified Practice Data

Signature: __________________________

Date: __________________________

Signature of Principal Investigator __________________________

Date __________________________

OR

Signature of Person Obtaining Consent __________________________

Date __________________________

If you have further questions about this project or if you have a research-related problem, you may contact the Principal Investigator, Dr. Wiechers, at 203-936-9738 or ilse.wiechers@yale.edu.

If you would like to talk with someone other than the researchers to discuss problems, concerns, and questions you may have concerning this research, or to discuss your rights as a research subject, you may contact the Yale Human Investigation Committee at (203) 785-4688
Pediatric Medical Practice: Interview Guide

Preamble:
PCare4NHV is a community-informed, patient-centered, scientifically rigorous approach to determine primary care assets and needs in greater New Haven. The first phase of PCare4NHV focused on adults with Medicaid. This second phase aims to identify and enumerate medical practices delivering primary care to children (age less than 18) within the greater New Haven area and to describe and characterize primary care provision at each of these practices.

Our working list currently includes 26 practices and 140 providers, plus the 17 school-based health clinics.

The survey addresses basic information regarding practice location and physical characteristics as well as information concerning care delivery. Representatives from the medical practices have the choice to not answer any questions they do not wish to answer. The unit of analysis is the medical practice; we will not be gathering individual participant’s data.

1. Which of the following types of services are available on site at this practice?

   On site = in the same physical location as this practice, meaning in the same office space or in an adjacent building or office space if it is owned/leased/occupied by this medical practice

   a. **Adult** = adults over age 18 can have their primary care from a provider here
   b. **Specialty mental health care** = any level of specialty-trained mental health provider, including medication management and/or therapy
   c. **Dental** = basic dental care, including cleanings, examination, and/or procedure
   d. **Lab work** = patients can have blood work drawn on site for labs ordered by their providers, labs do not have to be run on site (i.e. labs can be sent off sit to lab service for running), so long as the point of contact for patients of the blood draw is on site
   e. **Radiology** = any radiologic services, including ultrasound, xray, CT, MR
   f. **Social work services** = social worker available on site to meet with patients and address social services issues (NOT mental health social services)
   g. **Care management services** = on site personnel with time dedicated to patient care management (e.g. diabetes care manager, nurse care manager who provides follow up phone calls)
   h. **Dispensing pharmacy** = patients can get prescriptions filled on site for taking home with them
   i. **Clinical pharmacist** = personnel on site who coordinates care with other providers, provides patient care around medication regimens, evaluating drug-drug interactions or adverse events and side effects
   j. **Complementary and alternative medicine services** = any provider available who provides services such as acupuncture
   k. **Nutritionist** = personnel with dedicated time to discuss issues of nutrition and diet management, e.g. diabetes meal planning
   l. **Group visits** = patients can participate in group visits, e.g. group diabetes management visits
m. **Educational space** = space is available in the practice that is used for individual or group educational sessions, may also be used for community meeting space

n. **Home visits** = personnel on site who deliver preventive and family support services directly to the family in the home

o. **Lactation consultant** = health care professional on site who specializes in the clinical management of breastfeeding

p. **OB/GYN for under age 18** = female reproductive health services available on site such as preventative care, prenatal care, detection of sexually transmitted diseases, Pap test screening, and family planning

q. **Same-day visits** = time available in the clinic schedule to see unscheduled patients with acute issues (e.g. viral illness, sports injury)

r. **In-hospital care** = providers see their patients when they are in the hospital (e.g. inpatient, newborn nursery)

s. **Appointment reminders** = any reminder of upcoming appointment, such as phone call, email, text

t. **Medication samples** = provision of medication either to determine if effective/tolerated before filling or as a bridge until prescription can be filled

2. Which of the following types of trainings are offered for this practice's primary care providers?

Primary care providers = any person providing primary care to patients, at any level (including: physicians, physician assistants, advanced practice nurses)

Customer service = any training that focuses on skills needed to interact with and provide services in a professional manner to “customers” – in this context, the patients

Cultural competency = any training that focuses on the following:
Cultural and linguistic competence is a set of congruent behaviors, attitudes, and policies that come together in a system, agency, or among professionals that enables effective work in cross-cultural situations. 'Culture' refers to integrated patterns of human behavior that include the language, thoughts, communications, actions, customs, beliefs, values, and institutions of racial, ethnic, religious, or social groups. 'Competence' implies having the capacity to function effectively as an individual and an organization within the context of the cultural beliefs, behaviors, and needs presented by consumers and their communities [http://minorityhealth.hhs.gov/templates/browse.aspx?lvl=2&lvlID=11]

General customer service or patient-centered training does not count for cultural competency training unless there was an explicit focus on cultural issues as a significant segment of the training.

Trauma-informed care = any training that focuses on the following:
Trauma-informed care is an approach to engaging people with histories of trauma that recognizes the presence of trauma symptoms and acknowledges the role that trauma has played in their lives.
Trauma can result from experiences of violence. Trauma includes physical, sexual and institutional abuse, neglect, intergenerational trauma, and disasters that induce
powerlessness, fear, recurrent hopelessness, and a constant state of alert. [http://www.samhsa.gov/nctic/]

General customer service or patient-centered training does not count for trauma-informed care training unless there was an explicit focus on trauma issues as a significant segment of the training.

3. Which of the following types of trainings are offered for this practice's staff?

Staff = any staff other than primary care providers, both clinical (e.g. nurses, health techs, medical assistants, clinical assistants, social workers, pharmacists) and non-clinical (e.g. front desk staff, schedulers, billing staff, janitorial staff)

4. a. Does this practice have bilingual clinical primary care providers?

Primary care providers = any person providing primary care to patients, at any level (including: physicians, physician assistants, advanced practice nurses)

Bilingual = provider self-identifies as being willing and able to speak with patients in clinical encounters in a language other than English

b. If so, what languages?
Check for Spanish, list all languages other than Spanish that are spoken by a provider at this practice.

5. a. Does this practice have bilingual staff?

Staff = any staff other than primary care providers, both clinical (e.g. nurses, health techs, medical assistants, clinical assistants, social workers, pharmacists) and non-clinical (e.g. front desk staff, schedulers, billing staff, janitorial staff)

Bilingual = provider self-identifies as being willing and able to speak with patients in clinical encounters in a language other than English

b. If so, what languages?
Check for Spanish, list all languages other than Spanish that are spoken by a provider at this practice.

6. Does this practice office provide interpreter services?

a. On site in person
Trained medical interpreter is available in person at this location to provide translation for providers meeting with non-English speaking patients.

b. If so, what languages?
Check for Spanish, list all languages other than Spanish that are spoken by a provider at this practice.

c. By phone
Trained medical interpreter services are available for use by phone by providers while meeting with non-English speaking patients in practice.

7. How many pediatric patients does this practice serve?
   This number represents total practice panel for all providers at this practice location. Most practices report **active patient panel over a 3-year period.** If they do not have information available in this way, take note in the margins of the number they can provide and extrapolate to the 3-year panel later.

8. Does this practice accept new pediatric patients?
   Are there any providers at this practice who still have an open panel and are accepting new adult patients? This does not include “by referral only,” it means that a new patient can call the office and ask to see a provider, and they get an appointment.

9. a. Does this practice accept Medicaid insurance?
   b. Does this practice accept new pediatric patients with Medicaid insurance? This does not include “by referral only,” or “in special circumstances,” it means that a new patient can call the office and ask to see a provider, and they get an appointment.
   c. What percentage of the current pediatric practice panel has Medicaid insurance? Medicaid includes all HUSKY Health plans, including HUSKY A, B, C, and D.

10. a. Does this practice see pediatric patients on a sliding fee scale or free-of-charge basis?
    **Sliding fee scale** = variable costs for services based on a patient’s ability to pay
    **Free-of-charge** = no payment required for services, (in other words, services are provided free for patients unable to pay)
    b. What percentage of the current practice panel is on sliding fee scale or free-of-charge basis?

11. For each primary care provider working in this practice, how many bookable hours of pediatric primary care do they provide each week at this location?
    At this point, pull out the pre-populated workforce table that was forwarded to the practice prior to the site visit.
    Confirm each listed provider is still providing care at this location.
    Confirm we have the correct provider type & specialty designation.
    Ask for any additional providers who are providing care at this location but whom we don’t have on our list.

    Bookable hours of adult primary care per week @ this location = number of hours that the provider is available to book and provide care to adult patients.
    If people talk about “half days,” get them to be specific about how many hours are in a half day of clinic (e.g. 4 hours per half day)

    For each provider, confirm whether or not they accept Medicaid as insurance for patients they see at this practice site.
12. For each day of the week, what are this practice’s hours?
This chart should also be prepopulated with information you gather from online practice websites or by making phone call to front desk to confirm hours of operation (open time and close time).

Inquire as to when the first scheduled appointment of the day occurs (may be different from open time) and when is the last scheduled appointment of the day (also likely different from closing time).

13. During office hours, how are patient calls with medical questions triaged?
This is for during hours of operation (as defined above in #10). When a patient calls with a medical question, how is their call triaged? This may be after having gone through the regular office phone number phone tree.

Clinical provider here can refer to any level of clinical provider, so not just primary care providers (physicians, physicians assistant, advanced practice nurse) but also regular nursing staff as well

Check the box that applies, if none apply get description of triage process and write it in the space provided. These are listed in a hierarchy, with the top being most access to clinical care and the bottom being the least. If the process involves more than one of the below options, choose the one most towards the top of the list.

14. After office hours, how are patient calls with medical questions triaged?
This is for after hours of operation (as defined above in #10). This may also be after having gone through the regular office phone number phone tree.
Check the box that applies, if none apply get description of triage process and write it in the space provided. These are listed in a hierarchy, with the top being most access to clinical care and the bottom being the least. If the process involves more than one of the below options, choose the one most towards the top of the list.

15. a. Does this practice use an electronic medical record?
Check the box for name brand of EMR used or None. If the EMR is not listed, check Other and hand write in the brand being used.

b. If not EPIC, do your primary care providers have access to EPIC?
Can providers access EPIC through a portal of some sort that is accessible at this practice?

16. Does this practice provide a written clinical summary, which includes a problem list, vital signs, medication list, new orders and follow up care plan, for patients upon completion of each office visit?

Written summary = a piece of paper with printed words on it, usually printed out from a computer (to meet EMR meaningful use requirements), does not exclusively refer to something hand written by primary care provider
17. Does this practice have an online access portal for patients to access their own health records?
   Any sort of online access point for patients; to get results from tests, to communicate with provider, to see health records and progress notes, etc.

18. a. Is this practice a designated Patient Centered Medical Home?
Check box for yes, then check below the name of organization from which the practice received their PCMH designation. If the name of organization is not listed, check Other and hand write in the organization name.

PCMH = Patient Centered Medical Home (NCQA) –OR – Primary Care Medical Home (JCAHO) – OR – Person-Centered Medical Home (CT DSS)

f. If no, is this practice in the process of obtaining PCMH designation?
They answered No above, but are they in the process of obtaining PCMH designation? In the process means they have an application submitted and under consideration, or actively working on completing application materials with intention to submit by the end of this calendar year (2014).

19. a. Does this practice have a new patient orientation process?

   If yes, what does it consist of?
Check boxes for each of the individual items that are included in the new patient orientation process.

   b. Printed materials = any printed handouts, booklets, brochures
   c. In person education session = face to face session with patient that is separate from what occurs in the practice visit with their primary care provider
   d. Tour of facilities = tour of physical location

20. Does this practice require photo ID for patients to obtain care here?
   Does the patient have to show photo ID in order to initially register for care or in order to check in for subsequent visits?

21. a. Is this practice affiliated with another organization?
   Is this practice a part of a group practice or larger provider network (e.g. Northeast Medical Group) or independent practice association (IPA, e.g. New Haven Community Medical Group).

   b. If yes, with what organization?
Enter any names of organizations with which the practice is affiliated.

22. Does this practice participate in CIRTS?
Connecticut Immunization Registry and Tracking System is a free, statewide, immunization registry established to assure that children remain up-to-date with their immunizations and that their records are available when needed.
23. a. Does this practice have a policy to fill out camp/daycare/sport physical exam forms?
   
   b. If so, how long does it take?
   Designate less than or more than 2 weeks

24. Does this practice have a policy to authorize disclosure of health information to non-
parent/guardian caregivers?
For example, grandparent, babysitter, daycare, neighbor, anyone who is caring for the child.

25. Who helped in the completion of this survey?
   Check yes for all who helped with survey. If none of those listed, then choose Other and
write title in space provided.
Understanding Primary Care Access in greater New Haven through Community-Based Participatory Research: Pediatric Expansion

A Report of the Yale Robert Wood Johnson Foundation (RWJF) Clinical Scholars & Community Partners
Studying: The Why & The How

Why?
- Authentic healthcare access necessitates the right quantity and quality of providers
- Understanding the dimensions of access is essential to create solutions to access gaps

How?
- Expanded the practice-based survey to the pediatric practices and school-based health centers (SBHCs)
- Over 200 community members contributed:

Questions No One Could Answer Before PCare4NHV
- How many pediatric primary care providers are there in greater New Haven?
- What services do they provide?
- What is the access for pediatric patients with Husky (Medicaid)?

Community-Based Participatory Research (CBPR)
- Facilitated discussions with patients on experiences accessing primary care
- Engaged community members for expertise on primary care access
- Community organizations helped identify important factors:

What We Did
- Identified 124 pediatric primary care providers at 17 practices and 19 SBHCs between June 2014 and Jan 2015
- Asked questions the community identified as important
# Accessing: What We Found

## Making an appointment

<table>
<thead>
<tr>
<th>Practice</th>
<th>Practices</th>
<th>School-Based Health Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accept new patients with Medicaid</td>
<td>13 (77%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Offer same-day visits</td>
<td>17 (100%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Employ Spanish-speaking staff</td>
<td>8 (47%)</td>
<td>13 (68%)</td>
</tr>
<tr>
<td>Offer appointments after 6:00p</td>
<td>13 (77%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Provide weekend appointments</td>
<td>7 (41%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## Getting to the site

<table>
<thead>
<tr>
<th>Practice</th>
<th>Practices</th>
<th>School-Based Health Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide curb cuts for wheelchair entry</td>
<td>17 (100%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Have a wheelchair-accessible main entrance</td>
<td>7 (41%)</td>
<td>11 (58%)</td>
</tr>
<tr>
<td>Located within 5 minutes of a bus stop</td>
<td>14 (82%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Provide free parking</td>
<td>15 (88%)</td>
<td>19 (100%)</td>
</tr>
</tbody>
</table>

## At the site

<table>
<thead>
<tr>
<th>Practice</th>
<th>Practices</th>
<th>School-Based Health Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have a wheelchair-accessible counter</td>
<td>3 (18%)</td>
<td>13 (68%)</td>
</tr>
<tr>
<td>Provide full privacy in the waiting area</td>
<td>4 (24%)</td>
<td>2 (11%)</td>
</tr>
<tr>
<td>Offer cultural competency training for providers</td>
<td>10 (59%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Offer trauma-informed care training for providers</td>
<td>9 (53%)</td>
<td>17 (90%)</td>
</tr>
<tr>
<td>Employ Spanish-speaking providers</td>
<td>9 (53%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>Have interpreters available by phone</td>
<td>13 (77%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Use an electronic medical record (EMR)</td>
<td>13 (76%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Qualify as a patient-centered medical home</td>
<td>7 (41%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Offer specialty mental health care</td>
<td>7 (41%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Provide dental services</td>
<td>5 (29%)</td>
<td>6 (32%)</td>
</tr>
<tr>
<td>Employ a nutritionist</td>
<td>7 (41%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Employ a lactation consultant</td>
<td>9 (53%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

## After the appointment

<table>
<thead>
<tr>
<th>Practice</th>
<th>Practices</th>
<th>School-Based Health Centers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offer a summary after the appointment</td>
<td>11 (65%)</td>
<td>12 (63%)</td>
</tr>
<tr>
<td>Provide social work services</td>
<td>5 (29%)</td>
<td>18 (95%)</td>
</tr>
<tr>
<td>Offer on-site pharmacy</td>
<td>3 (18%)</td>
<td>11 (58%)</td>
</tr>
<tr>
<td>Offer laboratory services</td>
<td>9 (53%)</td>
<td>16 (84%)</td>
</tr>
<tr>
<td>Offer radiology</td>
<td>3 (18%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Offer home visits</td>
<td>3 (18%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Understanding: *What This Means*

- 9 out of 10 sites accept new Medicaid patients and 5 out of 10 practices spend at least half of their time seeing Medicaid patients, but East Haven and West Haven have too few pediatricians
  - There are adequate resources regionally, but there are pockets where access is limited
- School-based health centers provide 2 out of every 10 hours of primary care to Medicaid patients
  - SBHCs are a noteworthy source of healthcare access
- 8 out of 10 practices offer weekend and/or evening appointments
  - There is satisfactory 'after-hours' primary care access for working parents
- Less than 2 out of 10 sites provide a fully private check-in experience
  - There is opportunity to improve privacy for patients
- 5 out of 10 sites have a wheelchair-accessible main entrance
  - There is opportunity to improve handicap accessibility
- 6 out of 10 sites have Spanish-speaking staff and 9 out of 10 sites have access to phone interpreters
  - There are good resources for Spanish-only speaking patients
- The practices that provide adult primary care, mental health services, dental services, social services, and Spanish-speaking providers see more Medicaid patients than other practices
  - Practices with more Medicaid patients tend to have a broad range of comprehensive services
Entendiendo el Acceso a la Atención Primaria en New Haven a través de la Investigación Participativa de la Comunidad: Expansión pediátrica

Informe de la Fundación Robert Wood Johnson (RWJ) y sus aliados de la comunidad

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Estudio: *El por qué y el como*

**Por qué**
- Acceso auténtico a la asistencia médica requiere la cantidad y calidad correcta de proveedores
- Comprender las dimensiones de acceso es esencial para crear soluciones de brechas de acceso

**Como**
- Ampliar la encuesta a los centros de consultas pediátricos y centros de salud escolares
- Más de 200 miembros de la comunidad contribuyeron:

**Preguntas que Nadie Podía Responder Antes de PCare4NHV**
- ¿Cuántos proveedores de atención primaria pediátrica hay en el área de New Haven?
- ¿Cuáles servicios suministran?
- ¿Qué clase de acceso tienen los niños con Medicaid (Husky)?

**Investigación Participativa de la Comunidad (CBPR)**
- Se facilitaron discusiones con pacientes y otros miembros de la comunidad acerca de experiencias para acceder a la atención primaria
- Las organizaciones comunitarias que ayudaron a identificar factores importantes:

**Lo Que Hicimos**
- Identificamos 124 proveedores de atención primaria pediátrica en 17 centros de consulta y 19 centros de salud escolares en el área de New Haven entre junio 2014 y enero 2015
- Hicimos preguntas que fueron identificadas por la comunidad como importantes
## Acceso: Lo que encontramos

### Al hacer una cita

<table>
<thead>
<tr>
<th></th>
<th>Centros de consulta</th>
<th>Centros de salud escolares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aceptan pacientes nuevos con Medicaid</td>
<td>13 (77%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Ofrecen citas el mismo día</td>
<td>17 (100%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Tienen personal que habla Español</td>
<td>8 (47%)</td>
<td>13 (68%)</td>
</tr>
<tr>
<td>Ofrecen citas después de las 6:00p</td>
<td>13 (77%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Ofrecen citas los fines de semana</td>
<td>7 (41%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Llegando al consultorio

<table>
<thead>
<tr>
<th></th>
<th>Centros de consulta</th>
<th>Centros de salud escolares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tienen rampas en las aceras para silla de ruedas</td>
<td>17 (100%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Tienen una entrada principal accesible en silla de ruedas</td>
<td>7 (41%)</td>
<td>11 (58%)</td>
</tr>
<tr>
<td>Ubicado 5 minutos de una parada de autobús</td>
<td>14 (82%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Tienen aparcamiento gratuito</td>
<td>15 (88%)</td>
<td>19 (100%)</td>
</tr>
</tbody>
</table>

### Durante la consulta

<table>
<thead>
<tr>
<th></th>
<th>Centros de consulta</th>
<th>Centros de salud escolares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tienen un mostrador accesible en silla de ruedas</td>
<td>3 (18%)</td>
<td>13 (68%)</td>
</tr>
<tr>
<td>Suministran completa privacidad en el área de espera</td>
<td>4 (24%)</td>
<td>2 (11%)</td>
</tr>
<tr>
<td>Ofrecen educación al personal sobre diferencias culturales</td>
<td>10 (59%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Suministran educación al personal sobre el cuidado informado por trauma</td>
<td>9 (53%)</td>
<td>17 (90%)</td>
</tr>
<tr>
<td>Tienen pediatras que hablan Español</td>
<td>9 (53%)</td>
<td>1 (5%)</td>
</tr>
<tr>
<td>Tienen interpretes disponibles por teléfono</td>
<td>13 (77%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Usan registros médicos electrónicos</td>
<td>13 (76%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Son designados como “hogares médicos”</td>
<td>7 (41%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Suministran servicios de salud mental</td>
<td>7 (41%)</td>
<td>19 (100%)</td>
</tr>
<tr>
<td>Ofrecen servicios dentales</td>
<td>5 (29%)</td>
<td>6 (32%)</td>
</tr>
<tr>
<td>Suministran nutricionista</td>
<td>7 (41%)</td>
<td>0 (0%)</td>
</tr>
<tr>
<td>Tienen especialista en lactancia</td>
<td>9 (53%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>

### Después de la cita

<table>
<thead>
<tr>
<th></th>
<th>Centros de consulta</th>
<th>Centros de salud escolares</th>
</tr>
</thead>
<tbody>
<tr>
<td>Proveen un resumen después de la cita</td>
<td>11 (65%)</td>
<td>12 (63%)</td>
</tr>
<tr>
<td>Suministran servicios de trabajo social</td>
<td>5 (29%)</td>
<td>18 (95%)</td>
</tr>
<tr>
<td>Tienen una farmacia dentro del centro de consulta</td>
<td>3 (18%)</td>
<td>11 (58%)</td>
</tr>
<tr>
<td>Suministran servicios laboratorios</td>
<td>9 (53%)</td>
<td>16 (84%)</td>
</tr>
<tr>
<td>Ofrecen radiología</td>
<td>3 (18%)</td>
<td>N/A</td>
</tr>
<tr>
<td>Suministran visitas a domicilios</td>
<td>3 (18%)</td>
<td>N/A</td>
</tr>
</tbody>
</table>
Entendido: ¿Qué significa

- 9 de los 10 sitios aceptan pacientes nuevos con Medicaid y 5 de los 10 centros de consulta pasan por lo menos la mitad de su tiempo con pacientes con Medicaid, pero East Haven West Haven tiene muy pocos pediatras
  - Hay recursos adecuados a nivel regional, pero hay focos donde el acceso es limitado
- Centros de salud escolares proveen 2 de las 10 horas de la atención primaria a los niños con Medicaid
  - Centros de salud escolares son una fuente notable de acceso a la salud
- 8 de los 10 consultorios ofrecen citas los fines de semana y/o citas después de las 6:00pm
  - Hay acceso satisfactorio de atención primaria para los padres que trabajan
- Menos de 2 de los 10 sitios suministran privacidad completa en el área de espera
  - Hay oportunidades para mejorar la privacidad para los pacientes
- 5 de los 10 sitios tienen un mostrador accesible en silla de ruedas
  - Hay oportunidades para mejorar la accesibilidad para discapacitados
- 6 de los 10 sitios tienen personal que habla Español y 9 de los 10 sitios tienen interpretes disponibles por teléfono
  - Hay recursos adecuados para pacientes que hablan Español
- Los centros de consulta que tienen atención primaria para adultos, servicios de salud mental, servicios dentales, servicios sociales, y pediatras que hablan Español cuidan más pacientes con Medicaid que los otros centros de consulta
  - Centros de consulta con más pacientes con Medicaid tienen más servicios comprensivos

¿Preguntas?
¡Contáctenos!

Correo  pcare4nhv@gmail.com
Blog  http://pcare4nhv.wordpress.com
Twitter  @PCare4NHV

Fundación RWJ 2012-2014 Becarios Clínicos
- Jason Lott
- Arjun Venkatesh
- Jennifer Voorhees
- Ilse Wiechers
- Michael O’Brien

PCare4NHV Asistentes de Investigación
- Christina Cutter
- Meredith Binford

PCare4NHV Equipo Consejero de Atención Primaria
- Sharon Anderson, Fair Haven Health Center
- Lou Brady, Cornell Scott Hill Health Center
- Darcey Cobbs-Lomax, New Haven Project Access
- Mario Garcia, New Haven Health Department
- Lauren Kelley, Project Access-New Haven
- Georgina Lucas, RWJF Clinical Scholars Program, Yale School of Medicine
- Kate McEvoy, Connecticut Department of Social Services
- Robert Nordgren, Northeast Medical Group, Yale New Haven System
- Natasha Ray, New Haven Healthy Start
- Maurice Williams, Yale Center for Clinical Investigation
- Gregory Germain, Associate Chief for Children’s Services, YNHH

PCare4NHV Aliados en Discusiones Facilitadas
- Christian Community Action Health Kitchen Cabinet, Members
- New Haven Family Alliance Male Involvement Network, Members
- New Haven Healthy Start Consortium, Members
- Project Access-New Haven, Patient Navigators
- Yale School of Public Health Community Alliance for Research and Engagement, Community Needs Assessment Surveyors

Las 200 personas que hablaron con nosotros sobre la Atención Primaria en New Haven

Comité Directriz de Becarios Clínicos de la Fundación RWJ para Proyectos Comunitarios

Miembros de la Facultad para Becarios Clínicos de la Fundación RWJ

Fundación RWJ Facultad: Marjorie Rosenthal
PCare4NHV Primary Care Practice Locator Tool

This tool was created using information obtained in 2013-2014 through a community-based participatory research project about primary care resources in the New Haven area called PCare4NHV. Use this tool to locate primary care practices in the New Haven area that fit with your needs.

For more information about the effort that created this tool and other products from the PCare4NHV project, please visit http://pcare4nhv.wordpress.com.
# Search Practices

## Basic Search
- **City**: Select
- **Zip Code**: 
- **Distance**: Select

Click here to show/hide additional search terms

## Additional Search Terms

<table>
<thead>
<tr>
<th>Practice Name</th>
<th>Accepts New Medicaid</th>
<th>Language(s) Spoken by Provider(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Doesn't Matter</td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>Arabic</td>
<td>Cantonese</td>
</tr>
</tbody>
</table>

## Provider Type
- **Family Medicine Provider**: Doesn't Matter | Yes | No
- **Internal Medicine Provider**: Doesn't Matter | Yes | No
- **Obstetrics and Gynecology Provider**: Doesn't Matter | Yes | No
- **Solo Practice**: Doesn't Matter | Yes | No

## Onsite Services
- **Offers Pediatric Care**: Doesn't Matter | Yes | No
- **Offers Specialty Mental Health Care**: Doesn't Matter | Yes | No
- **Offers Dental Care**: Doesn't Matter | Yes | No
- **Offers Laboratory Services**: Doesn't Matter | Yes | No
<table>
<thead>
<tr>
<th>Service</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>Offers Radiology Services</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Offers Social Work Services</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Offers Care Management Services</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Has On-site Dispensing Pharmacy</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Has On-site Clinical Pharmacist</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Offers Complementary and Alternative Medicine</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Has On-site Nutritionist</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Offers Group Visits</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Has Dedicated Patient Educational Space</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
<tr>
<td>Offers Home Visits</td>
<td>Doesn't Matter @Yes @No</td>
</tr>
</tbody>
</table>