ACCESS DENIED:

A LOOK AT AMERICA'S MEDICALLY DISENFRANCHISED

National Association of Community Health Centers, Inc.

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National Association of Community Health Centers
Division of Federal, State, and Public Affairs
1400 I Street, NW, Suite 330
Washington, DC 20005
(202) 296-3800

The National Association of Community Health Centers promotes the provision of high quality, comprehensive health care that is accessible, coordinated, culturally and linguistically competent, and community directed for all underserved populations.

The Robert Graham Center
Policy Studies in Family Medicine and Primary Care
1350 Connecticut Avenue, NW Suite 201,
Washington, DC 20036
(202) 331-3360

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For more information, please email research@nachc.com.

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Executive Summary

A startling 56 million Americans are "medically disenfranchised" according to *ACCESS DENIED*, a new study by the National Association of Community Health Centers and the Robert Graham Center. The groups' research found that nearly one in five Americans – of all income levels, racial and ethnic groups, and insurance status – are at great risk of not having a "medical home" to address their basic health needs from the common cold to migraines or high blood sugar.

No matter where they live – in rural pockets of America's farm land, in urban neighborhoods, or in suburban developments – medically disenfranchised Americans face disparities in access to primary and preventive health care. The toll of these unmet needs is steep, from higher death and disease rates to wide health disparities in communities where residents have few or no primary health care options.

Unmet health care needs are not just a consequence of being poor and uninsured. Americans at all income levels are feeling the primary health care pinch. Even those lucky enough to have good health insurance face a large and growing shortage of primary health care options. In fact, the number of communities deemed as having too few primary care physicians is growing precisely as demand is projected to grow with a rapidly growing pool of baby boomers turning 65 over the next several years.

Other highlights of *ACCESS DENIED* include:

- While more than half (52 percent) of uninsured Americans have no regular source of health care, in fact most people living in medically disenfranchised areas *have health* insurance.
- The range of uninsured without a usual source of care varied widely by state, from 18 percent of adults in Minnesota to 60 percent in Texas.
- 21 states have over one million medically disenfranchised residents each.
- At least two in five residents in Alabama, Alaska, Florida, Kansas, Mississippi, Missouri, Oregon, South Carolina, and Utah are medically disenfranchised.

Moving Forward

As the nation and its elected leaders increasingly focus on possible national health care reform, providing more Americans with access to primary health care should be a top priority. Focusing only on ensuring everyone has health insurance without ensuring them a regular source of primary care is like providing currency without a marketplace. Widening access to primary care is a critical first step not only toward improving health and fighting disease but to cutting costs and reducing reliance on hospital emergency rooms as the costly last resort for the medically disenfranchised and the uninsured.

Congress has taken a bold step, investing $750 million in new funding over the past 6 years in federally-supported community health centers, thereby decreasing the number of medically disenfranchised by more than 5 million. This year, it has appropriated an historic $207 million increase for health centers, potentially providing access to a health care home for 1.5 million more Americans. The new funding also helps stabilize existing health centers, which are seeing growing numbers of low income and chronically ill individuals.

More must be done to prepare for growing primary health care demand, through further investment in health centers and other sources of primary health care, and in training the primary health care providers who will care for today's aging Americans and the millions waiting in line behind them.

Introduction

Debate on how to fix the U.S. health care system has reached a crescendo recently, with a host of proposals directly aimed at addressing the nearly 47 million Americans struggling without health insurance coverage and the millions more left underinsured due to changes in employer coverage plans.[1] Presidential candidates, along with Members of Congress and health care experts, have put forth varying solutions to the one crisis on which there is little dispute—the lack of affordable health insurance coverage for too many Americans. But expanding health care *coverage* without addressing the need to provide *access* to quality preventive and primary care services answers only part of the health care equation. Even if universal coverage becomes a reality in the next decade, there persists the larger problem of the scarcity, and even in some communities the total absence, of preventive and primary health care services.

Our research has found 56 million Americans of all income levels, race and ethnicity, and insurance status have inadequate access to a primary care physician due to shortages of these physicians in their communities. They are America's *medically disenfranchised* – people at great risk for being unable to establish a medical or health care home to provide them patient-centered, regular and continuous primary care because of a shortage of primary care physicians where they live. The medically disenfranchised are a *subset* of what many call the "medically underserved" – those that face multiple and compounding barriers to primary care, including lack of insurance and financial difficulty, language and culture, transportation, as well as the lack of physicians present or willing to treat them.

The toll of unmet health care needs – such as a common cold, high blood pressure, or high blood sugar – is incalculable. Studies show that in communities with poor access to primary health care, there are higher death and disease rates, and a higher degree of health disparities. Having a medical home improves health outcomes overall by preventing sickness, managing chronic illness, and minimizing health disparities. In addition, medical homes save money because they reduce the need for avoidable, costlier care such as emergency room visits and hospitalizations. While health insurance is an important facilitator to care, having a medical home is more likely to improve appropriate health care use and health outcomes than having insurance alone. However, people fare best when they have both. This report focuses on the need to provide more opportunities for people to have a medical home and the role of health centers in fulfilling that need.

The promise of the medical home has been the engine of the Community Health Center movement that set out to break the cycle of sickness and poverty over forty years ago. Community, Migrant, Homeless, and Public Housing Health Centers started out as a pilot project in 1965 to address the severe health care needs of millions of Americans who lived in poverty-stricken communities where doctors were scarce or non-existent. Health centers not only break down the barriers to health care in America's poorest communities, they also customize their services to the unique health and cultural needs of the communities they serve. Most health centers have broadened the meaning of health, with a comprehensive approach that can include other services such as case management, transportation, translation, outreach, dental and mental health services. Because they go above and beyond the role of a medical home, they may be more appropriately described as "health care homes." Today, health centers serve 16 million patients in every state and territory, including 1 in 8 uninsured persons, 1 in 9 Medicaid beneficiaries, and 1 in 4 low income individuals. Health centers have demonstrated that they improve health outcomes for their at risk patients and mitigate health disparities. They also generate cost savings to patients, communities, and payers by reducing the need for expensive inpatient, emergency, and specialty services.

The federal Health Centers Program has grown dramatically in recent years. President Bush and a broad bipartisan coalition in Congress have recognized the need for expanded access to essential health care in underserved communities and have directed historic funding increases to the program since 2001. That expansion initiative has brought effective, affordable primary and preventive care services to an additional five million Americans in over 900 communities across the country. More recently, President Bush called for the establishment of a health center in every low income county currently without one. Support in Congress for the continued expansion remains strong, and advocates as well as Members of Congress have expressed their desire to look beyond "counties" to serve those "communities" most in need. Despite the recent expansion of health centers a great unmet need remains in America's underserved communities.

With the growth of uninsured, underinsured, and medically disenfranchised people in the United States, national leaders and policymakers must consider options for expanding insurance and access to medical homes. The scarcity or physicians that generates America's medically disenfranchised is only one barrier to care out of many. Expanding the federal Health Centers Program is an ideal solution, but one that must occur simultaneously with expansion and stabilization of the primary care workforce, incentives for better physician distribution, capital and construction solutions for new and existing health centers, and insurance coverage.

America's Medically Disenfranchised

The medically disenfranchised are Americans who are at risk of inadequate access to a primary care physician. They live in areas which lack a sufficient number of primary care physicians to care for the local population. Access to primary care is limited or non-existent because physicians located in these areas can only appropriately treat a limited number of people. The medically disenfranchised often go without needed primary and preventive care unless they are able to negotiate barriers of distance, time and cost to find physician services outside of their communities. Insufficient access to primary care services is a function of both shortages and uneven distribution of physicians. The U.S. is experiencing a deterioration in the number of primary care physicians while the number of specialties is rapidly increasing and concentrating in areas with higher income and better insured people.[2] Both the decline in interest in primary care by U.S. medical students and patterns of physician location make it difficult to improve access to care for the medically disenfranchised without investments to expand health centers and their staffing.

Who Are the Medically Disenfranchised?

This report defines the medically disenfranchised as the number of people with no or inadequate access to a primary care physician due to local shortage of such physicians. They are a *subset* of the medically underserved – those facing various and often compounding barriers to care. The medically disenfranchised live in a primary care Health Profession Shortage Area (HPSA) or Medically Underserved Area (MUA), or who are considered a Medically Underserved Population (MUP) after subtracting a standard 2000 people for every primary care physician. For national and state estimates only, the medically disenfranchised exclude the number of people cared for by health centers in that same designated area. County level and congressional district level do not account for health center patients given an inability to align patients by this region. This is a conservative calculation, since there are undoubtedly individuals who live in areas with more than one primary care physician per 2000 residents, and even in areas that are not designated as HPSAs or MUAs, yet who cannot find a source of primary health care that will accept their insurance (this is increasingly true for individuals who have Medicaid and perhaps even Medicare). We also recognize that for large counties and subcounties, the number of medically disenfranchised may be underestimated given realistic travel times to local physicians. For more information on methodology and limitations, see Appendix F.

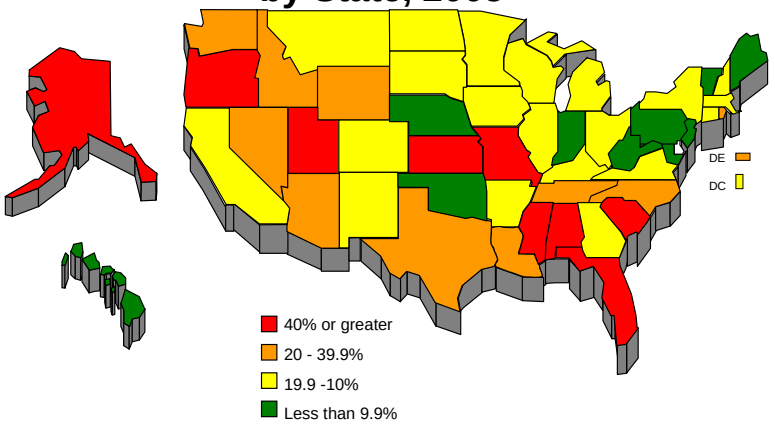
Over 56 million Americans – nearly one in five residents – were considered medically disenfranchised in 2005. Moreover, the national number of medically disenfranchised is notably higher than the nearly 47 million Americans who lacked insurance coverage during the same year[3] because insurance alone does not guarantee access to health care. These Americans without a regular source of reliable health care live in every state and nearly every county. If they develop health problems, studies show that the lack of available health care services poses far more of a health risk than not having health insurance. It is important to keep in mind that our measure of medically disenfranchisement represents only one access barrier to primary care – local physician shortage. Our estimate of 56 million medically disenfranchised Americans is conservative because it represents only those living in areas with federal physician shortage or medical underservice designations, and countless others face barriers to care outside these areas. Barriers to care extend beyond a simple lack of physicians, but also include language barriers, uninsurance and cost, transportation, and poverty. Undoubtedly there are millions more in need of improved access to primary care. Communities not listed in this study as having medically disenfranchised people will often still have populations at risk of poor access to health care. Migrant and homeless people are two important and traditionally at risk and underserved populations that may not be accounted for in this study. Special considerations must be given to all access barriers. For these reasons, identifying true health care need is best done at a community, rather than county, level. Often counties, especially those in the western states, are too big for one new provider to serve everyone. Methodology and limitations are outlined in **Appendix F**.

In the States. No state is immune. Map 1 below displays the percent of state residents who are medically disenfranchised. (See Appendix A for more detail.) Specifically:

- 21 states each have more than one million medically disenfranchised residents.
- Three states – **Florida**, **Texas**, and **California** – have the highest aggregate number of such individuals, together making up 29% of the 56 million.
- While 19.4% of all Americans were medically disenfranchised in 2005, nine states are struggling with swelling ranks of people shut out of the health care system. At least two in five residents in **Alabama**, **Alaska**, **Florida**, **Kansas**, **Mississippi**, **Missouri**, **Oregon**, **South Carolina**, and **Utah** have threatened or limited access to basic health care.
- The highest rate of medical disenfranchisement among the states is in Alabama. More than half (55.9%) of **Alabama** residents are medically disenfranchised.

Map 1

Percent of Medically Disenfranchised People by State, 2005



National Average = 19.4%

Note: Does not subtract health center patients as state and U.S. medically disenfranchised figures do.
Source: The Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data, 2005 Uniform Data System), 2006 AMA Masterfile, Census Bureau 2005 population estimates, NACHC 2006 survey of non-federally funded health centers.

NACHC's previous study of Americans without access to primary care found that one in three residents of **Louisiana** and **Mississippi** and at least one of five residents in ten other states (**Alabama**, **Arkansas**, **Georgia**, **Idaho**, **Kentucky**, **Nebraska**, **Nevada**, **North Carolina**, **Tennessee**, and **Wyoming**) were medically disenfranchised. That report found that 36 million Americans were struggling without basic access to health care. Our estimate has grown substantially for several reasons explained in the methodology section of this report.

Although health centers are not the only source of safety net ambulatory care, they make up the largest single source of safety net ambulatory care providers. As Appendix B depicts, without health centers, the number of medically disenfranchised Americans would be over 71 million. Because health centers served a total of 15 million patients in 2005, they, in effect, reduced the number of medically disenfranchised by 21% nationally. Health centers in four states (**Hawaii**, **Maine**, **New Jersey**, and **Vermont**) actually decreased the number of disenfranchised by more than 50%. In other words, were it not for health centers, the number in these states would be twice as high. Health centers in 10 other states (**California**, **Colorado**, **Connecticut**, **Illinois**, **Maryland**, **Montana**, **New Mexico**, **New York, Pennsylvania**, and **South Dakota**) and the **District of Columbia** reduced the number of medically disenfranchised by 30% or more.

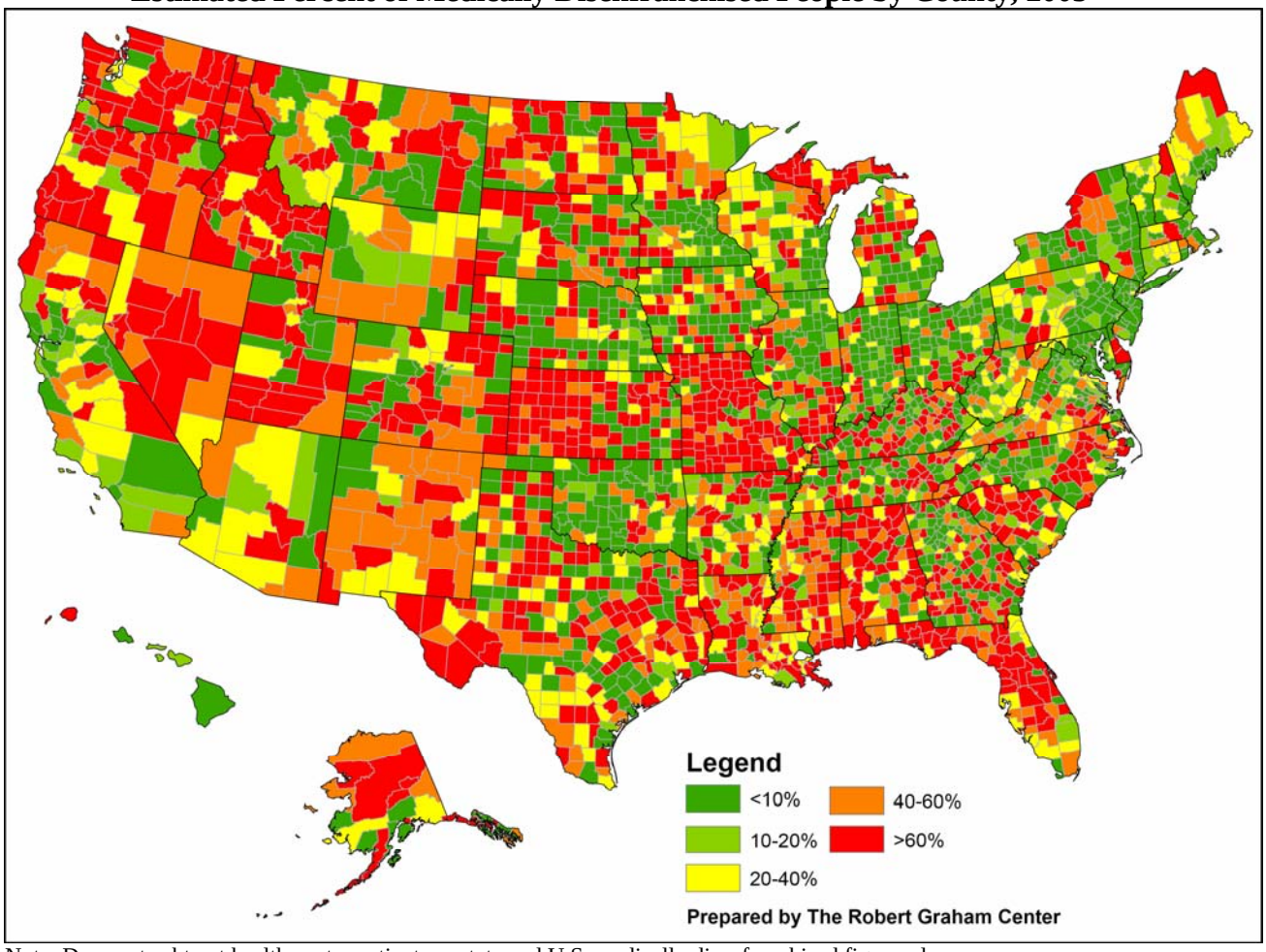
In the Counties. Although it is difficult to match health center patients by county, given that health center patients are reported at an organizational level rather than by each service delivery site, it is possible to determine which counties have disenfranchised populations and do not have health centers. Nearly 1,500 counties across every state have disenfranchised populations and do not have a health center. These counties are displayed in **Appendix C**, which reveals the following:

- In total, 18.9 million people (31%) residing in these counties are disenfranchised, making up 34% of total disenfranchised nationally.
- The average number of disenfranchised for any one of these counties is 12,800 (median is 6,327).

- Of the total 1,474 counties, 19 had disenfranchised populations in excess of 100,000 each. These 19 counties are located in ten states (**Alabama**, **Delaware**, **Florida**, **Mississippi**, **Missouri**, **New York**, **South Carolina**, **Texas**, **Oregon**, and **Utah**). Among these counties, two have well over 200,000 disenfranchised people: St. Lucie County in Florida (211,105) and Marion County in Florida (281,842).

While there are many counties that continue to face shortages of primary care providers, we cannot account for how many residents travel across county boundaries to access a medical home. People seeking health care services may not respect such political boundaries, but the health of people and the health of communities are improved if health care resources are local. Distance is a known barrier to accessing health care – both in terms of geography, especially in rural areas, and by time of travel, especially in urban settings where the time of travel may make geographically short distances difficult.[4] County boundaries are important for many disenfranchised people, since it often falls to county governments to finance and organize care for uninsured and underinsured people. Our methods may be lacking in their ability to be specific about who is disenfranchised and where they live, but our numbers are based on the most reliable data available.

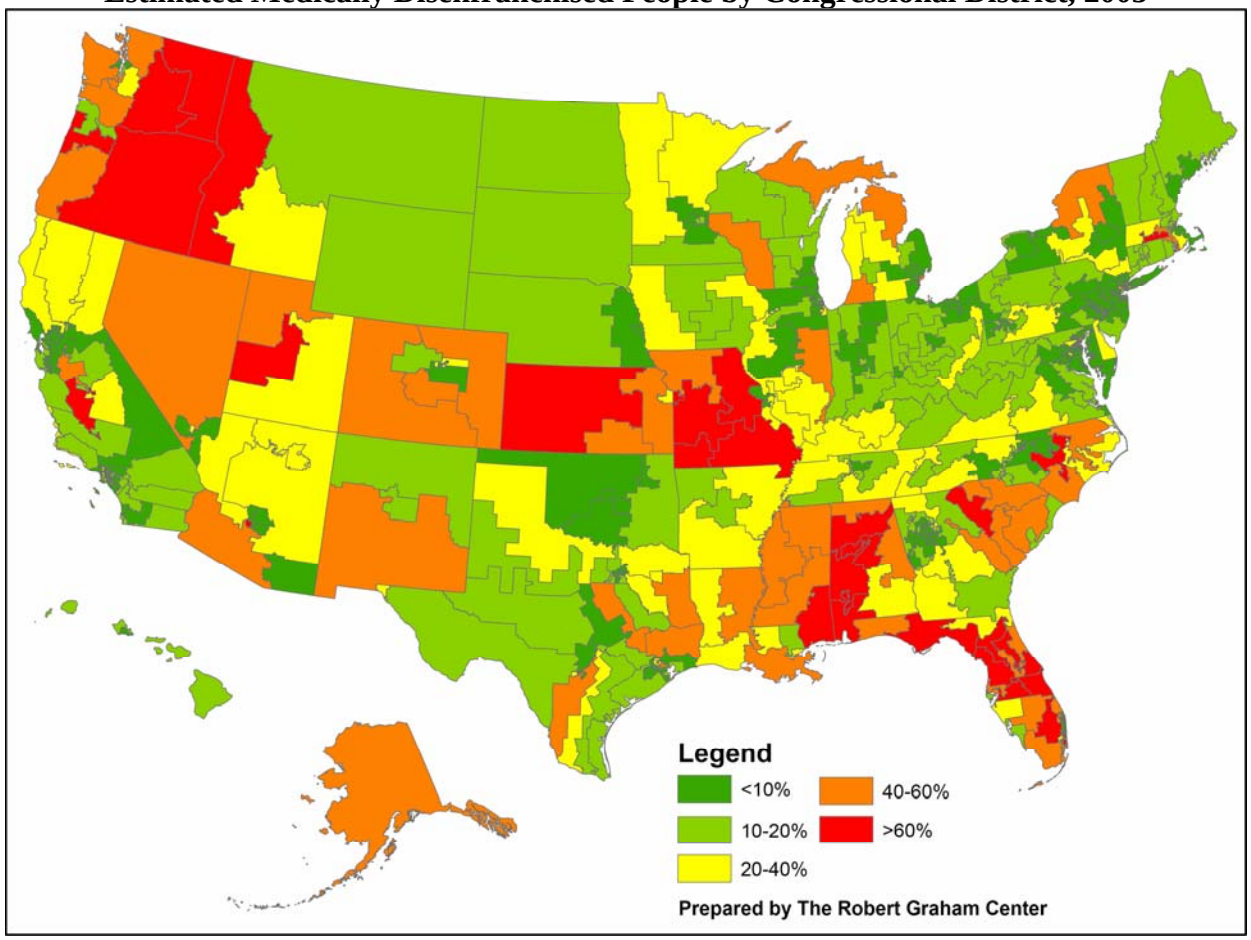
Map 2
Estimated Percent of Medically Disenfranchised People by County, 2005



Note: Does not subtract health center patients as state and U.S. medically disenfranchised figures do.
Source: The Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates.

In the Congressional Districts. The vast majority of federal Congressional districts are home to at least one health center site. Of the 35 that do not have health center, 28 have disenfranchised populations that together total 1.3 million people, as shown in Appendix D. These districts are located in 13 states: **Arizona**, **California**, **Florida**, **Illinois**, **Minnesota**, **Missouri**, **New Jersey**, **New York**, **North Carolina**, **Ohio**, **Pennsylvania**, **Texas**, and **Virginia**. The disenfranchised population in these districts averages 46,527 people (median is 15,706). Three Congressional districts have more than 100,000 disenfranchised people (Texas 6th, Texas 12th, and Texas 26th), and a fourth has well over 300,000 (Florida 1st). For the same reasons mentioned above, people are not likely to respect political boundaries in seeking care, but distance and travel time are real barriers that make seeking care outside of one's community less probable.

Map 3
Estimated Medically Disenfranchised People by Congressional District, 2005



Note: Does not subtract health center patients as state and U.S. medically disenfranchised figures do.
Source: Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates.

Other Estimates of Those Who Experience Poor Access to Care. As an estimate of difficulty in accessing care, medical disenfranchisement is useful because it allows us to locate and quantify the affected people. It does not allow us to estimate those affected by race, ethnicity, income, age, or health status. However, another important measure of risk for not

being able to access care – the number of Americans who report having no usual source of care (USC) –can be broken down by these categories. Having a USC is a necessary component of a medical home. Estimates of not having a USC is another valuable measure of a lack of access to primary care, but these estimates are not comparable to our estimates of medically disenfranchised because they measure two different things. While medical disenfranchisement estimates the extent of physician shortages on access to primary care, reports of lacking a USC tend to consider multiple and even compounding access barriers. Neither measure is complete, and both likely underestimate the true number of at risk people. However, both help describe the extent to which access to primary care is a problem.

Nearly 1 in 5 (19.3%) men, women, and children (55.5 million people) reported lacking a USC in 2004 according to the U.S. Medical Expenditure Panel Survey.[5] The fact that this number is remarkably, if coincidentally, the same as our estimate of medical disenfranchisement reinforces the fact that the number of at risk people is a large proportion of our fellow Americans. Of those without a USC, 32% are uninsured and 21% are low income. This means that the majority of those without a USC are *insured* and *not in poverty*. Yet we find that the *uninsured, low income, and members of racial and ethnic minority groups are disproportionately affected* by the lack of USC:

- 52% of *all* uninsured people under 65 years of age have no USC;
- Nearly a quarter (24%) of *all* poor or near-poor are without a USC; and
- 32% of *all* Hispanic or Latino Americans have no USC and 23% of *all* Black, non-Hispanic people have no USC.

In addition, 9.1% of *all* Medicare beneficiaries without other sources of insurance lack a USC. People who describe their health as Fair or Poor do slightly better at having a USC, but four million of them (of 31 million; 14% Fair health, 11% Poor health) have been unable to establish a continuous healing relationship with a provider.

The Behavioral Risk Factor Surveillance System (BRFSS) is another national survey that allows a look at USC for *adults* on the state level. (See Appendix F for methodology and detail.) This survey reveals that the uninsured without a USC in 2005 range from 18% in **Minnesota** to 60% in **Texas**. Appendix E displays state level findings of the percent of uninsured without a USC, as well as the percent of uninsured with a USC. In 30 states, at least 40% of uninsured residents are without a USC, and many are states that have a lower than average proportion of state residents that are medically disenfranchised. State with a lower proportion of counties with federally-designated physician shortages and medical underservice, like **West Virginia** and **Oklahoma**, tend to have low medical disenfranchisement estimates and high estimates of uninsured without a USC. In all states, health centers may be important and even the primary provider of care for the uninsured who reported having a USC. Again, it is important to keep in mind that these are two different and valuable ways of measuring poor access to primary care.

Medical Homes Save Lives

A medical home is a patient-centered, regular, and continuous source of primary care, proven to provide better health outcomes and lower costs of care.[6] Although health insurance often facilitates access to care, it does not guarantee access to a usual source of care or to a medical home.[7] In fact, having a medical home is a greater predictor of the likelihood of receiving care. While the benefits of primary care and medical homes are well-documented, it is clear that having *both* a medical home and health insurance will most effectively improve access

to care and produce better health outcomes. In fact, people who have a usual source of care but no health insurance actually receive more primary care than those who have insurance but no source of usual care, and those that have both fare best of all.[8]

According to the American Academy of Family Physicians, the American Academy of Pediatrics, the American College of Physicians, and the American Osteopathic Association, a medical home encompasses the following:[9]

1. An ongoing relationship with a *personal physician* trained to provide first contact, continuous, and comprehensive care.
2. A *team of other individuals at the practice* led by the personal physician to collectively take responsibility for the ongoing care of patients.
3. An approach to care that *covers the whole person*, so that the personal physician is responsible for providing all of the patient's health care needs or for arranging care with specialists as needed.
4. *Care is coordinated and/or integrated* across the entire health care system, including hospitals, nursing homes, home health agencies, and other care settings, to ensure that patients receive the care they need when and where they need and want it.
5. *Quality and safety* are key features and entail the use of evidence-based medicine and clinical decision-support tools to guide decision-making, physician commitment to continuous quality improvement; involving patients in decision-making; the use of health information technology where possible to support optimal patient care, performance measurement, patient education, and enhanced communication.

Medical homes are becoming a central theme in health care reform efforts in many states. Several states are offering new proposals and programs to expand insurance coverage and access to care, and some are honing in on medical homes as a key component. In dealing with the aftermath of Hurricane Katrina, the state of **Louisiana** has initiated an overhaul of its hospital-based system of care to focus more on community-based ambulatory medical homes. The Louisiana Health Care Redesign Collaborative aims to "improve health care by providing every [resident] with a medical home that is prevention centered, neighborhood located and electronically connected." This redesign effort will focus on three core elements: local solutions, patient centered care, and access to quality care for all.[10] **Missouri** Governor Matt Blunt, in his recent State of the State Address, called for an "entirely new system" for poor residents. While the program revamps Medicaid, it also establishes "health care home coordinators" and increases financial support for health centers in the state.[11] In addition, at least twelve states (including **California**, **Connecticut**, **Florida**, **Idaho**, **Iowa**, **Louisiana**, **Maryland**, **Mississippi**, **Rhode Island**, **Texas**, **Washington**, and **West Virginia**) have enacted legislation to create or encourage the creation of medical homes specifically for children.[12]

Having a medical home offers improved health outcomes and lowers health care costs independent of other factors. For example, accessible primary care is associated with reduced heart disease and cancer mortality disparities related to socio-demographic measures and lifestyle factors whereas other medical services are not.[13] When people have a regular source of health care, they better manage chronic illness, receive more cancer screenings, and even have fewer lawsuits against emergency rooms.[14] In an extensive review of relevant literature, Starfield and Shi found that having a medical home is a greater predictor of receiving care than having insurance alone, and that having a medical home is generally associated with better utilization and outcomes, including needs recognition, earlier and more accurate diagnoses, reduced emergency room use, fewer hospitalizations, lower costs, better prevention, fewer unmet

needs, and increased patient satisfaction.[15] Medical homes are therefore essential means for improved health outcomes, the prevention of costlier illnesses, and cost savings.

A wealth of evidence suggests that science and technology alone aren't sufficient. People need a place and a relationship in which they can access the fruits of science, make sense of their conditions, integrate their care, receive preventive care, and be coached on changing their behaviors. One measure of the capacity to have such relationships and to have a medical home is the number of physicians in a community. Even this measure is associated with important personal and population health effects. For instance, increasing the number of primary care physicians is associated with diagnosing breast cancer at earlier stages,[16] lower incidence of and mortality from cervical cancer[17] and colorectal cancer,[18] fewer cases of infant mortality and low birth weight,[19] and reduced stroke and post-neonatal mortality.[20] People who live in states or counties where there is a higher concentration of primary care physicians are more likely to report being in good health than those living in areas with a low concentration of primary care providers.[21] A higher primary care physician-to-population ratio is also associated with lower mortality rates overall, while higher rates of specialty care providers are associated with higher mortality rates. Moreover, this finding is especially pronounced in the case of family physicians, the only primary care specialty consistently associated with lower mortality and the one most likely to distribute like the population.[22]

Higher primary care physician-to-population ratios and improved primary care quality also minimize health care disparities related to income and race/ethnicity. Such disparities are often co-occurring and are well-documented factors contributing to poorer access to care, poorer health outcomes, and even death.[23] Primary care characterized by enhanced accessibility, continuity, and interpersonal relationships with physicians is associated with better self-rated general and mental health, and is found to mitigate disparities related to income, race and ethnicity, and socioeconomic inequalities.[24] Moreover, minorities living in poverty can make the most improvement through higher quality primary care.[25] Approximately 80% of people in the U.S. have a usual source of care or medical home, and for the overwhelming majority, that source is a primary care provider.[26]

Clearly, medical homes play an important role in the balancing of health care cost, access, and quality. Improving access to primary care can in fact make health insurance more affordable to those who are insured by lowering the overall costs of care. While attention must be paid to the growing numbers of uninsured and underinsured, policymakers will want to pay close attention to where those individuals, and the millions who will remain uninsured, are able to turn for affordable, accessible primary health care.

The Health Center Model: Why It Works

Currently, health centers serve 16 million patients through over 5,000 locations in every state and territory. Patients often rely on health centers as their only source of care outside of hospital emergency departments. In fact, health centers furnish approximately 22% of all ambulatory care visits provided to the uninsured outside federally-run facilities.[27] As the figures below display, 92% of health center patients are low income and 71% of health center patients have family incomes at or below poverty, 40% of health center patients are uninsured and

another 36% depend on Medicaid, and roughly two-thirds of health center patients are racial and ethnic minorities. Health center patients live in rural, frontier, urban, and even suburban areas.[1]

Figure 1

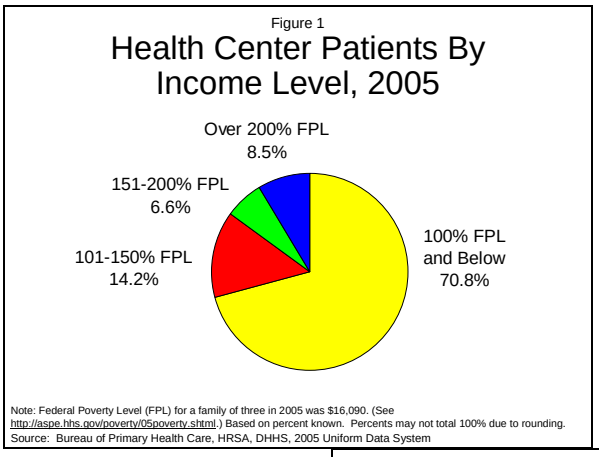


Figure 2

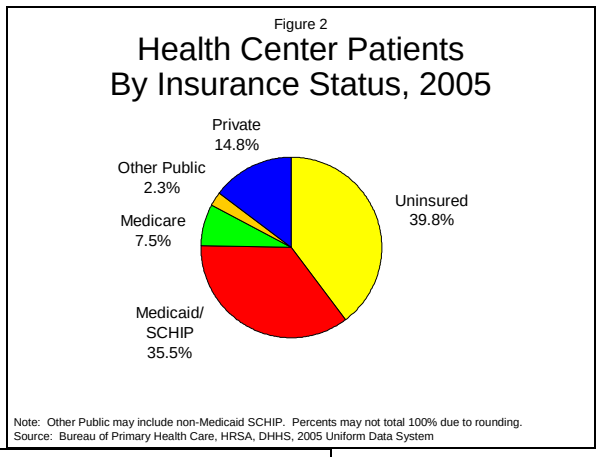
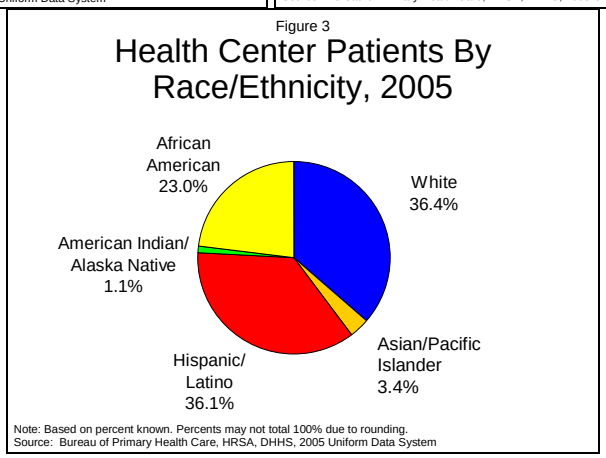


Figure 3



As illustrated in Figure 4, the number of low income health center patients grew almost *six times* the number of low income Americans between 2000 and 2005. The number of uninsured patients cared for at health centers has also continued to rise rapidly. Uninsured patients treated by health centers grew nearly *three times* the number of uninsured nationally (Figure 5), while the number of health center Medicaid patients also grew *three times* the number of Medicaid patients nationally (Figure 6).

[1] Unless otherwise stated, health center data come from 2005 Uniform Data System, Bureau of Primary Health Care, HRSA, HHS.

Figure 4

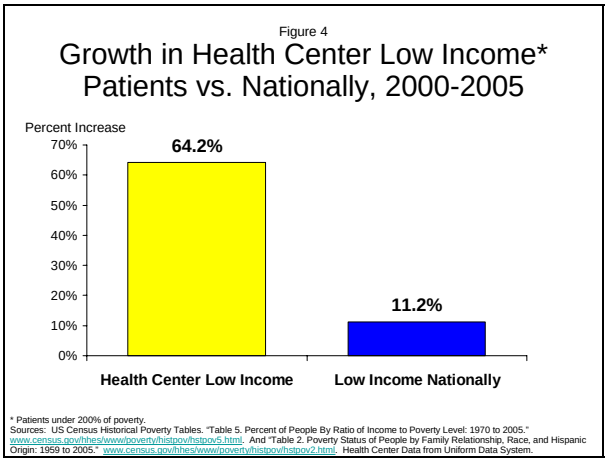


Figure 5

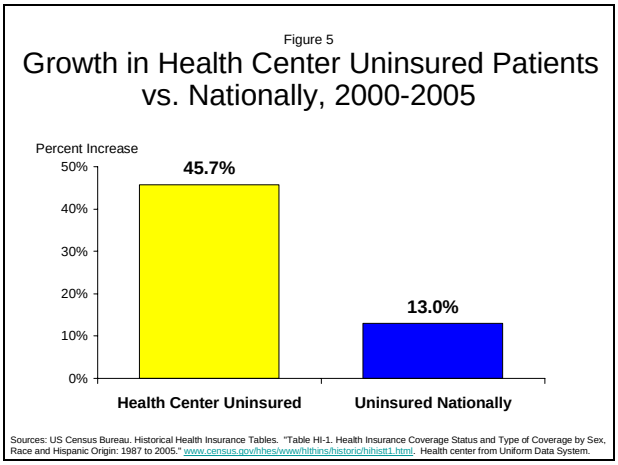
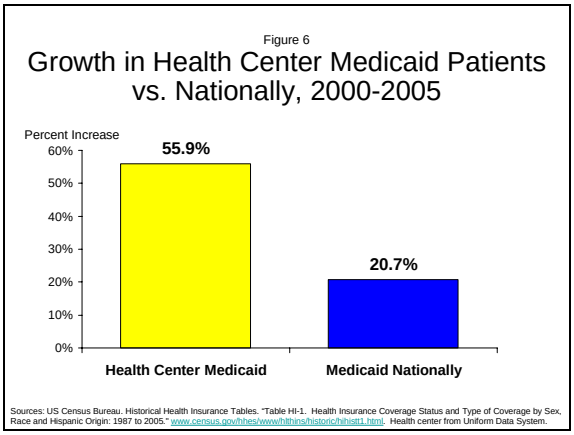
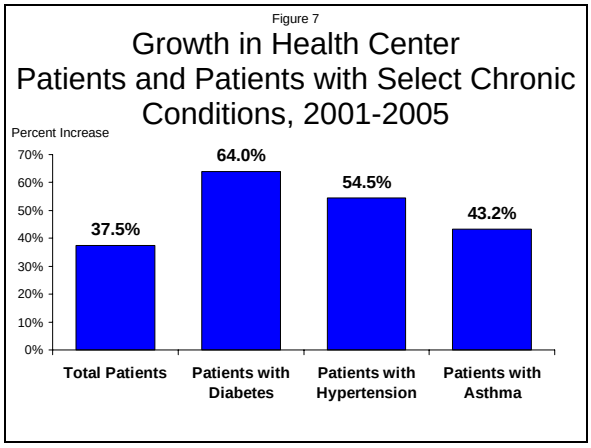


Figure 6



Health centers provide care to growing numbers of patients suffering from chronic illnesses such as diabetes, high blood pressure, and asthma. Health centers treated more than 844,000 patients with diabetes, more than 232,000 patients with heart disease, almost 1,340,000 patients with high blood pressure, and nearly 445,000 with asthma in 2005. As displayed in Figure 7, the number of patients with diabetes, hypertension, and asthma grew faster than total patients between 2001-2005. The related patient visits are costly to treat and make up a significant proportion of total patient visits. In fact, roughly one-quarter of all health center medical visits are for chronic illness.

Figure 7



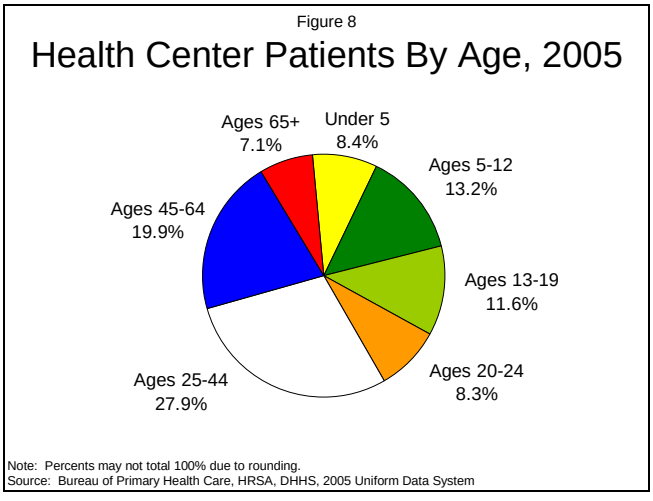
Health Centers as an Answer to the Health Care Crisis

The nation's federally-supported Community Health Centers (which also include health centers serving farmworker and homeless populations) stand as model health care homes. Also known as Federally-Qualified Health Centers (FQHCs), health centers provide high quality, affordable primary care and preventive services to low income and traditionally underserved communities. Launched in 1965 as part of President Johnson's War on Poverty, the concept of the federal health centers program has remained constant throughout its history. The idea then as it is now more than forty years later, is that widening access to an affordable and regular source of care in places where doctors are scarce helps break the cycle of disease and poverty. In recent years, health centers have expanded upon this original concept by adding vital oral health, behavioral health, and pharmaceutical services, thereby evolving from "medical homes" to much more comprehensive "health care homes" for their communities. Health centers help individuals successfully overcome barriers to care because the centers are located in high-need areas, are open to all community residents regardless of their insurance status or ability to pay, offer services that facilitate access to care such as outreach and transportation, and tailor their services to their communities' unique cultural and health needs.

Today, health centers remain an effective model for improving the health of medically underserved communities and people. They fulfill the American Academy of Family Physicians, American Academy of Pediatricians, American College of Physicians, and American Osteopathic Association five-point definition of medical home as described above.

1. Health centers are *personal physicians*. In fact, 84% of patients report being able to identify a particular health center physician as their own,[28] compared to 38% of adults 36% of children nationally.[29]
2. Health centers *care for patients throughout the life cycle*. The figure below demonstrates that health center patients span all ages. Interestingly, the fastest growing age group is the 45 to 64 year-olds, who tend to be disproportionately uninsured.[30] Moreover, federally-funded health centers delivered 3.2 million well-child visits to patients under age 12 and provided prenatal care to 397,000 pregnant women in 2005.

Figure 8



Note: Percents may not total 100% due to rounding.
Source: Bureau of Primary Health Care, HRSA, DHHS, 2005 Uniform Data System

3. Health centers also differ in approach from conventional medicine in that they *deliver care in a team-based setting*. Health centers deliver care through teams of providers,

which include primary care clinicians, case managers, behavioral health specialists and others. This team-based approach to care is an important feature of health centers not found in most clinical settings and embraces new models of health care emphasized by several physician organizations and the Institute of Medicine as being important to quality and safety. Team-based care impacts health and health care outcomes positively. In fact, health centers are a leading model for how to organize and finance care by teams, which is particularly difficult in a largely fee for service environment that does not reward such care.[31] While often cited as an approach to better care delivery in the U.S, the health care system struggles to incorporate team-based care into all primary care settings and programs.[32]

4. Health centers take a complete approach to health care by *coordinating and integrating* with social services to mitigate the effects of poverty. These services may include case management, assistance with free or reduced cost medication programs, and health education in clinical and other settings. Helping to integrate peoples' care, keeping them whole in a fractured system, is a critical function of a medical home and one at which health centers excel.
5. Health centers *provide high-quality care that improves patient health and reduces health disparities.* Health centers are on the front line of acute social disparities that largely explain the wide disparities in health in the U.S. Health centers have a proven record of reducing health disparities, improving birth outcomes, and effectively managing chronic diseases. They have been credited with reducing infant mortality and low birth weight.[33] They owe part of their success to a nationwide initiative called the Health Disparities Collaboratives, which establishes a new model for the treatment of chronic disease, incorporates methods for making rapid improvements in patient-centered care, and empowers patients to take charge of managing their illnesses. The Collaboratives have substantially improved the quality of care at health centers, which in turn has improved rates of screening and outcomes for diabetes, hypertension, and other illnesses. The Collaboratives have also contributed to *lower overall patient costs*, even while the number of primary care visits has risen. Both the Institute of Medicine and the Government Accountability Office (GAO) have recognized health centers for their effective and efficient delivery of primary care.[34] Moreover, fully 99% of patients are satisfied or very satisfied with the quality of care they receive at health centers, compared to satisfaction rates of 67% to 87% reported in other national surveys of physician visits.[35]

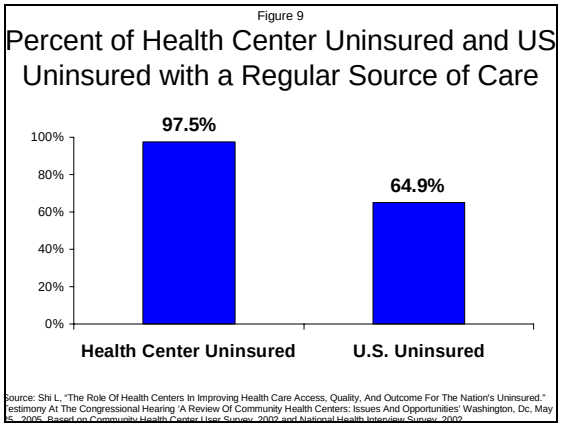
In addition, health centers expand on this concept of medical home in several ways. These features common to all health centers help overcome barriers to care and make the care provided much more effective. Health centers, then, are more suitably "health care homes." Health centers:

- *provide health care services not normally seen in primary care settings*, such as dental care, behavioral health care, and pharmacy services.
- are *open to all residents and their services are not contingent on ability to pay.*
- are required to be *located in high-need areas* identified by the federal government as having elevated poverty, higher than average infant mortality, few physicians in practice, or sufficient social and financial barriers to the existing healthcare infrastructure.

- *customize and tailor their services* to meet the specific needs of their patients and communities. While nearly one-third of their patients are best served in languages other than English, 95% of patients report that their doctor speaks the same language as they do.[36]
- are *committed to community health improvement* and *patient involvement in healthcare delivery*. Community boards remain a key aspect of the health center model, ensuring that health center care prioritizes the particular needs of each community being served. This way of engaging communities to define their own health care needs and make care community-oriented is frequently an obstacle for communities that have no health centers and where care has traditionally been dictated by physicians and hospitals.
- Health centers *offer enhanced access to care.* They actively engage the community through outreach to publicize their services and often provide transportation services to and from their sites. They also make use of "open access scheduling" so that patients can make same day appointments and are often open evenings and weekends. Over half (54%) of patients report seeing their doctor within 15 minutes of arrival. In addition, only 24% indicate that their wait to see a provider was too long, compared to other settings where 53% of Medicaid and privately insured patients felt their wait was too long.[37]

As an access point for people to establish continuous healing relationships, health centers reduce the risk of new health problems. Patients experience improved health, are more likely to get the preventive care they need, less likely to have unmet needs, and less likely to use the emergency department or be hospitalized.[38] In fact, uninsured health center patients are much more likely to report having a regular source of care than the uninsured nationally, as displayed in the figure below, and are more likely to receive the care they need than the uninsured nationally.[39]

Figure 9



Studies point to health centers' reduction in preventive care and health status disparities.[40] Continuity of care, in terms of consistently going to the same provider for all or most care, is better and even increasing at health centers.[41] Health centers' commitment to customizing care to best serve medically vulnerable communities improves outcomes at both the individual and community levels. Moreover, their *costs of care rank among the lowest, and they reduce the need for more expensive inpatient, emergency, and specialty care*, saving billions of dollars for taxpayers. In fact, they have been shown to save Medicaid up to 30% per beneficiary per year.[42] Not only are health centers effective health care homes, they also generate savings while stimulating the local economy.

Notably, the vast majority of health center patients are poor, uninsured or publicly insured, or members of racial and ethnic minority groups. These traditionally underserved patients often rely on health centers as their only means of securing high quality primary care. As an effective model of care, expanding the federal Health Centers Program will improve access to care for millions who currently lack a health care home. More specifically, expanding health center capacity would reduce unmet need, narrow health disparities, decrease the percent of uninsured with a usual source of care, and make the overall system more efficient with reduced hospitalizations and emergency room use.[43]

This is why NACHC has developed a strategy to reduce the unmet need in America and directly confront the growing crisis of the medically disenfranchised. The plan, the **Affordable Comprehensive Care, Expanded to Strengthen Service (ACCESS) for All America** charts future health center growth to guide future increases in federal support for the Health Centers Program and the accompanying policy priorities necessary for continued expansion. By consistently escalating their rate of growth over the next eight years, health centers can become health care homes for nearly twice the number of patients currently served. An estimated 30 million Americans could have access to high-quality primary care in a health center by the year 2015. This expansion plan is an important part of improving access to primary care for the growing number of uninsured, underinsured, and publicly insured people experiencing increasing barriers to care. Eventually, the plan envisions program growth to reach all Americans who are without a health care home today, with health centers serving as a model and innovation leader for what primary care practice could become.

Remaining Challenges

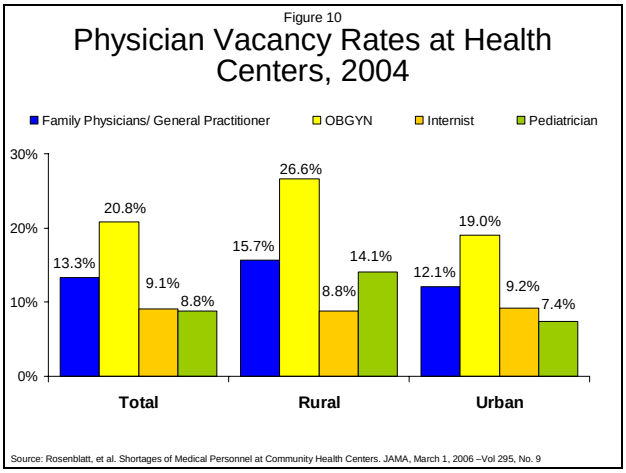
Health Center Appropriations. The continued growth of direct federal appropriations for health centers remains the principal factor behind expansion of the program. Through new funding for New Access Points, Expanded Medical Capacity grants, and Service Expansions, health centers will continue to expand in their communities and into new areas, and will serve as "one-stop shops" for necessary services beyond basic primary medical care. Originally conceived as the means to fund care for the uninsured who rely on health centers, federal grant funding as a proportion of uninsured costs has slowly declined over the years.[44] The desire and readiness for health centers among communities is greater than current and previous appropriations can support. During the first expansion initiative, which began in fiscal year 2002, for every one application that received funding, there were at least two more applications scored "fully acceptable" or higher that were not funded. Moreover, federal appropriations have not kept up with the cost of patient care.

Workforce shortages. The availability of primary care physicians has deteriorated in recent years.[45] In fact, the number of primary care physicians per capita has changed very little, while the number of specialists has been rapidly growing – accounting for more than three-quarters of the growth in per capita physicians from 1980 to 1999.[46] Primary care specialties have lost their appeal to U.S. medical school graduates, and specific primary care specialties are seeing young physicians look to more lucrative sub-specialization.[47] At the same time, it is estimated that the demand for primary care providers will increase 38% from 2000 to 2020.[48] The lack of primary care physicians is expected to be compounded by a rapidly rising elderly population. The number of people ages 65 and older is expected to grow 54% between 2000 and 2010, while the number over the age of 85 will grow 43% over the same time.[49] The

skyrocketing growth of the nation's elderly will create even greater demand for primary care. Researchers currently predict that there will not be enough primary care physicians to take care of the aging population and the related growing incidences of chronic conditions.[50] There is a real need to shore up primary care training and to increase training flexibility—particularly to permit more training in health centers, to offset escalating student debt which makes primary care a less viable choice, and to offer loan repayment and other incentives for people choosing to provide primary care services to disenfranchised populations.

Health centers are already experiencing difficulty recruiting qualified providers, and this will be compounded as the number of health centers increases. Clinician vacancies at health centers coupled with national shortages in primary care providers threaten health centers' ability to meet rising demand. The impact will be felt most in underserved communities where it is often difficult to recruit providers to live and work. While nearly every physician at health centers specializes in primary care, health centers are particularly dependent on family physicians and general practitioners. A recent national survey of health centers found that 13.3% of family physician positions were vacant in 2004, as displayed below in Figure 10. The most pressing primary care physician vacancy was for obstetricians/gynecologists, with a 20.8% national vacancy rate. Rural health centers are particularly challenged in recruiting primary care physicians.[51]

Figure 10



These factors underscore the need for continued support for federal programs that help ensure that health centers have adequate numbers of clinicians, such as the National Health Service Corps (NHSC) and other federally-supported training programs. Such programs are currently targeted for cuts or even elimination under the President's FY 2008 budget, and yet the capacity of health centers to serve new communities depends on whether they will be able to fill their staffing needs. In fact, all health centers report participating in one or more federal or state workforce programs, with the NHSC loan repayment being the most frequently cited program. Rural health centers are especially reliant on these programs for clinicians.[52] Although these federal efforts have aided health centers in recruiting and retaining new clinicians, significant gaps remain. For these reasons, it is essential that Congress revitalize and enhance support for workforce programs, especially those that are targeted on reversing the decline in the primary care workforce, stimulating greater levels of service in underserved communities, and achieving greater diversity among practicing health professionals.

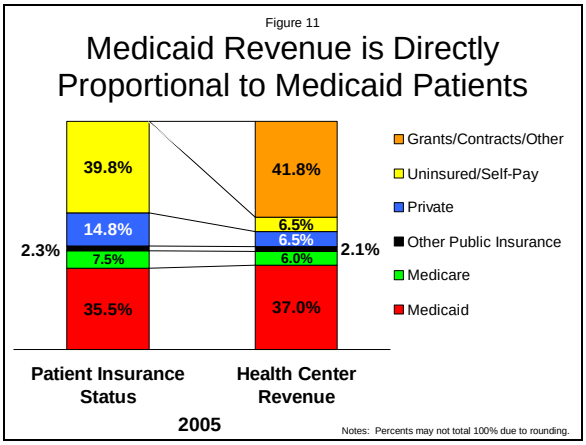
Capital projects. Continued growth in the federal appropriation for health centers is critical for the expansion effort to new communities and the addition of new services. Without investment, health centers cannot achieve the technological improvements and quality measurements that ensure high quality of care. For example, while health centers eagerly seek the use of health information technology (HIT), the most commonly reported barrier to adopting electronic health records is cost. In a 2006 national survey of health centers, only 9% of health centers reported being fully electronic, and 89% reported "lack of capital" as a barrier.[53] Health centers require financial support for HIT that is separate and apart from the support they receive to pay for care delivery. Just as the federal government took advantage of its leverage and authority with the Veterans Administration to put in place what has become a model hospital HIT platform, it could similarly take advantage of its leverage and relationship with health centers to give America's disenfranchised a common and robust HIT system.

In addition, NACHC surveys reveal that one in three health centers currently operates in buildings that are over 30 years old, and in 12 states, two-thirds of centers need to modernize or expand their buildings or construct new facilities. Yet construction, modernization, or expansion of health centers cannot be paid for with federal grant dollars. Health centers have limited financial capital to undertake much needed facility improvements, expansions, and new site development.

Insurance Expansions. While having health insurance does not guarantee adequate access to care, it is a powerful enabler. Because the access barriers that the disenfranchised face go beyond lack of insurance, extending health insurance coverage to all people in the U.S. would remove one of the highest hurdles for them to get the health care they need. Universal coverage would stoke the healthcare engine in a proper way, making primary care a more viable business model. By increasing access to appropriate care, universal coverage would likely reduce unnecessary costs and suffering that are currently borne by the medically disenfranchised and by healthcare providers. Universal coverage would provide health centers financial security and give them necessary revenue for improving quality and access. Growth in the uninsured and underinsured populations and the weakening of public insurance commitments leave health centers stretched thin. Insurance provides patients with better guarantees of access to needed specialty care – something that health centers commonly struggle to provide for their uninsured patients. Thus, maintaining and expanding insurance coverage must be part of a successful growth plan. While currently 47 million are uninsured, a recent analysis projected that by 2013, the number of uninsured people will soar to 56 million, or even substantially higher if health care costs grow faster than expected and if enrollment in Medicaid and the State Children's Health Insurance Program (SCHIP) falls.[54]

Importance of Medicaid and Medicare Coverage and Revenue. As the largest insurer of health center patients, adequate Medicaid payments and sustained Medicaid enrollment are essential to a health center's financial viability. Currently, Medicaid is the most reliable payer and has helped propel health center growth in recent years. As the figure below demonstrates, the proportion of Medicaid patients is directly related to the proportion of revenue from Medicaid. This direct relationship is not the same in the case of other payers. Medicaid payments to health centers through a Prospective Payment System (PPS) as the law requires has helped ensure that health centers' grant revenues are dedicated to care for the uninsured. Nonetheless, some state PPS rates may not adequately cover Medicaid services delivered to health center patients. The GAO, in fact, concluded that PPS rates in at least one-third of all states may not include all Medicaid-covered health services, and that many states have not

created a process for rebasing PPS rates due to a change in a center's scope of services, nor even specified what constitutes a change. In addition, states using alternative methodologies as a substitute for PPS have not ensured that their health center payments are at least equal to the amount the centers would have received under PPS. The GAO concluded that these issues reflect a lack of adherence to the PPS law. Moreover, the GAO determined that existing inflation indices do not accurately reflect true costs of care increases.[55]



When states change Medicaid to increase cost sharing and reduce benefits and enrollment, health center patients lose their coverage. Equally important, Medicaid patients rely on health centers for their ambulatory health needs beyond basic medical care, including vision, dental, mental health, and substance abuse services. Cutting back on these Medicaid benefits could threaten a health center's ability to continue offering these services, especially if Medicaid serves as the primary payer source for them. More recently, new rules went into effect on July 1, 2006 that require all Americans to provide documentation and proof of citizenship when they apply for or seek to renew their Medicaid benefits. The Center for Budget Policy Priorities found early evidence in six states (**Iowa**, **Kansas**, **Louisiana**, **New Hampshire**, **Virginia**, and **Wisconsin)** that these new requirements are triggering significant declines in enrollment. States are also experiencing huge backlogs of applications, due to extra paperwork and the time it is taking applicants to get the necessary documentation.[56]

While Medicare insures far fewer health center patients (7.5%), the number of Medicare patients continues to grow. Yet the percent of charges that Medicare pays has been decreasing over the last few years as a result of a federally-imposed payment cap that affects an ever-increasing number of health centers. More than 75% of all health centers are reimbursed at the Medicare payment cap, which fails to keep up with the cost growth of health care. NACHC's analysis of Medicare cost report data found that nationally, health centers are experiencing Medicare losses totaling at least $51 million annually due to this artificial cap, with some health centers reporting losses in excess of $1 million annually. Other estimates put this total loss much higher. Another factor contributing to these Medicare losses is the limited scope of services for which health centers are reimbursed. This limited list of reimbursable services means that health centers are not paid for providing a number of important services to Medicare patients. In all, health centers on average collect only 69% of their Medicare costs.

Conclusion

There is increasing consensus that our healthcare system is in crisis and that without significant reform, it is headed for a complete meltdown. Too many people are losing insurance coverage (47 million and growing). At the same time, at least 56 million do not have access to a medical home because of a shortage of local primary care physicians, a figure likely to grow given the declining rate of physicians entering primary care. These 56 million Americans – the medically disenfranchised – run the risk of poorer outcomes. Extensive evidence documents that *access to primary care, especially through medical homes, results in better health outcomes, reduced health disparities, and lower health care expenditures*. Because the medically disenfranchised come from all walks of life, better access to primary care would benefit all Americans. However, low income, minority, and uninsured populations would especially benefit because their health is more likely to be compromised and they run the greatest risk of using costly hospital-based care for avoidable conditions.[57]

Virtually all health care experts support a major investment in a primary care system, underscoring *the importance of moving primary care to a central place on the nation's health reform agenda*. While the large number of individuals without any or adequate health insurance coverage creates challenges for achieving the type of fundamental health system change that is needed, it is possible, through targeted investment, to make significant and meaningful improvements in the accessibility and quality of primary care. Targeting the medically disenfranchised will likely produce significant gains in national health. The best way to truly improve access to care is to remove all barriers to care, such as physician shortages or uneven distribution, insurance coverage and affordability, as well as geographic, language, and cultural barriers. True progress in resolving this crisis will necessarily involve overcoming all these barriers in order to ensure that all Americans have a usual source of care.

The features that make primary care effective are found in both private group practices and in hospital-based and freestanding clinics. Among the various models, however, *health centers have been repeatedly evaluated as especially effective in terms of both cost and patient health*, given their community accessibility as well as their ability to furnish timely and high quality care in a manner adapted to patient need. Patients served in health centers show higher levels of health than similar patients served in other settings. *Extensive studies have underscored health centers' quality, cost-effectiveness, and their ability to reduce racial, ethnic, and socioeconomic health disparities*. Notably, health centers are credited with improving health outcomes, not only for individual patients but also for the communities they serve, in terms of lower infant mortality, lower rates of chronic conditions, especially among minority patients, and greater use of preventive services. In terms of producing overall system savings, several studies have found that *health centers save the Medicaid program 30% or more in annual spending* for health center Medicaid beneficiaries due to reduced specialty care referrals and fewer hospital admissions, thereby producing significant savings in combined federal and state Medicaid expenditures.

By growing the number and reach of health centers, Congress can simultaneously give more Americans a medical home, improve the quality of their care, and dramatically lower overall costs – making health insurance more affordable for all. Increased federal funding is the first step in assuring that health centers have the resources, staffing, and facilities necessary to serve as a true "health care home" to all Americans in need. The expansion of access to high-quality primary care will make an enormous difference in health care outcomes and costs for all Americans – and the nation's Community Health Centers stand ready, willing, and able to improve our nation's health care system today. Congress has taken a bold step, investing $750

million in new funding over the past six years in federally-supported Community Health Centers, thereby decreasing the number of medically disenfranchised by more than 5 million. This year, it has appropriated an historic $207 million increase for health centers, providing access to a health care home for 1.5 million more Americans. The new funding also helps stabilize existing health centers, already seeing growing numbers of low income and chronically ill individuals. While this new funding will help to continue the necessary growth of the program, much more will be needed in future years to further reduce the backlog of unmet need across the country.

The ACCESS strategy is designed to guide federal investment in health centers, as well as related health care policies, around several priorities that will best support health center expansion into new areas of need and ease rising costs of care. Accordingly, we recommend the following:

- Federal investment in the expansion of health centers to communities in need;
- Targeted health center investment aimed at making available a comprehensive range of necessary services, such as a mental health, oral health, and pharmacy services in high need communities;
- Revitalization of key health workforce programs, including the National Health Service Corps (NHSC);
- Targeted investment in tools such as health information technology (HIT) to ensure that health center expansion is not just fast enough to meet the growing need but also efficient, effective, and transparent;
- Affordable insurance coverage for health center employees so that their financial resources are efficiently directed to patient care;
- Restoration of construction authority and funding for building new health center sites; and
- Strengthening of current public payer sources, such as Medicaid or Medicare.

Moreover, we offer additional recommendations to provide other long term solutions to growing unmet health care needs:

- Policymakers must find long term solutions to expand health care coverage for all people in the U.S.; and
- Policymakers must further support primary care training, including increased incentives for physicians to work in underserved areas.

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Appendix A

State Population and Total Population Considered Medically Disenfranchised,* 2005

State[#]	Population, 2005	Total Medically Disenfranchised, 2005	Percent of Population Medically Disenfranchised
Alabama	4,557,808	2,548,219	55.9%
Alaska	663,661	297,730	44.9%
Arizona	5,939,292	1,265,402	21.3%
Arkansas	2,779,154	514,009	18.5%
California	36,132,147	3,997,327	11.1%
Colorado	4,664,119	905,759	19.4%
Connecticut	3,510,297	451,912	12.9%
Delaware	843,524	283,217	33.6%
District of Columbia	550,521	82,867	15.1%
Florida	17,789,864	8,150,146	45.8%
Georgia	9,072,576	1,335,787	14.7%
Hawaii	1,275,194	25,583	2.0%
Idaho	1,429,096	557,137	39.0%
Illinois	12,763,371	1,677,848	13.1%
Indiana	6,271,973	582,284	9.3%
Iowa	2,966,334	529,620	17.9%
Kansas	2,744,687	1,362,340	49.6%
Kentucky	4,173,405	662,654	15.9%
Louisiana	4,523,628	1,475,774	32.6%
Maine	1,321,505	72,315	5.5%
Maryland	5,600,388	380,441	6.8%
Massachusetts	6,398,743	1,269,791	19.8%
Michigan	10,120,860	1,656,884	16.4%
Minnesota	5,132,799	578,171	11.3%
Mississippi[†]	2,921,088	1,320,128	45.2%
Missouri	5,800,310	2,572,776	44.4%
Montana	935,670	108,035	11.5%
Nebraska	1,758,787	126,605	7.2%
Nevada	2,414,807	607,000	25.1%
New Hampshire	1,309,940	149,594	11.4%
New Jersey	8,717,925	187,300	2.1%
New Mexico	1,928,384	367,889	19.1%
New York	19,254,630	2,374,642	12.3%
North Carolina	8,683,242	1,861,481	21.4%
North Dakota	636,677	95,675	15.0%
Ohio	11,464,042	1,156,683	10.1%
Oklahoma	3,547,884	324,075	9.1%

State[#]	Population, 2005	Total Medically Disenfranchised, 2005	Percent of Population Medically Disenfranchised
Oregon	3,641,056	1,533,234	42.1%
Pennsylvania	12,429,616	797,030	6.4%
Rhode Island	1,076,189	273,181	25.4%
South Carolina	4,255,083	1,896,296	44.6%
South Dakota	775,933	108,623	14.0%
Tennessee	5,962,959	1,222,929	20.5%
Texas	22,859,968	4,637,766	20.3%
Utah	2,469,585	1,214,063	49.2%
Vermont	623,050	32,180	5.2%
Virginia	7,567,465	783,606	10.4%
Washington	6,287,759	2,204,188	35.1%
West Virginia[‡]	1,816,856	Data Not Available	Data Not Available
Wisconsin	5,536,201	772,367	14.0%
Wyoming	509,294	106,045	20.8%
US	296,409,346	56,172,709[#]	19.0%

* The medically disenfranchised are those people with no or inadequate access to a primary care physician due to local shortage of such physicians. They are a *subset* of the medically underserved who face various and often compounding barriers to care. The medically disenfranchised live in a primary care Health Profession Shortage Area (HPSA) or Medically Underserved Area (MUA), or who are considered a Medically Underserved Population (MUP) after subtracting a standard 2000 people for every primary care physician. For national and state estimates only, the medically disenfranchised exclude the number of people cared for by health centers in that same designated area. County level and congressional district level do not account for health center patients given an inability to align health center patients by this region. This is a conservative calculation, since there are undoubtedly individuals who live in areas with more than one primary care physician per 2000 residents, and even in areas that are not designated as HPSAs or MUAs, yet who cannot find a source of primary health care that will accept their insurance (this is increasingly true for individuals who have Medicaid and now even Medicare. For more information on methodology, see Appendix F.

[#] US and state totals of medically disenfranchised take health center patients into account (i.e., patients are deducted as explained above). While state health center patients are derived from federally-funded health centers that are required to report data annually, the US total also includes patients served by a category of health centers that do not receive federal health center funding (known as "FQHC Look Alikes") and are therefore not required to report data annually to the federal government. There are currently over 100 of these health centers around the country. State totals do not include patients served by non-federally funded health centers.

[†] Several health centers affected by Hurricane Katrina in 2005 were unable to report data or were unable to collect patient information for part of the year. This was especially the case for several Mississippi health centers.

[‡] The number of medically disenfranchised in West Virginia may be underestimated because some communities may not be designated HPSAs or MUAs despite having a qualifying physician shortage. The state has relatively fewer HPSAs compared with other similarly rural states

For more information, email research@nachc.com.

Source: Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates, Uniform Data Set 2005 and NACHC 2006 survey of non-federally funded health centers.

Appendix B

Impact of Health Centers on Decreasing the Number of Medically Disenfranchised,* 2005

State	Population, 2005	Medically Disenfranchised *Excluding* Health Center Patients, 2005	Health Center Patients, 2005[#]	Medically Disenfranchised After Deducting Health Center Patients, 2005	Health Center Patients as a Percent of Medically Disenfranchised
Alabama	4,557,808	2,831,514	283,295	2,548,219	10%
Alaska	663,661	375,807	78,077	297,730	21%
Arizona	5,939,292	1,561,368	295,966	1,265,402	19%
Arkansas	2,779,154	637,789	123,780	514,009	19%
California	36,132,147	5,976,994	1,979,667	3,997,327	33%
Colorado	4,664,119	1,302,298	396,539	905,759	30%
Connecticut	3,510,297	649,481	197,569	451,912	30%
Delaware	843,524	305,052	21,835	283,217	7%
District of Columbia	550,521	158,268	75,401	82,867	48%
Florida	17,789,864	8,795,525	645,379	8,150,146	7%
Georgia	9,072,576	1,574,036	238,249	1,335,787	15%
Hawaii	1,275,194	110,178	84,595	25,583	77%
Idaho	1,429,096	646,069	88,932	557,137	14%
Illinois	12,763,371	2,456,469	778,621	1,677,848	32%
Indiana	6,271,973	737,704	155,420	582,284	21%
Iowa	2,966,334	624,480	94,860	529,620	15%
Kansas	2,744,687	1,418,919	56,579	1,362,340	4%
Kentucky	4,173,405	864,901	202,247	662,654	23%
Louisiana	4,523,628	1,601,454	125,680	1,475,774	8%
Maine	1,321,505	197,570	125,255	72,315	63%
Maryland	5,600,388	553,530	173,089	380,441	31%
Massachusetts	6,398,743	1,700,796	431,005	1,269,791	25%
Michigan	10,120,860	2,074,437	417,553	1,656,884	20%
Minnesota	5,132,799	703,593	125,422	578,171	18%
Mississippi[†]	2,921,088	1,602,024	281,896	1,320,128	18%
Missouri	5,800,310	2,865,362	292,586	2,572,776	10%
Montana	935,670	184,555	76,520	108,035	41%
Nebraska	1,758,787	162,328	35,723	126,605	22%
Nevada	2,414,807	674,904	67,904	607,000	10%
New Hampshire	1,309,940	206,009	56,415	149,594	27%
New Jersey	8,717,925	454,173	266,873	187,300	59%
New Mexico	1,928,384	590,165	222,276	367,889	38%
New York	19,254,630	3,471,159	1,096,517	2,374,642	32%
North Carolina	8,683,242	2,173,957	312,476	1,861,481	14%
North Dakota	636,677	117,654	21,979	95,675	19%

State	Population, 2005	Medically Disenfranchised *Excluding* Health Center Patients, 2005	Health Center Patients, 2005[#]	Medically Disenfranchised After Deducting Health Center Patients, 2005	Health Center Patients as a Percent of Medically Disenfranchised
Ohio	11,464,042	1,462,273	305,590	1,156,683	21%
Oklahoma	3,547,884	406,794	82,719	324,075	20%
Oregon	3,641,056	1,729,718	196,484	1,533,234	11%
Pennsylvania	12,429,616	1,262,342	465,312	797,030	37%
Rhode Island	1,076,189	365,622	92,441	273,181	25%
South Carolina	4,255,083	2,191,431	295,135	1,896,296	13%
South Dakota	775,933	159,253	50,630	108,623	32%
Tennessee	5,962,959	1,474,685	251,756	1,222,929	17%
Texas	22,859,968	5,280,467	642,701	4,637,766	12%
Utah	2,469,585	1,298,641	84,578	1,214,063	7%
Vermont	623,050	67,524	35,344	32,180	52%
Virginia	7,567,465	979,683	196,077	783,606	20%
Washington	6,287,759	2,790,652	586,464	2,204,188	21%
West Virginia[‡]	1,816,856	Data Not Available	292,849	Data Not Available	Data Not Available
Wisconsin	5,536,201	926,818	154,451	772,367	17%
Wyoming	509,294	125,294	19,249	106,045	15%
US	296,409,346	71,150,669	14,977,960	56,172,709	21%

* The medically disenfranchised are those people with no or inadequate access to a primary care physician due to local shortage of such physicians. They are a *subset* of the medically underserved who face various and often compounding barriers to care. The medically disenfranchised live in a primary care Health Profession Shortage Area (HPSA) or Medically Underserved Area (MUA), or who are considered a Medically Underserved Population (MUP) after subtracting a standard 2000 people for every primary care physician. For national and state estimates only, the medically disenfranchised exclude the number of people cared for by health centers in that same designated area. County level and congressional district level do not account for health center patients given an inability to align health center patients by this region. This is a conservative calculation, since there are undoubtedly individuals who live in areas with more than one primary care physician per 2000 residents, and even in areas that are not designated as HPSAs or MUAs, yet who cannot find a source of primary health care that will accept their insurance (this is increasingly true for individuals who have Medicaid and now even Medicare. For more information on methodology, see Appendix F.

[#] US and state totals of medically disenfranchised take health center patients into account (i.e., patients are deducted as explained above). While state health center patients are derived from federally-funded health centers that are required to report data annually, the US total also includes patients served by a category of health centers that do not receive federal health center funding (known as "FQHC Look Alikes") and are therefore not required to report data annually to the federal government. There are currently over 100 of these health centers around the country. State totals do not include patients served by non-federally funded health centers.

[†] Several health centers affected by Hurricane Katrina in 2005 were unable to report data or were unable to collect patient information for part of the year. This was especially the case for several Mississippi health centers.

[‡] The number of medically disenfranchised in West Virginia may be underestimated because some communities may not be designated HPSAs or MUAs despite having a qualifying physician shortage. The state has relatively fewer HPSAs compared with other similarly rural states

Source: Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates, Uniform Data Set 2005 and NACHC 2006 survey of non-federally funded health centers. For more information, email research@nachc.com.

Appendix C

Medically Disenfranchised Population in Counties without Health Centers, 2005

County Name, State (Number Medically Disenfranchised)

Blount County, Alabama (31,725)
Bullock County, Alabama (5,055)
Cherokee County, Alabama (12,522)
Clarke County, Alabama (19,669)
Clay County, Alabama (6,564)
Cleburne County, Alabama (10,460)
DeKalb County, Alabama (57,471)
Fayette County, Alabama (28)
Geneva County, Alabama (10,135)
Henry County, Alabama (6,610)
Lee County, Alabama (110,854)
Marion County, Alabama (24,954)
Marshall County, Alabama (69,634)
Pickens County, Alabama (10,178)
Randolph County, Alabama (18,117)
St. Clair County, Alabama (44,330)
Tallapoosa County, Alabama (9,284)
Winston County, Alabama (10,698)

Matanuska-Susitna County, Alaska (891)
Prince of Wales-Outer Ketchikan, Alaska (2,460)
Skagway-Hoonah-Angoon, Alaska (3,126)
Southeast Fairbanks County, Alaska (3,214)
Valdez-Cordova County, Alaska (2,036)
Wrangell-Petersburg County, Alaska (466)
Yukon-Koyukuk County, Alaska (4,143)

Gila County, Arizona (31,525)
Greenlee County, Arizona (4,521)

Arkansas County, Arkansas (7,886)
Benton County, Arkansas (24,662)
Bradley County, Arkansas (7,523)
Columbia County, Arkansas (18,495)
Crawford County, Arkansas (15,848)
Dallas County, Arkansas (2,524)
Desha County, Arkansas (1,358)
Drew County, Arkansas (2,693)
Faulkner County, Arkansas (12,220)
Franklin County, Arkansas (8,218)
Garland County, Arkansas (19,245)
Grant County, Arkansas (7,348)
Hot Spring County, Arkansas (7,264)
Howard County, Arkansas (2,342)
Izard County, Arkansas (11,630)
Johnson County, Arkansas (8,936)
Lincoln County, Arkansas (5,262)
Marion County, Arkansas (8,335)
Miller County, Arkansas (7,162)
Montgomery County, Arkansas (7,274)
Nevada County, Arkansas (3,550)
Perry County, Arkansas (6,468)
Saline County, Arkansas (1,418)
Scott County, Arkansas (5,150)
Sebastian County, Arkansas (5,066)
Sevier County, Arkansas (1,323)
Sharp County, Arkansas (11,197)
St. Francis County, Arkansas (11,902)
Stone County, Arkansas (8,316)
Yell County, Arkansas (15,861)

Amador County, California (2,384)
El Dorado County, California (61,453)
Modoc County, California (7,724)
Nevada County, California (10,955)
Placer County, California (36,657)
San Benito County, California (27,936)
Sierra County, California (3,434)
Tehama County, California (46,934)
Tuolumne County, California (2,983)

Archuleta County, Colorado (6,886)
Baca County, Colorado (3,069)
Chaffee County, Colorado (7,707)
Cheyenne County, Colorado (1,953)
Clear Creek County, Colorado (7,397)
Custer County, Colorado (2,460)
Delta County, Colorado (24,147)
Elbert County, Colorado (13,188)
Grand County, Colorado (3,811)
Hinsdale County, Colorado (765)
Huerfano County, Colorado (3,971)
Jackson County, Colorado (1,248)
Kiowa County, Colorado (1,222)
Lake County, Colorado (6,138)
Las Animas County, Colorado (7,046)
Mineral County, Colorado (932)
Phillips County, Colorado (3,586)
Rio Blanco County, Colorado (3,573)
Routt County, Colorado (3,224)
San Juan County, Colorado (377)
Washington County, Colorado (3,233)

Tolland County, Connecticut (50,350)

Sussex County, Delaware (142,348)

Baker County, Florida (20,569)
Bay County, Florida (143,958)
Bradford County, Florida (24,918)
Calhoun County, Florida (12,490)
Citrus County, Florida (120,970)
DeSoto County, Florida (28,006)
Escambia County, Florida (160,223)
Glades County, Florida (9,652)
Hamilton County, Florida (2,183)
Hernando County, Florida (138,009)
Holmes County, Florida (13,664)
Jackson County, Florida (34,585)
Levy County, Florida (32,598)
Marion County, Florida (281,842)
Monroe County, Florida (58)
Nassau County, Florida (17,595)
Okaloosa County, Florida (37,067)
Santa Rosa County, Florida (73,472)
St. Johns County, Florida (41,919)
St. Lucie County, Florida (211,105)
Suwannee County, Florida (23,024)
Union County, Florida (13,316)
Walton County, Florida (45,324)
Washington County, Florida (18,699)

Appling County, Georgia (16,954)
Baldwin County, Georgia (42,230)
Banks County, Georgia (12,055)
Bartow County, Georgia (17,706)
Berrien County, Georgia (14,308)
Bibb County, Georgia (6,526)
Brooks County, Georgia (8,727)
Bryan County, Georgia (10,861)
Bulloch County, Georgia (47,054)
Butts County, Georgia (13,845)
Candler County, Georgia (8,121)
Carroll County, Georgia (24,096)
Catoosa County, Georgia (1,514)
Chattahoochee County, Georgia (14,679)
Chattooga County, Georgia (8,570)
Clarke County, Georgia (4,586)
Clinch County, Georgia (3,196)
Columbia County, Georgia (1,606)
Coweta County, Georgia (20,802)
Crawford County, Georgia (6,874)
Dodge County, Georgia (13,374)
Early County, Georgia (11,256)
Echols County, Georgia (4,253)
Effingham County, Georgia (26,924)
Evans County, Georgia (10,643)
Gordon County, Georgia (1,311)
Grady County, Georgia (2,466)
Haralson County, Georgia (12,938)
Houston County, Georgia (7,313)
Jackson County, Georgia (7,350)
Jasper County, Georgia (5,947)
Jeff Davis County, Georgia (11,483)
Jefferson County, Georgia (11,526)
Jenkins County, Georgia (6,329)
Jones County, Georgia (6,836)
Lanier County, Georgia (6,153)
Lincoln County, Georgia (4,207)
Long County, Georgia (8,283)
Macon County, Georgia (5,745)
Marion County, Georgia (6,044)
McDuffie County, Georgia (21,543)
McIntosh County, Georgia (7,068)
Meriwether County, Georgia (919)
Miller County, Georgia (5,228)
Mitchell County, Georgia (17,791)
Montgomery County, Georgia (5,109)
Morgan County, Georgia (16,692)
Murray County, Georgia (28,812)
Newton County, Georgia (12,945)
Paulding County, Georgia (82,411)
Peach County, Georgia (21,994)
Pickens County, Georgia (18,042)
Polk County, Georgia (22,479)
Pulaski County, Georgia (3,928)
Putnam County, Georgia (5,829)
Randolph County, Georgia (5,910)
Richmond County, Georgia (88,287)
Screven County, Georgia (9,830)
Spalding County, Georgia (19,042)
Taylor County, Georgia (7,687)
Telfair County, Georgia (10,805)

Tift County, Georgia (1,979)
Towns County, Georgia (9,915)
Troup County, Georgia (2,298)
Twiggs County, Georgia (10,299)
Union County, Georgia (17,782)
Upson County, Georgia (973)
Walker County, Georgia (53,890)
Walton County, Georgia (19,647)
Webster County, Georgia (1,489)
Wheeler County, Georgia (5,906)
White County, Georgia (4,055)
Wilcox County, Georgia (6,321)
Wilkinson County, Georgia (6,943)
Worth County, Georgia (15,996)

Kalawao County, Hawaii (23)

Bear Lake County, Idaho (3,376)
Blaine County, Idaho (4,655)
Boise County, Idaho (5,535)
Butte County, Idaho (2,208)
Caribou County, Idaho (5,131)
Clark County, Idaho (943)
Clearwater County, Idaho (7,573)
Custer County, Idaho (3,677)
Franklin County, Idaho (5,971)
Fremont County, Idaho (11,042)
Gooding County, Idaho (11,061)
Idaho County, Idaho (11,897)
Jefferson County, Idaho (18,580)
Latah County, Idaho (31,914)
Lemhi County, Idaho (7,109)
Lewis County, Idaho (771)
Lincoln County, Idaho (2,745)
Madison County, Idaho (25,575)
Nez Perce County, Idaho (36,731)
Oneida County, Idaho (3,809)
Shoshone County, Idaho (10,757)
Teton County, Idaho (4,867)
Valley County, Idaho (2,408)
Washington County, Idaho (8,298)

Adams County, Illinois (3,632)
Bond County, Illinois (920)
Brown County, Illinois (5,635)
Bureau County, Illinois (19,930)
Carroll County, Illinois (9,286)
Cass County, Illinois (3,298)
Christian County, Illinois (4,348)
Clinton County, Illinois (18,095)
Coles County, Illinois (2,565)
Crawford County, Illinois (16,498)
Cumberland County, Illinois (9,373)
De Witt County, Illinois (1,349)
Edgar County, Illinois (1,157)
Edwards County, Illinois (4,596)
Effingham County, Illinois (3,068)
Fulton County, Illinois (33,508)
Greene County, Illinois (13,981)
Henry County, Illinois (22,591)
Iroquois County, Illinois (3,854)
Jasper County, Illinois (6,620)
Jersey County, Illinois (12,490)
Jo Daviess County, Illinois (9,213)
Knox County, Illinois (3,204)
Lawrence County, Illinois (12,530)
Lee County, Illinois (13,749)
Livingston County, Illinois (736)
Logan County, Illinois (1,372)
Macoupin County, Illinois (25,711)
Marshall County, Illinois (544)
Mason County, Illinois (7,741)
Massac County, Illinois (15,148)
McDonough County, Illinois (25,966)
McLean County, Illinois (597)
Menard County, Illinois (6,738)
Mercer County, Illinois (11,712)
Monroe County, Illinois (6,386)
Montgomery County, Illinois (29,396)
Morgan County, Illinois (671)
Ogle County, Illinois (4,593)
Pike County, Illinois (5,099)
Richland County, Illinois (12,398)
Shelby County, Illinois (12,522)
St. Clair County, Illinois (46,404)
Wabash County, Illinois (3,570)
Warren County, Illinois (14,558)
Washington County, Illinois (2,414)
White County, Illinois (11,084)
Whiteside County, Illinois (4,166)
Woodford County, Illinois (19,248)

Brown County, Indiana (3,154)
Clark County, Indiana (364)
Clay County, Indiana (5,829)
Crawford County, Indiana (7,216)
Daviess County, Indiana (17,666)
Decatur County, Indiana (2,124)
Elkhart County, Indiana (51,240)
Fayette County, Indiana (766)
Floyd County, Indiana (646)
Fountain County, Indiana (10,062)
Franklin County, Indiana (11,285)
Greene County, Indiana (29,079)
Huntington County, Indiana (803)
Jasper County, Indiana (18,484)
Jefferson County, Indiana (2,993)
Jennings County, Indiana (14,427)
Knox County, Indiana (3,181)
LaGrange County, Indiana (18,875)
Martin County, Indiana (9,786)
Miami County, Indiana (1,005)
Newton County, Indiana (10,456)
Ohio County, Indiana (5,074)
Orange County, Indiana (711)
Owen County, Indiana (17,023)
Parke County, Indiana (11,362)
Perry County, Indiana (1,004)
Pike County, Indiana (6,766)
Pulaski County, Indiana (10,583)
Randolph County, Indiana (21,884)
Ripley County, Indiana (5,700)
Scott County, Indiana (1,820)
Spencer County, Indiana (19,128)
St. Joseph County, Indiana (25,750)
Starke County, Indiana (20,533)
Sullivan County, Indiana (7,763)
Switzerland County, Indiana (8,918)
Union County, Indiana (637)
Vermillion County, Indiana (14,162)
Vigo County, Indiana (2,106)
Warren County, Indiana (5,185)
Washington County, Indiana (5,055)
Wayne County, Indiana (56,992)
White County, Indiana (6,500)

Adair County, Iowa (5,859)
Adams County, Iowa (877)
Allamakee County, Iowa (3,026)
Audubon County, Iowa (457)
Benton County, Iowa (18,000)
Boone County, Iowa (2,919)
Bremer County, Iowa (4,909)
Buchanan County, Iowa (11,019)
Butler County, Iowa (11,072)
Calhoun County, Iowa (3,043)
Carroll County, Iowa (6,250)
Cedar County, Iowa (5,436)
Chickasaw County, Iowa (2,584)
Clarke County, Iowa (8,761)
Clinton County, Iowa (6,206)
Crawford County, Iowa (16,289)
Dallas County, Iowa (3,872)
Davis County, Iowa (4,659)
Delaware County, Iowa (8,025)
Dubuque County, Iowa (1,443)
Fayette County, Iowa (9,298)
Franklin County, Iowa (4,732)
Fremont County, Iowa (5,759)
Greene County, Iowa (2,624)
Grundy County, Iowa (6,329)
Guthrie County, Iowa (8,947)
Hamilton County, Iowa (313)
Hancock County, Iowa (5,786)
Hardin County, Iowa (2,980)
Harrison County, Iowa (1,369)
Henry County, Iowa (4,240)
Howard County, Iowa (1,182)
Humboldt County, Iowa (2,373)
Ida County, Iowa (6,979)
Jackson County, Iowa (2,375)
Jefferson County, Iowa (13,372)
Keokuk County, Iowa (9,157)
Kossuth County, Iowa (14,942)
Linn County, Iowa (6,847)
Louisa County, Iowa (8,842)
Lucas County, Iowa (8,672)
Lyon County, Iowa (11,550)
Madison County, Iowa (7,259)
Mahaska County, Iowa (1,418)
Mills County, Iowa (13,284)
Mitchell County, Iowa (4,919)
Monona County, Iowa (8,920)
O'Brien County, Iowa (1,981)
Osceola County, Iowa (1,377)
Plymouth County, Iowa (2,080)
Pocahontas County, Iowa (7,930)
Ringgold County, Iowa (1,085)
Sac County, Iowa (4,621)
Sioux County, Iowa (9,803)
Tama County, Iowa (9,119)
Taylor County, Iowa (4,614)
Union County, Iowa (887)
Wayne County, Iowa (5,601)
Wright County, Iowa (2,807)

Allen County, Kansas (3,787)
Anderson County, Kansas (7,182)
Atchison County, Kansas (14,204)
Barber County, Kansas (3,558)
Bourbon County, Kansas (1,042)
Brown County, Kansas (8,239)
Butler County, Kansas (568)
Chase County, Kansas (2,481)
Chautauqua County, Kansas (2,509)
Cherokee County, Kansas (13,355)
Cheyenne County, Kansas (1,346)

Clark County, Kansas (1,683)
Cloud County, Kansas (8,559)
Coffey County, Kansas (552)
Comanche County, Kansas (1,735)
Cowley County, Kansas (33,098)
Decatur County, Kansas (2,791)
Douglas County, Kansas (93,314)
Edwards County, Kansas (2,092)
Elk County, Kansas (2,875)
Ellis County, Kansas (23,167)
Ellsworth County, Kansas (343)
Franklin County, Kansas (1,415)
Gove County, Kansas (2,163)
Graham County, Kansas (2,321)
Gray County, Kansas (5,661)
Greeley County, Kansas (949)
Greenwood County, Kansas (457)
Hamilton County, Kansas (1,604)
Harper County, Kansas (5,881)
Haskell County, Kansas (2,232)
Hodgeman County, Kansas (1,110)
Jackson County, Kansas (6,335)
Jefferson County, Kansas (11,506)
Jewell County, Kansas (3,352)
Kearny County, Kansas (3,916)
Kingman County, Kansas (3,765)
Kiowa County, Kansas (2,984)
Labette County, Kansas (3,402)
Lane County, Kansas (1,694)
Lincoln County, Kansas (1,611)
Linn County, Kansas (5,514)
Logan County, Kansas (2,394)
Marion County, Kansas (11,752)
McPherson County, Kansas (604)
Meade County, Kansas (2,225)
Miami County, Kansas (3,891)
Mitchell County, Kansas (5,620)
Montgomery County, Kansas (1,725)
Morris County, Kansas (1,244)
Morton County, Kansas (2,796)
Nemaha County, Kansas (10,243)
Neosho County, Kansas (575)
Ness County, Kansas (2,209)
Norton County, Kansas (5,264)
Osage County, Kansas (7,750)
Osborne County, Kansas (2,050)
Ottawa County, Kansas (5,523)
Phillips County, Kansas (3,704)
Pottawatomie County, Kansas (17,129)
Pratt County, Kansas (8,296)
Rawlins County, Kansas (2,072)
Reno County, Kansas (55,158)
Republic County, Kansas (1,964)
Rice County, Kansas (452)
Rooks County, Kansas (2,551)
Rush County, Kansas (3,006)
Russell County, Kansas (6,045)
Scott County, Kansas (4,400)
Sheridan County, Kansas (2,191)
Sherman County, Kansas (5,353)
Smith County, Kansas (3,721)
Stafford County, Kansas (3,688)
Stanton County, Kansas (2,045)
Stevens County, Kansas (2,612)
Sumner County, Kansas (599)
Thomas County, Kansas (5,439)
Trego County, Kansas (3,050)
Wabaunsee County, Kansas (6,719)
Wallace County, Kansas (973)
Washington County, Kansas (2,009)
Wichita County, Kansas (1,109)
Woodson County, Kansas (3,372)

Adair County, Kentucky (12,973)
Allen County, Kentucky (12,706)
Ballard County, Kentucky (7,877)
Barren County, Kentucky (29,873)
Bath County, Kentucky (5,626)
Boyd County, Kentucky (253)
Breckinridge County, Kentucky (15,293)
Bullitt County, Kentucky (49,074)
Butler County, Kentucky (10,214)
Caldwell County, Kentucky (973)
Carlisle County, Kentucky (3,329)
Carroll County, Kentucky (5,254)
Carter County, Kentucky (15,906)
Casey County, Kentucky (9,690)
Clark County, Kentucky (29,887)
Clay County, Kentucky (2,146)
Crittenden County, Kentucky (6,184)
Edmonson County, Kentucky (8,830)
Elliott County, Kentucky (4,902)
Estill County, Kentucky (7,089)
Gallatin County, Kentucky (6,134)
Garrard County, Kentucky (14,779)
Graves County, Kentucky (1,625)
Green County, Kentucky (9,188)
Greenup County, Kentucky (14,384)
Hardin County, Kentucky (1,646)
Harrison County, Kentucky (1,177)
Hart County, Kentucky (7,719)
Henderson County, Kentucky (550)
Henry County, Kentucky (13,503)
Hickman County, Kentucky (3,075)
Knott County, Kentucky (11,561)
Knox County, Kentucky (10,069)
Larue County, Kentucky (7,699)
Leslie County, Kentucky (9,394)
Lincoln County, Kentucky (11,322)
Livingston County, Kentucky (8,760)
Lyon County, Kentucky (2,160)
Martin County, Kentucky (8,215)
McCreary County, Kentucky (7,633)
McLean County, Kentucky (7,126)
Meade County, Kentucky (25,047)
Menifee County, Kentucky (4,009)
Metcalfe County, Kentucky (6,597)
Monroe County, Kentucky (8,660)
Morgan County, Kentucky (9,934)
Nicholas County, Kentucky (5,027)
Ohio County, Kentucky (18,076)
Owen County, Kentucky (1,374)
Pendleton County, Kentucky (13,125)
Rockcastle County, Kentucky (12,712)
Scott County, Kentucky (3,028)
Shelby County, Kentucky (34,405)
Simpson County, Kentucky (14,421)
Taylor County, Kentucky (1,115)
Todd County, Kentucky (6,144)
Trigg County, Kentucky (7,749)
Trimble County, Kentucky (5,023)
Union County, Kentucky (12,392)
Washington County, Kentucky (10,199)
Webster County, Kentucky (10,161)
Wolfe County, Kentucky (5,070)

Acadia Parish, Louisiana (27,352)
Allen Parish, Louisiana (21,870)
Ascension Parish, Louisiana (33,101)
Assumption Parish, Louisiana (14,796)
Avoyelles Parish, Louisiana (18,698)
Beauregard Parish, Louisiana (13,762)
Bienville Parish, Louisiana (6,776)
Bossier Parish, Louisiana (17,606)
Caldwell Parish, Louisiana (7,563)
Cameron Parish, Louisiana (6,958)
De Soto Parish, Louisiana (18,183)
East Carroll Parish, Louisiana (2,756)
East Feliciana Parish, Louisiana (10,023)
Grant Parish, Louisiana (18,503)
Jackson Parish, Louisiana (7,335)
Jefferson Parish, Louisiana (95,288)
Jefferson Davis Parish, Louisiana (22,272)
La Salle Parish, Louisiana (6,040)
Lafayette Parish, Louisiana (16,099)
Lafourche Parish, Louisiana (57,979)
Lincoln Parish, Louisiana (34,308)
Livingston Parish, Louisiana (90,406)
Morehouse Parish, Louisiana (21,389)
Plaquemines Parish, Louisiana (25,195)
Red River Parish, Louisiana (5,865)
Richland Parish, Louisiana (15,326)
Sabine Parish, Louisiana (14,586)
St. Bernard Parish, Louisiana (56,564)
St. Charles Parish, Louisiana (32,033)
St. Helena Parish, Louisiana (3,659)
St. James Parish, Louisiana (15,350)
St. John the Baptist Parish, Louisiana (12,793)
St. Landry Parish, Louisiana (56,937)
St. Martin Parish, Louisiana (36,834)
St. Mary Parish, Louisiana (17,216)
St. Tammany Parish, Louisiana (14,862)
Tensas Parish, Louisiana (4,525)
Union Parish, Louisiana (14,901)
Washington Parish, Louisiana (15,623)
West Baton Rouge Parish, Louisiana (21,634)
West Carroll Parish, Louisiana (4,806)
West Feliciana Parish, Louisiana (13,999)
Winn Parish, Louisiana (9,168)

Knox County, Maine (1,687)
Piscataquis County, Maine (3,636)

Cecil County, Maryland (1,942)
Garrett County, Maryland (24,909)
Prince George's County, Maryland (45,540)
Queen Anne's County, Maryland (4,831)
St. Mary's County, Maryland (4,014)

Dukes County, Massachusetts (2,592)

Alger County, Michigan (8,262)
Baraga County, Michigan (7,146)
Benzie County, Michigan (17,244)
Branch County, Michigan (40,860)
Cass County, Michigan (8,315)
Cheboygan County, Michigan (15,863)
Chippewa County, Michigan (31,380)
Clare County, Michigan (5,690)
Delta County, Michigan (32,947)
Dickinson County, Michigan (22,432)
Emmet County, Michigan (4,416)
Gladwin County, Michigan (24,209)
Gogebic County, Michigan (15,061)

Grand Traverse County, Michigan (15,752)
Gratiot County, Michigan (35,745)
Hillsdale County, Michigan (21,466)
Houghton County, Michigan (31,105)
Huron County, Michigan (31,040)
Isabella County, Michigan (59,018)
Kalkaska County, Michigan (15,639)
Lenawee County, Michigan (59,489)
Luce County, Michigan (3,789)
Marquette County, Michigan (19,744)
Mecosta County, Michigan (37,991)
Midland County, Michigan (2,140)
Missaukee County, Michigan (12,299)
Osceola County, Michigan (826)
Oscoda County, Michigan (5,498)
Sanilac County, Michigan (8,133)
Schoolcraft County, Michigan (7,619)
St. Clair County, Michigan (6,030)
St. Joseph County, Michigan (54,384)
Wexford County, Michigan (23,676)

Aitkin County, Minnesota (7,540)
Becker County, Minnesota (25,668)
Benton County, Minnesota (2,305)
Big Stone County, Minnesota (690)
Blue Earth County, Minnesota (11,938)
Brown County, Minnesota (14,145)
Carlton County, Minnesota (14,403)
Cass County, Minnesota (13,510)
Chisago County, Minnesota (4,171)
Clearwater County, Minnesota (4,876)
Cottonwood County, Minnesota (7,834)
Crow Wing County, Minnesota (6,621)
Dodge County, Minnesota (4,031)
Douglas County, Minnesota (29,138)
Faribault County, Minnesota (1,094)
Freeborn County, Minnesota (214)
Grant County, Minnesota (2,114)
Houston County, Minnesota (1,941)
Hubbard County, Minnesota (17,461)
Jackson County, Minnesota (7,182)
Kanabec County, Minnesota (13,215)
Kittson County, Minnesota (1,992)
Lac qui Parle County, Minnesota (7,404)
Lake of the Woods County, Minnesota (3,621)
Lincoln County, Minnesota (4,050)
Lyon County, Minnesota (4,586)
Mahnomen County, Minnesota (3,113)
Marshall County, Minnesota (9,765)
Martin County, Minnesota (1,724)
McLeod County, Minnesota (1,715)
Meeker County, Minnesota (1,020)
Mille Lacs County, Minnesota (8,162)
Morrison County, Minnesota (27,588)
Mower County, Minnesota (1,634)
Murray County, Minnesota (5,852)
Nicollet County, Minnesota (3,032)
Nobles County, Minnesota (531)
Norman County, Minnesota (6,203)
Otter Tail County, Minnesota (21,017)
Pennington County, Minnesota (13,008)
Pine County, Minnesota (26,085)
Pipestone County, Minnesota (6,221)
Pope County, Minnesota (8,852)
Red Lake County, Minnesota (4,317)
Redwood County, Minnesota (6,018)
Rice County, Minnesota (3,025)
Rock County, Minnesota (1,379)
Sherburne County, Minnesota (1,545)
Sibley County, Minnesota (5,237)
St. Louis County, Minnesota (27,534)
Stearns County, Minnesota (3,696)
Swift County, Minnesota (753)
Todd County, Minnesota (14,603)
Wabasha County, Minnesota (2,120)
Wadena County, Minnesota (9,850)
Waseca County, Minnesota (2,856)
Watonwan County, Minnesota (2,311)
Winona County, Minnesota (1,450)
Wright County, Minnesota (2,265)
Yellow Medicine County, Minnesota (1,081)

Adams County, Mississippi (22,099)
Attala County, Mississippi (8,552)
Calhoun County, Mississippi (7,452)
Choctaw County, Mississippi (5,572)
Clay County, Mississippi (8,823)
DeSoto County, Mississippi (21,004)
Franklin County, Mississippi (3,611)
George County, Mississippi (9,259)
Hancock County, Mississippi (39,111)
Harrison County, Mississippi (160,810)
Jackson County, Mississippi (112,340)
Jasper County, Mississippi (14,162)
Lafayette County, Mississippi (33,642)
Lee County, Mississippi (64,393)
Leflore County, Mississippi (13,231)
Lincoln County, Mississippi (25,706)
Montgomery County, Mississippi (10,829)
Newton County, Mississippi (15,566)
Pearl River County, Mississippi (26,659)
Pike County, Mississippi (16,635)
Pontotoc County, Mississippi (16,208)
Sharkey County, Mississippi (2,767)
Smith County, Mississippi (10,858)
Stone County, Mississippi (12,062)
Tishomingo County, Mississippi (8,802)
Union County, Mississippi (20,784)
Walthall County, Mississippi (15,460)
Webster County, Mississippi (6,092)
Yalobusha County, Mississippi (9,417)

Audrain County, Missouri (21,359)
Barton County, Missouri (10,657)
Bates County, Missouri (9,027)
Benton County, Missouri (18,054)
Callaway County, Missouri (42,141)
Camden County, Missouri (4,957)
Carroll County, Missouri (8,193)
Cass County, Missouri (92,632)
Cedar County, Missouri (6,760)
Christian County, Missouri (66,666)
Clark County, Missouri (6,723)
Cooper County, Missouri (15,894)
Crawford County, Missouri (23,932)
Dade County, Missouri (7,830)
Dallas County, Missouri (7,237)
Daviess County, Missouri (7,921)
DeKalb County, Missouri (8,342)
Dent County, Missouri (10,883)
Gasconade County, Missouri (13,945)
Grundy County, Missouri (10,127)
Henry County, Missouri (18,977)
Hickory County, Missouri (5,271)
Howard County, Missouri (9,757)
Jefferson County, Missouri (118,819)
Johnson County, Missouri (49,784)
Laclede County, Missouri (29,892)
Lawrence County, Missouri (35,527)
Lewis County, Missouri (10,186)
Linn County, Missouri (11,333)
Livingston County, Missouri (13,091)
Macon County, Missouri (14,400)
Madison County, Missouri (9,751)
Maries County, Missouri (6,989)
Marion County, Missouri (2,434)
Miller County, Missouri (24,512)
Mississippi County, Missouri (5,599)
Monroe County, Missouri (8,379)
Montgomery County, Missouri (10,166)
Morgan County, Missouri (18,836)
Nodaway County, Missouri (20,910)
Oregon County, Missouri (8,403)
Osage County, Missouri (2,088)
Pemiscot County, Missouri (14,212)
Perry County, Missouri (17,971)
Pettis County, Missouri (38,521)
Phelps County, Missouri (38,725)
Pike County, Missouri (17,962)
Polk County, Missouri (26,092)
Putnam County, Missouri (3,168)
Ralls County, Missouri (8,761)
Randolph County, Missouri (22,336)
Ray County, Missouri (738)
Saline County, Missouri (18,275)
Schuyler County, Missouri (2,508)
Scott County, Missouri (37,543)
Shelby County, Missouri (4,744)
St. Charles County, Missouri (7,446)
St. Clair County, Missouri (7,286)
St. Francois County, Missouri (54,261)
St. Louis County, Missouri (121,311)
St. Louis City County, Missouri (166,554)
Stone County, Missouri (24,531)
Texas County, Missouri (22,814)
Vernon County, Missouri (19,641)
Warren County, Missouri (14,764)
Washington County, Missouri (17,232)
Wayne County, Missouri (5,097)
Webster County, Missouri (32,345)
Worth County, Missouri (1,774)

Broadwater County, Montana (2,917)
Chouteau County, Montana (5,063)
Daniels County, Montana (1,836)
Deer Lodge County, Montana (7,348)
Fergus County, Montana (2,376)
Flathead County, Montana (4,760)
Garfield County, Montana (1,199)
Golden Valley County, Montana (1,159)
Granite County, Montana (1,765)
Hill County, Montana (3,704)
Jefferson County, Montana (7,970)
Judith Basin County, Montana (2,198)
Liberty County, Montana (2,003)
McCone County, Montana (1,805)
Mineral County, Montana (3,014)
Musselshell County, Montana (2,497)
Petroleum County, Montana (470)
Phillips County, Montana (2,179)
Pondera County, Montana (3,487)
Powder River County, Montana (1,705)
Powell County, Montana (3,599)

Prairie County, Montana (1,105)
Ravalli County, Montana (5,419)
Roosevelt County, Montana (524)
Sanders County, Montana (4,457)
Sheridan County, Montana (1,524)
Sweet Grass County, Montana (1,872)
Teton County, Montana (1,640)
Toole County, Montana (1,131)
Valley County, Montana (2,943)

Arthur County, Nebraska (378)
Banner County, Nebraska (733)
Blaine County, Nebraska (484)
Brown County, Nebraska (1,328)
Buffalo County, Nebraska (787)
Burt County, Nebraska (1,534)
Butler County, Nebraska (1,794)
Cass County, Nebraska (3,450)
Cedar County, Nebraska (3,666)
Clay County, Nebraska (6,733)
Colfax County, Nebraska (1,735)
Cuming County, Nebraska (589)
Custer County, Nebraska (5,622)
Dakota County, Nebraska (1,949)
Dawes County, Nebraska (2,591)
Dixon County, Nebraska (3,555)
Dodge County, Nebraska (1,684)
Dundy County, Nebraska (133)
Franklin County, Nebraska (395)
Frontier County, Nebraska (2,795)
Furnas County, Nebraska (1,019)
Gosper County, Nebraska (2,020)
Greeley County, Nebraska (2,512)
Harlan County, Nebraska (1,462)
Hayes County, Nebraska (1,027)
Hitchcock County, Nebraska (2,970)
Howard County, Nebraska (1,380)
Jefferson County, Nebraska (1,630)
Johnson County, Nebraska (966)
Kearney County, Nebraska (4,174)
Keya Paha County, Nebraska (902)
Kimball County, Nebraska (3,782)
Lincoln County, Nebraska (1,580)
Logan County, Nebraska (740)
Loup County, Nebraska (686)
Merrick County, Nebraska (1,659)
Nance County, Nebraska (754)
Nemaha County, Nebraska (1,433)
Polk County, Nebraska (3,421)
Richardson County, Nebraska (732)
Rock County, Nebraska (1,567)
Saline County, Nebraska (2,195)
Sarpy County, Nebraska (2,088)
Saunders County, Nebraska (2,083)
Sheridan County, Nebraska (1,468)
Sherman County, Nebraska (1,112)
Sioux County, Nebraska (1,058)
Stanton County, Nebraska (6,534)
Thayer County, Nebraska (1,118)
Valley County, Nebraska (906)
Wayne County, Nebraska (764)
Wheeler County, Nebraska (820)

Churchill County, Nevada (24,556)
Douglas County, Nevada (19,090)
Esmeralda County, Nevada (787)
Humboldt County, Nevada (10,129)
Lincoln County, Nevada (2,391)
Lyon County, Nevada (43,515)
Mineral County, Nevada (2,310)
Pershing County, Nevada (4,760)
Storey County, Nevada (4,074)
White Pine County, Nevada (8,194)

Belknap County, New Hampshire (43,147)
Cheshire County, New Hampshire (2,805)
Sullivan County, New Hampshire (8,854)

Bergen County, New Jersey (12,043)
Cape May County, New Jersey (1,174)
Ocean County, New Jersey (22,888)
Warren County, New Jersey (655)

Lea County, New Mexico (25,919)
Union County, New Mexico (1,850)

Allegany County, New York (27,002)
Broome County, New York (10,568)
Cattaraugus County, New York (19,089)
Chemung County, New York (549)
Delaware County, New York (8,923)
Fulton County, New York (853)
Genesee County, New York (26,457)
Greene County, New York (2,905)
Herkimer County, New York (34,980)
Jefferson County, New York (88,142)
Lewis County, New York (14,371)
Nassau County, New York (38,482)
Oneida County, New York (102,555)
Otsego County, New York (11,108)
Schuyler County, New York (8,742)
St. Lawrence County, New York (84,380)
Steuben County, New York (1,470)
Suffolk County, New York (1,097)
Wyoming County, New York (5,210)

Alexander County, North Carolina (17,492)
Brunswick County, North Carolina (81,162)
Buncombe County, North Carolina (3,675)
Cabarrus County, North Carolina (9,127)
Camden County, North Carolina (2,967)
Cherokee County, North Carolina (11,054)
Clay County, North Carolina (6,765)
Craven County, North Carolina (14,862)
Currituck County, North Carolina (11,112)
Dare County, North Carolina (1,864)
Davidson County, North Carolina (791)
Davie County, North Carolina (3,136)
Forsyth County, North Carolina (52,412)
Gates County, North Carolina (7,224)
Graham County, North Carolina (4,085)
Guilford County, North Carolina (4,136)
Hoke County, North Carolina (25,016)
Hyde County, North Carolina (5,413)
Iredell County, North Carolina (3,065)
Lincoln County, North Carolina (3,842)
Macon County, North Carolina (25,348)
Martin County, North Carolina (16,443)
McDowell County, North Carolina (7,201)
Montgomery County, North Carolina (5,322)
Moore County, North Carolina (14,716)
Nash County, North Carolina (82,378)
Perquimans County, North Carolina (10,480)
Polk County, North Carolina (18,334)
Randolph County, North Carolina (1,225)
Rockingham County, North Carolina (9,018)
Rowan County, North Carolina (2,258)
Rutherford County, North Carolina (14,641)
Stanly County, North Carolina (8,293)
Stokes County, North Carolina (27,858)
Swain County, North Carolina (12,167)
Transylvania County, North Carolina (1,526)
Tyrrell County, North Carolina (2,957)
Vance County, North Carolina (17,449)
Washington County, North Carolina (5,282)

Adams County, North Dakota (233)
Barnes County, North Dakota (4,585)
Billings County, North Dakota (813)
Bottineau County, North Dakota (4,741)
Burke County, North Dakota (1,832)
Burleigh County, North Dakota (882)
Cavalier County, North Dakota (4,330)
Dickey County, North Dakota (2,887)
Divide County, North Dakota (949)
Eddy County, North Dakota (626)
Emmons County, North Dakota (3,845)
Foster County, North Dakota (1,580)
Golden Valley County, North Dakota (1,739)
Grant County, North Dakota (1,415)
Griggs County, North Dakota (2,497)
Hettinger County, North Dakota (1,486)
Kidder County, North Dakota (1,681)
LaMoure County, North Dakota (3,984)
Logan County, North Dakota (1,059)
McHenry County, North Dakota (4,911)
McIntosh County, North Dakota (1,813)
McKenzie County, North Dakota (2,794)
Morton County, North Dakota (6,290)
Mountrail County, North Dakota (4,513)
Pembina County, North Dakota (353)
Renville County, North Dakota (2,422)
Richland County, North Dakota (4,372)
Sargent County, North Dakota (3,150)
Slope County, North Dakota (709)
Stark County, North Dakota (3,400)
Steele County, North Dakota (2,007)
Stutsman County, North Dakota (4,478)
Towner County, North Dakota (1,144)
Ward County, North Dakota (4,189)
Wells County, North Dakota (1,774)
Williams County, North Dakota (4,117)

Ashtabula County, Ohio (16,200)
Butler County, Ohio (4,598)
Carroll County, Ohio (13,988)
Clark County, Ohio (17,936)
Clinton County, Ohio (1,875)
Coshocton County, Ohio (3,328)
Defiance County, Ohio (2,625)
Fairfield County, Ohio (20,506)
Greene County, Ohio (41,409)
Guernsey County, Ohio (11,266)
Hardin County, Ohio (15,232)
Holmes County, Ohio (16,567)
Jefferson County, Ohio (1,776)
Lorain County, Ohio (11,988)
Marion County, Ohio (2,061)
Meigs County, Ohio (22,032)
Morgan County, Ohio (10,558)
Morrow County, Ohio (16,722)
Muskingum County, Ohio (2,194)
Noble County, Ohio (833)

Paulding County, Ohio (2,350)
Portage County, Ohio (3,767)
Preble County, Ohio (19,927)
Putnam County, Ohio (10,928)
Tuscarawas County, Ohio (26,107)
Warren County, Ohio (23)
Washington County, Ohio (10,432)
Wood County, Ohio (1,910)

Adair County, Oklahoma (3,988)
Alfalfa County, Oklahoma (5,725)
Atoka County, Oklahoma (8,456)
Blaine County, Oklahoma (2,293)
Canadian County, Oklahoma (825)
Choctaw County, Oklahoma (1,297)
Cimarron County, Oklahoma (1,233)
Coal County, Oklahoma (3,743)
Comanche County, Oklahoma (6,796)
Cotton County, Oklahoma (2,589)
Delaware County, Oklahoma (14,260)
Dewey County, Oklahoma (568)
Garfield County, Oklahoma (1,870)
Grant County, Oklahoma (3,979)
Harper County, Oklahoma (1,313)
Hughes County, Oklahoma (8,035)
Jefferson County, Oklahoma (461)
Kay County, Oklahoma (1,105)
Latimer County, Oklahoma (2,635)
Le Flore County, Oklahoma (1,337)
Lincoln County, Oklahoma (16,911)
Marshall County, Oklahoma (461)
McClain County, Oklahoma (2,096)
McIntosh County, Oklahoma (7,965)
Muskogee County, Oklahoma (66,607)
Okfuskee County, Oklahoma (9,034)
Pawnee County, Oklahoma (1,085)
Pontotoc County, Oklahoma (35,346)
Pushmataha County, Oklahoma (3,626)
Roger Mills County, Oklahoma (1,511)
Rogers County, Oklahoma (1,172)
Sequoyah County, Oklahoma (16,868)
Stephens County, Oklahoma (1,623)
Texas County, Oklahoma (1,761)
Wagoner County, Oklahoma (4,390)
Washita County, Oklahoma (5,471)
Woods County, Oklahoma (546)

Baker County, Oregon (12,687)
Columbia County, Oregon (27,665)
Coos County, Oregon (49,111)
Curry County, Oregon (21,027)
Gilliam County, Oregon (1,794)
Grant County, Oregon (3,297)
Harney County, Oregon (5,298)
Lake County, Oregon (2,323)
Lincoln County, Oregon (13,746)
Linn County, Oregon (107,314)
Sherman County, Oregon (949)
Union County, Oregon (4,273)

Armstrong County, Pennsylvania (15,010)
Berks County, Pennsylvania (8,399)
Blair County, Pennsylvania (9,796)
Bradford County, Pennsylvania (8,503)
Bucks County, Pennsylvania (6,817)
Cambria County, Pennsylvania (47,284)
Carbon County, Pennsylvania (2,274)
Centre County, Pennsylvania (16,455)
Clinton County, Pennsylvania (7,029)
Columbia County, Pennsylvania (8,979)
Cumberland County, Pennsylvania (936)
Elk County, Pennsylvania (2,906)
Forest County, Pennsylvania (5,739)
Fulton County, Pennsylvania (4,273)
Jefferson County, Pennsylvania (6,897)
Juniata County, Pennsylvania (11,307)
Lehigh County, Pennsylvania (1,238)
Lycoming County, Pennsylvania (10,775)
McKean County, Pennsylvania (24,908)
Mifflin County, Pennsylvania (15,936)
Monroe County, Pennsylvania (1,394)
Northampton County, Pennsylvania (7,352)
Northumberland County, Pennsylvania (7,441)
Perry County, Pennsylvania (630)
Pike County, Pennsylvania (16,697)
Snyder County, Pennsylvania (9,079)
Somerset County, Pennsylvania (58,434)
Sullivan County, Pennsylvania (2,391)
Union County, Pennsylvania (6,325)
Venango County, Pennsylvania (13,182)
Wayne County, Pennsylvania (32,313)

Bristol County, Rhode Island (7,247)

Anderson County, South Carolina (158,514)
Cherokee County, South Carolina (43,044)
Chester County, South Carolina (15,228)
Edgefield County, South Carolina (15,528)
Lancaster County, South Carolina (50,513)
Oconee County, South Carolina (56,377)
Pickens County, South Carolina (105,575)
Union County, South Carolina (25,139)

Bon Homme County, South Dakota (3,087)
Brookings County, South Dakota (3,510)
Brown County, South Dakota (2,397)
Brule County, South Dakota (527)
Butte County, South Dakota (2,418)
Campbell County, South Dakota (1,165)
Charles Mix County, South Dakota (3,994)
Clark County, South Dakota (3,599)
Clay County, South Dakota (2,442)
Custer County, South Dakota (4,908)
Davison County, South Dakota (1,620)
Day County, South Dakota (2,557)
Deuel County, South Dakota (4,296)
Douglas County, South Dakota (1,909)
Edmunds County, South Dakota (2,512)
Fall River County, South Dakota (5,555)
Faulk County, South Dakota (1,386)
Grant County, South Dakota (1,469)
Gregory County, South Dakota (2,053)
Haakon County, South Dakota (393)
Hanson County, South Dakota (3,747)
Harding County, South Dakota (818)
Jackson County, South Dakota (858)
Lincoln County, South Dakota (27,581)
Lyman County, South Dakota (1,719)
Marshall County, South Dakota (418)
McCook County, South Dakota (2,930)
McPherson County, South Dakota (1,017)
Moody County, South Dakota (6,437)
Spink County, South Dakota (6,299)
Stanley County, South Dakota (2,829)
Turner County, South Dakota (5,920)
Walworth County, South Dakota (3,894)
Ziebach County, South Dakota (2,631)

Anderson County, Tennessee (4,912)
Bedford County, Tennessee (35,804)
Benton County, Tennessee (10,467)
Blount County, Tennessee (7,860)
Cheatham County, Tennessee (26,803)
Chester County, Tennessee (12,941)
Coffee County, Tennessee (6,175)
Crockett County, Tennessee (8,995)
Decatur County, Tennessee (5,486)
Dickson County, Tennessee (4,101)
Dyer County, Tennessee (1,451)
Giles County, Tennessee (15,297)
Henderson County, Tennessee (21,225)
Henry County, Tennessee (1,599)
Hickman County, Tennessee (18,193)
Houston County, Tennessee (3,788)
Humphreys County, Tennessee (546)
Lauderdale County, Tennessee (15,195)
Lewis County, Tennessee (3,435)
Lincoln County, Tennessee (25,792)
Loudon County, Tennessee (34,987)
Madison County, Tennessee (16,480)
Marshall County, Tennessee (4,372)
Maury County, Tennessee (1,863)
Monroe County, Tennessee (35,185)
Montgomery County, Tennessee (8,049)
Moore County, Tennessee (5,824)
Obion County, Tennessee (11,888)
Roane County, Tennessee (44,089)
Rutherford County, Tennessee (6,122)
Sequatchie County, Tennessee (691)
Sevier County, Tennessee (11,330)
Sumner County, Tennessee (7,772)
Tipton County, Tennessee (9,998)
Wayne County, Tennessee (12,509)
Weakley County, Tennessee (25,932)
Williamson County, Tennessee (44,273)
Wilson County, Tennessee (13,752)

Angelina County, Texas (63,757)
Aransas County, Texas (13,640)
Archer County, Texas (7,095)
Armstrong County, Texas (2,173)
Austin County, Texas (14,123)
Bandera County, Texas (17,988)
Bastrop County, Texas (43,532)
Baylor County, Texas (2,643)
Blanco County, Texas (5,110)
Borden County, Texas (648)
Bosque County, Texas (16,853)
Bowie County, Texas (73,443)
Brazoria County, Texas (60,332)
Brewster County, Texas (7,279)
Briscoe County, Texas (1,644)
Burleson County, Texas (11,238)
Burnet County, Texas (33,676)
Callahan County, Texas (9,516)
Camp County, Texas (10,438)
Carson County, Texas (6,586)
Cass County, Texas (22,755)
Castro County, Texas (3,640)
Chambers County, Texas (24,411)
Clay County, Texas (9,687)
Cochran County, Texas (1,289)
Coke County, Texas (3,612)
Coleman County, Texas (2,665)
Collingsworth County, Texas (2,968)
Colorado County, Texas (1,455)

Concho County, Texas (768)
Cooke County, Texas (12,847)
Coryell County, Texas (41,602)
Cottle County, Texas (1,746)
Crane County, Texas (1,037)
Crockett County, Texas (1,934)
Crosby County, Texas (2,686)
Culberson County, Texas (1,627)
Delta County, Texas (5,480)
Denton County, Texas (156,763)
DeWitt County, Texas (507)
Dickens County, Texas (2,646)
Donley County, Texas (1,889)
Ector County, Texas (3,146)
Ellis County, Texas (17,705)
Falls County, Texas (7,646)
Fisher County, Texas (2,089)
Foard County, Texas (1,518)
Franklin County, Texas (7,400)
Freestone County, Texas (14,400)
Gaines County, Texas (4,712)
Garza County, Texas (5,002)
Glasscock County, Texas (1,327)
Goliad County, Texas (5,102)
Gray County, Texas (942)
Grayson County, Texas (19,570)
Gregg County, Texas (6,745)
Guadalupe County, Texas (7,510)
Hall County, Texas (1,700)
Hansford County, Texas (3,230)
Harrison County, Texas (49,659)
Haskell County, Texas (3,541)
Hemphill County, Texas (3,422)
Henderson County, Texas (62,817)
Hill County, Texas (27,624)
Houston County, Texas (16,418)
Hudspeth County, Texas (3,295)
Irion County, Texas (1,756)
Jack County, Texas (1,064)
Jackson County, Texas (6,339)
Jasper County, Texas (14,134)
Jeff Davis County, Texas (1,106)
Johnson County, Texas (83,176)
Jones County, Texas (5,736)
Karnes County, Texas (5,351)
Kenedy County, Texas (417)
Kent County, Texas (782)
Kimble County, Texas (2,591)
King County, Texas (307)
Knox County, Texas (413)
Lamb County, Texas (6,867)
Lampasas County, Texas (11,669)
Lee County, Texas (12,526)
Leon County, Texas (6,344)
Liberty County, Texas (27,741)
Limestone County, Texas (17,763)
Lipscomb County, Texas (3,101)
Loving County, Texas (62)
Lynn County, Texas (2,237)
Marion County, Texas (6,952)
Martin County, Texas (260)
Mason County, Texas (1,880)
Matagorda County, Texas (29,249)
McMullen County, Texas (883)
Menard County, Texas (2,201)
Milam County, Texas (15,354)
Mills County, Texas (3,237)
Mitchell County, Texas (3,613)
Montague County, Texas (1,677)
Moore County, Texas (15,548)
Morris County, Texas (6,936)
Navarro County, Texas (43,487)
Nolan County, Texas (4,401)
Nueces County, Texas (11,599)
Ochiltree County, Texas (1,385)
Oldham County, Texas (2,118)
Palo Pinto County, Texas (20,278)
Panola County, Texas (8,997)
Parker County, Texas (95,601)
Parmer County, Texas (3,754)
Polk County, Texas (21,440)
Presidio County, Texas (5,722)
Rains County, Texas (9,305)
Randall County, Texas (1,465)
Reagan County, Texas (1,995)
Red River County, Texas (7,575)
Reeves County, Texas (3,638)
Refugio County, Texas (3,639)
Roberts County, Texas (820)
Runnels County, Texas (5,574)
Rusk County, Texas (37,971)
Sabine County, Texas (5,616)
San Augustine County, Texas (4,107)
San Jacinto County, Texas (20,801)
San Saba County, Texas (4,076)
Schleicher County, Texas (2,342)
Scurry County, Texas (11,817)
Shackelford County, Texas (3,167)
Shelby County, Texas (19,746)
Sherman County, Texas (3,002)
Smith County, Texas (12,043)
Stephens County, Texas (3,761)
Sterling County, Texas (1,303)
Stonewall County, Texas (1,372)
Sutton County, Texas (2,212)
Swisher County, Texas (3,028)
Tarrant County, Texas (98,658)
Taylor County, Texas (4,872)
Terry County, Texas (8,219)
Trinity County, Texas (6,367)
Tyler County, Texas (15,017)
Upshur County, Texas (20,281)
Upton County, Texas (1,256)
Van Zandt County, Texas (34,491)
Walker County, Texas (54,135)
Ward County, Texas (4,237)
Washington County, Texas (27,521)
Wilson County, Texas (23,529)
Winkler County, Texas (4,690)
Yoakum County, Texas (3,408)

Beaver County, Utah (4,804)
Cache County, Utah (83,655)
Daggett County, Utah (943)
Davis County, Utah (137,501)
Garfield County, Utah (3,670)
Grand County, Utah (6,943)
Juab County, Utah (770)
Kane County, Utah (5,202)
Millard County, Utah (4,284)
Morgan County, Utah (5,906)
Piute County, Utah (1,365)
Sanpete County, Utah (19,644)
Tooele County, Utah (30,911)
Uintah County, Utah (15,995)

Addison County, Vermont (1,657)
Lamoille County, Vermont (5,039)
Orange County, Vermont (8,687)
Orleans County, Vermont (3,997)
Rutland County, Vermont (12,798)
Washington County, Vermont (2,900)
Windham County, Vermont (3,385)
Windsor County, Vermont (4,066)

Alexandria County, Virginia (11,698)
Alleghany County, Virginia (1,236)
Appomattox County, Virginia (7,967)
Arlington County, Virginia (3,844)
Bath County, Virginia (2,137)
Bedford County, Virginia (18,756)
Botetourt County, Virginia (8,011)
Campbell County, Virginia (37,044)
Caroline County, Virginia (14,163)
Chesapeake County, Virginia (20,906)
Chesterfield County, Virginia (2,327)
Clarke County, Virginia (205)
Craig County, Virginia (5,154)
Culpeper County, Virginia (6,663)
Cumberland County, Virginia (1,778)
Danville County, Virginia (28,343)
Emporia County, Virginia (1,187)
Essex County, Virginia (3,492)
Fauquier County, Virginia (8,841)
Floyd County, Virginia (6,249)
Fluvanna County, Virginia (9,237)
Franklin County, Virginia (26,345)
Gloucester County, Virginia (4,139)
Goochland County, Virginia (7,551)
Greene County, Virginia (13,418)
Greensville County, Virginia (9,088)
Halifax County, Virginia (12,084)
Hampton County, Virginia (29,974)
Henry County, Virginia (39,901)
Isle of Wight County, Virginia (22,486)
James City County, Virginia (6,647)
King and Queen County, Virginia (796)
King George County, Virginia (7,637)
Lancaster County, Virginia (1,531)
Loudoun County, Virginia (5,257)
Louisa County, Virginia (8,020)
Lynchburg County, Virginia (18,164)
Mathews County, Virginia (5,194)
New Kent County, Virginia (8,107)
Newport News County, Virginia (17,004)
Norfolk County, Virginia (8,745)
Northumberland County, Virginia (6,474)
Nottoway County, Virginia (12,360)
Page County, Virginia (11,231)
Patrick County, Virginia (10,609)
Pittsylvania County, Virginia (37,054)
Portsmouth County, Virginia (4,890)
Powhatan County, Virginia (598)
Pulaski County, Virginia (4,353)
Richmond County, Virginia (114)
Russell County, Virginia (13,149)
Spotsylvania County, Virginia (9,975)
Stafford County, Virginia (23,874)
Suffolk County, Virginia (19,463)
Surry County, Virginia (6,213)
Virginia Beach County, Virginia (3,465)
Williamsburg County, Virginia (2,417)
Wythe County, Virginia (4,516)
York County, Virginia (2,620)

Clallam County, Washington (53,489)
Columbia County, Washington (3,129)
Douglas County, Washington (32,977)
Garfield County, Washington (2,344)
Island County, Washington (57,670)
Jefferson County, Washington (17,666)
Kittitas County, Washington (27,441)
Lincoln County, Washington (8,581)
Mason County, Washington (26,359)
San Juan County, Washington (9,074)
Skamania County, Washington (7,064)
Wahkiakum County, Washington (1,849)
Whitman County, Washington (32,370)

Barbour County, West Virginia (5,889)
Boone County, West Virginia (10,703)
Braxton County, West Virginia (4,851)
Cabell County, West Virginia (1,850)
Calhoun County, West Virginia (387)
Clay County, West Virginia (1,956)
Doddridge County, West Virginia (5,676)
Fayette County, West Virginia (9,632)
Gilmer County, West Virginia (4,950)
Grant County, West Virginia (5,835)
Greenbrier County, West Virginia (8,664)
Hampshire County, West Virginia (4,025)
Hancock County, West Virginia (942)
Hardy County, West Virginia (7,287)
Harrison County, West Virginia (1,074)
Jackson County, West Virginia (403)
Kanawha County, West Virginia (15,159)
Lincoln County, West Virginia (10,374)
Marion County, West Virginia (5,890)
Marshall County, West Virginia (15,037)
Mercer County, West Virginia (10,242)
Mineral County, West Virginia (13,028)
Mingo County, West Virginia (10,610)
Monongalia County, West Virginia (2,028)
Monroe County, West Virginia (5,907)
Morgan County, West Virginia (4,725)
Ohio County, West Virginia (805)
Pendleton County, West Virginia (2,444)
Pleasants County, West Virginia (3,376)
Pocahontas County, West Virginia (1,821)
Preston County, West Virginia (15,225)
Raleigh County, West Virginia (13,251)
Randolph County, West Virginia (13,108)
Ritchie County, West Virginia (6,140)
Roane County, West Virginia (3,807)
Summers County, West Virginia (4,940)
Taylor County, West Virginia (5,891)
Tyler County, West Virginia (8,540)
Upshur County, West Virginia (8,405)
Wayne County, West Virginia (2,091)
Webster County, West Virginia (1,804)
Wirt County, West Virginia (1,896)
Wyoming County, West Virginia (8,279)

Adams County, Wisconsin (13,828)
Barron County, Wisconsin (1,485)
Bayfield County, Wisconsin (3,116)
Buffalo County, Wisconsin (4,368)
Burnett County, Wisconsin (7,128)
Calumet County, Wisconsin (14,816)
Columbia County, Wisconsin (40,982)
Crawford County, Wisconsin (11,267)
Door County, Wisconsin (8,549)
Dunn County, Wisconsin (10,333)
Eau Claire County, Wisconsin (84,889)
Florence County, Wisconsin (2,974)
Fond du Lac County, Wisconsin (2,301)
Forest County, Wisconsin (4,761)
Grant County, Wisconsin (47,671)
Green Lake County, Wisconsin (3,989)
Iowa County, Wisconsin (2,879)
Iron County, Wisconsin (649)
Jackson County, Wisconsin (4,065)
Juneau County, Wisconsin (4,641)
Lafayette County, Wisconsin (7,864)
Langlade County, Wisconsin (9,765)
Marinette County, Wisconsin (42,406)
Marquette County, Wisconsin (11,237)
Menominee County, Wisconsin (4,580)
Oneida County, Wisconsin (5,431)
Pepin County, Wisconsin (1,518)
Pierce County, Wisconsin (17,623)
Polk County, Wisconsin (16,030)
Portage County, Wisconsin (2,994)
Racine County, Wisconsin (4,399)
Richland County, Wisconsin (4,140)
Shawano County, Wisconsin (10,823)
St. Croix County, Wisconsin (41,443)
Taylor County, Wisconsin (3,501)
Trempealeau County, Wisconsin (11,212)
Vernon County, Wisconsin (9,274)
Vilas County, Wisconsin (13,322)
Waupaca County, Wisconsin (14,478)

Albany County, Wyoming (374)
Campbell County, Wyoming (14,504)
Carbon County, Wyoming (7,331)
Converse County, Wyoming (5,966)
Crook County, Wyoming (1,272)
Goshen County, Wyoming (968)
Hot Springs County, Wyoming (1,937)
Johnson County, Wyoming (1,693)
Lincoln County, Wyoming (8,469)
Niobrara County, Wyoming (2,286)
Platte County, Wyoming (7,019)
Sweetwater County, Wyoming (18,975)
Uinta County, Wyoming (9,339)
Weston County, Wyoming (3,071)

County TOTAL (18,873,291)

NOTE: Counties without health centers are determined by sites reported through the 2005 Uniform Data System. Some counties may in fact have a health center that was not reported as such in the list of delivery sites but rather was reported in the list of grantee organizations. However, grantees are required to report each service delivery site separately.

Source: Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates, Uniform Data Set 2005 and NACHC 2006 survey of non-federally funded health centers. For more information, email research@nachc.com

Appendix D

Medically Disenfranchised* Population in Congressional Districts Without Health Centers, 2005

State	109th Congressional District	Medically Disenfranchised
Arizona	3	14,715
Arizona	6	67,239
California	26	1,684
California	40	21,989
California	41	94,920
California	42	16,697
California	48	7,999
Florida	1	338,486
Florida	19	36,599
Florida	22	41,039
Illinois	13	2,597
Minnesota	2	3,025
Missouri	2	7,446
New Jersey	5	655
New Jersey	7	1,836
New York	1	1,097
New York	3	9,349
New York	4	29,133
North Carolina	10	44,106
Ohio	14	25,531
Pennsylvania	8	6,817
Pennsylvania	13	1,440
Pennsylvania	15	8,590
Texas	3	7,934
Texas	6	127,506
Texas	12	148,494
Texas	26	190,554
Virginia	7	45,288
TOTAL		1,302,765

* The medically disenfranchised are those people with no or inadequate access to a primary care physician due to local shortage of such physicians. They are a *subset* of the medically underserved who face various and often compounding barriers to care. The medically disenfranchised live in a primary care Health Profession Shortage Area (HPSA) or Medically Underserved Area (MUA), or who are considered a Medically Underserved Population (MUP) after subtracting a standard 2000 people for every primary care physician. For national and state estimates only, the medically disenfranchised exclude the number of people cared for by health centers in that same designated area. County level and congressional district level do not account for health center patients given an inability to align patients by this region. This is a conservative calculation, since there are undoubtedly individuals who live in areas with more than one primary care physician per 2000 residents, and even in areas that are not designated as HPSAs or MUAs, yet who cannot find a source of primary health care that will accept their insurance (this is increasingly true for individuals who have Medicaid and now even Medicare. For more information on methodology, see Appendix F.

Source: Robert Graham Center. Health Services and Resource Administration (HPSA, MUA/MUP data), 2006 AMA Masterfile, Bureau of the Census 2005 population estimates, Uniform Data Set 2005. For more information, email research@nachc.com.

Appendix E

Percent of Uninsured With and Without a Usual Source of Care by State, 2005

Note: Estimates of not having a usual source of care (USC) is another valuable measure of a lack of access to primary care, but these estimates are not comparable to our estimates of medically disenfranchised because they measure two different things. While medically disenfranchised estimate the impact of physician shortages on primary care, reports of lacking a USC tend to consider multiple and even compounding access barriers. Neither measure is complete, and both likely underestimate the true number of at-risk people.

State	Percent of Uninsured Adults *Without* a Usual Source of Care	Percent of Uninsured Adults *with* a Usual Source of Care	Total
Alabama	41.1%	58.9%	100.0%
Alaska	32.9%	67.1%	100.0%
Arizona	53.5%	46.5%	100.0%
Arkansas	50.2%	49.8%	100.0%
California	41.7%	58.3%	100.0%
Colorado	45.1%	54.9%	100.0%
Connecticut	31.7%	68.3%	100.0%
Delaware	29.2%	70.8%	100.0%
District of Columbia	29.9%	70.1%	100.0%
Florida	50.9%	49.1%	100.0%
Georgia	41.1%	58.9%	100.0%
Hawaii	24.8%	75.2%	100.0%
Idaho	37.3%	62.7%	100.0%
Illinois	42.5%	57.5%	100.0%
Indiana	47.6%	52.4%	100.0%
Iowa	32.8%	67.2%	100.0%
Kansas	41.4%	58.6%	100.0%
Kentucky	45.7%	54.3%	100.0%
Louisiana	49.5%	50.5%	100.0%
Maine	43.3%	56.7%	100.0%
Maryland	36.8%	63.2%	100.0%
Massachusetts	43.4%	56.6%	100.0%
Michigan	37.9%	62.1%	100.0%
Minnesota	18.3%	81.7%	100.0%

State	Percent of Uninsured Adults *Without* a Usual Source of Care	Percent of Uninsured Adults *with* a Usual Source of Care	Total
Mississippi	38.0%	62.0%	100.0%
Missouri	41.8%	58.2%	100.0%
Montana	37.8%	62.2%	100.0%
Nebraska	39.8%	60.2%	100.0%
Nevada	49.9%	50.1%	100.0%
New Hampshire	41.0%	59.0%	100.0%
New Jersey	47.9%	52.1%	100.0%
New Mexico	54.0%	46.0%	100.0%
New York	42.8%	57.2%	100.0%
North Carolina	48.6%	51.4%	100.0%
North Dakota	24.9%	75.1%	100.0%
Ohio	41.9%	58.1%	100.0%
Oklahoma	50.0%	50.0%	100.0%
Oregon	46.7%	53.3%	100.0%
Pennsylvania	36.4%	63.6%	100.0%
Puerto Rico	18.7%	81.3%	100.0%
Rhode Island	41.5%	58.5%	100.0%
South Carolina	45.9%	54.1%	100.0%
South Dakota	23.9%	76.1%	100.0%
Tennessee	33.7%	66.3%	100.0%
Texas	60.2%	39.8%	100.0%
Utah	32.7%	67.3%	100.0%
Vermont	38.3%	61.7%	100.0%
Virgin Islands	50.7%	49.3%	100.0%
Virginia	35.7%	64.3%	100.0%
Washington	41.2%	58.8%	100.0%
West Virginia	44.1%	55.9%	100.0%
Wisconsin	29.2%	70.8%	100.0%
Wyoming	32.1%	67.9%	100.0%

Source: Robert Graham Center. 2005 Behavioral Risk Factor Surveillance System.

Appendix F
Methodology and Limitations

We calculated the medically disenfranchised population by identifying and summing the populations living within federally-designated primary care Health Professional Shortage Areas (HPSAs) and Medically Underserved Areas (MUAs) or within Medically Underserved Populations (MUPs) across the U.S. by Census Track.[1] We also used the American Medical Association Master file to determine locations of practicing, non-federal primary care physicians.[2] After aggregating the residents living in these designated areas, we subtracted 2000 people for every one primary care specialist physician, including general/family practice, practice pediatrics, and obstetrics/gynecology.[3] We used the ratio of 1:2000 physicians to population as an average panel size for most primary care physicians and as reasonable estimate of the number of patients a physician can treat annually. Moreover, this ratio research has shown that this is an important threshold within counties for reducing hospitalizations for ambulatory care sensitive conditions. From this total, the number of patients served by Community Health Centers was subtracted for national and state estimates only. While state health center patients are derived from federally-funded health centers that are required to report data annually, the US total also includes patients served by a category of health centers that do not receive federal health center funding (known as "FQHC Look alikes") and are therefore not required to report data annually to the federal government. There are currently over 100 of these health centers around the country who served 1.3 million patients in 2005.[4] State totals do not include patients served by non-federally funded health centers.

We find that nationally, 56 million people across every state are considered medically disenfranchised. This is a conservative calculation and risks removing those patients served by health centers twice, once by accounting for the physician to population ratio even if those physician may be serving in health centers, and second by removing the patients served by health centers. This risk means that the estimate may be an underestimate. Additionally, we recognize that for large counties and sub-counties with HPSA and MUA/MUP designations, the number of medically disenfranchised may be underestimated given realistic travel times to local physicians. A third cause of underestimation is that we deducted all patients visiting a health center from the areas that carry shortage designations when a substantial proportion of these people may come from outside the designation area. A fourth cause of possible underestimation is that we used census tract level HPSA and MUA designations for quantifying the people at risk for poor access to care; however if a health center was present in the same county, the full patient load of the health center was subtracted from the population of this much smaller geographic area. Since health center patients come from a much wider geography, this likely overestimates the impact of the health center on the at-risk population and underestimates the remaining population at risk. This particular underestimation risk was much lower for counties in which all census tracts carried a shortage designation. The fifth possible source of underestimation, is that our method only accounts for people living in areas that carry federal shortage designations. Many other undesignated areas have people who also lack sufficient access to primary health care.

NACHC's previous study of Americans without access to primary care given physician shortages found that 36 million Americans were medically disenfranchised, including one in three residents of **Louisiana** and **Mississippi** and at least one in five residents in ten other states (**Alabama**, **Arkansas**, **Georgia**, **Idaho**, **Kentucky**, **Nebraska**, **Nevada**, **North Carolina**, **Tennessee**, and **Wyoming**). The current figure is substantially different because many more areas have been federally designated as lacking enough primary care physicians (Table 1 below) and because of continued poor physician distribution relative to the growth of the population.

Table 1. Growth in HPSA and MUA Counties, 1998 to 2006

County HPSA Status	1998	2006	Difference	% Change
Full	907	1383	476	52%
Partial	1150	665	-485	-42%
None	1084	1093	9	1%

[1] For more information on HPSAs and MUAs/MUPs, see http://bhpr.hrsa.gov/shortage/.
[2] For more information on the AMA masterfile, see http://www.ama-assn.org/ama/pub/category/2673.html.
[3] For more information on these primary care specialties, see http://bhpr.hrsa.gov/shortage/hpsaguidepc.htm.
[4] Based on NACHC, 2006 Survey of Non-Federally Funded Health Centers.

County MUA/MUP Status	1998	2006	Difference	% Change
Full	1412	1546	134	9%
Partial	997	1057	60	6%
None	732	538	-194	-27%

Some states have been more successful than others in having their shortage areas federally designated which largely explains the changes in the most affected states. For example, **Louisiana's** seeming improvement in the rankings may not reflect actual improvement, and certainly does not capture what has happened since its devastating hurricanes in 2005. Because this methodology relies on areas that are designated as medically underserved or health professional shortage areas, and this process may be influenced by advocacy by state leaders, the number of medically disenfranchised in some states may be underestimated because some communities may not be designated HPSAs or MUAs despite having a qualifying physician shortage. This might be the case in **West Virginia,** for example, which has relatively fewer HPSAs compared with other similarly rural states. Likewise, this method has risk for under or over estimating medically disenfranchised people. Since it relies heavily on shortage designations, it may overestimate in areas that have retained their designations beyond actual shortage.

The Behavioral Risk Factor Surveillance System offers an alternative approach to understanding problems of access. Like the MEPS, mentioned in this report, this survey permits measurement of people who report having no usual source of care (USC), but is restricted to adults. Whereas MEPS only allows national estimates, BRFSS permits estimates of how many within each state are affected in each state. This national survey also collects information on whether or not people have health insurance. Again, having no USC is one measure of poor access to care that is different from our definition of medical disenfranchisement. Its benefit is in being able to estimate the scope of the problem outside of areas with shortage designations and that it permits looking at problems associated with and beyond lack of health insurance. Its downside is that it does not permit local area estimates of poor access to care. In 2005, more than 45 million adults had no usual source of care. If this figure is weighted to include children, it represents more than 56 million people. Thus our overall measure of disenfranchisement is remarkably, perhaps coincidentally, similar to number of people without a usual source of care in two independent national surveys. All three estimates put the number of affected people at 56 million. The MEPS and BRFSS are measuring the same problem—the lack of a usual source of care—by two different methods and reinforce that the actual number approaches 60 million people, or nearly one in five Americans. They reinforce our finding of the number of medically disenfranchised by supporting an estimate in the tens of millions of people. All three methods likely overlap in their counting of people but underestimate the true scope of the problem, that is, the number of truly disenfranchised is likely to be several million people larger. The differences in how BRFSS and our definition of medical disenfranchisement estimate the size of the problem is revealed in the state-based estimates which are not as similar as the national estimates: states in which the majority of counties carry a shortage designation, like **Missouri** and **Florida**, tend to have larger estimates of disenfranchisement than people without a USC; states with a lower proportion of counties with designations, like **West Virginia** and **Oklahoma**, tend to have lower disenfranchisement estimates than the estimates of people without a USC. For several states, the two estimates are more balanced. Using both estimates, no USC and medical disenfranchisement, in tandem may offer a more balanced view of the affected population, but only our estimate of medical disenfranchisement allows estimates for counties and Congressional Districts.

It is important to keep in mind that the medically disenfranchised represent only one access barrier to primary care – local physician shortage. Other barriers, such as insurance and cost, language and culture, transportation, and special needs also hamper access to primary care. Communities not listed in this study as having medically disenfranchised will often still have populations at risk of poor access to care. Or, populations in need of primary care may be lost when they reside in counties that are too big for one new provider to sever everyone. Migrant and homeless are two important and traditionally at risk and underserved populations that may not be accounted for in this study. Special considerations must be given to all access barriers.