CPCA
California Primary Care Association

Health Care Access for All

July 2005

Addendum
A Nation's Health at Risk III: Growing Uninsured, Budget Cutbacks Challenge President's Initiative to Put a Health Center in Every Poor County

Although the National Association of Community Health Centers and the California Primary Care Association support the intent of the President's New Initiative, we urge a revision of the central concept that proposes one health center in every poor county as a solution to provide health care to the uninsured and the underserved. The assessment for locating just one health center per county does not provide an appropriate solution to the health care needs for the poor and underserved in a significant number of areas of the United States. This Addendum points to the shortcomings of using county level data to determine health center placement for communities across the United States. The Addendum also proposes an alternative geographic measure to implement the President's New Initiative through a California case study focusing on geographic delineations based on rational service areas, as defined in 42 CFR Chapter 1, Part 5.

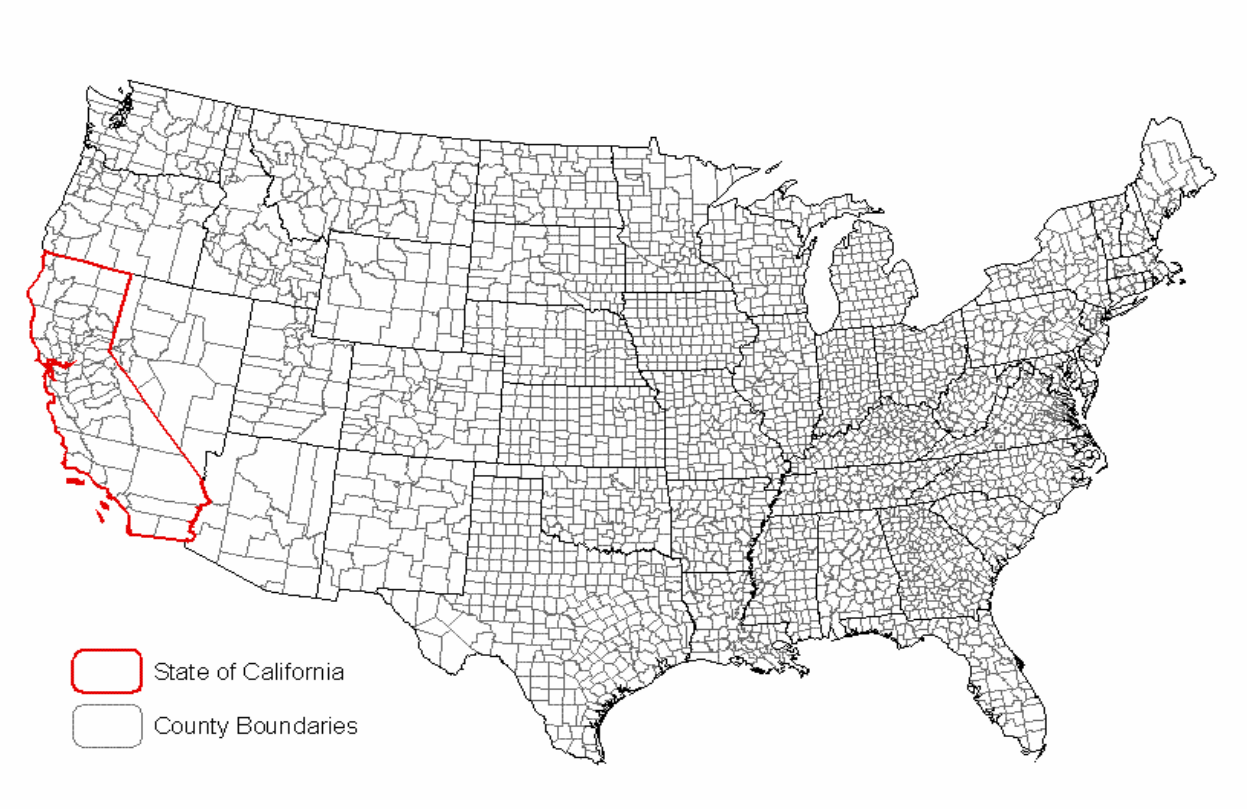
Based on the findings of *A Nation's Health at Risk III*, including this Addendum, we make the following recommendation for the implementation of the President's New Initiative:

- In implementing the President's New Initiative, the Health Resources and Services Administration should allow states to use rational service areas, as defined in 42 CFR Chapter 1, Part 5, versus counties as the geographic parameter for health center placement. In many states counties will be appropriate rational service areas. In many others, portions of a county represent the logical area in which a low-income population would expect to receive primary health care services.
- In addition, some counties and rational service areas may not have a population large enough to sustain a health center or some counties and rational service areas may already be

served by a health center in a contiguous county or rational service area. HRSA should develop a process that will also take this situation into account

As this Addendum will discuss, a health center initiative that focuses on placing only one health center per county will discriminate against states with large counties and with densely populated areas within counties. The map below delineates counties across the nation. As one travels from east to west, county sizes increase considerably. The use of counties as a geographic parameter for a health center initiative becomes a less and less practical or judicious system for improving health care availability for the west central, the west and the north-east.

Figure 1: Map of all counties across the contiguous United States



(1) ***Variations in geographic extent diminishes the county parameter as a determinate for the placement of a health center.*** County size differs significantly across the nation. In this Addendum, the California Primary Care Association analyzed the average size of counties across the country on a state-by-state basis and reviewed the variation in size comparing average square miles per county by state. County sizes vary from an average of about 200 square miles per county in Rhode Island to an average of 2700 miles in California and 7500 miles in Arizona. Table 1 below shows the 17 states that have counties with an average area of

over 1,000 square miles per county. One health center will not be able to serve all needy residents of a county covering 1,000 square miles; hence health center location determination based on counties is inappropriate for a significant portion of the nation.

Table 1: States with average county size of more than 1000 square miles per county

State	Number Of Counties	Area (Square Miles)	Average Sq. Miles Per County
Alaska	27	571,933	21,183
Arizona	15	113,629	7,575
Nevada	17	109,833	6,461
Wyoming	23	97,100	4,222
New Mexico	33	121,339	3,677
Utah	29	82,144	2,833
California	58	155,935	2,689
Oregon	36	95,999	2,667
Montana	56	145,552	2,599
Maine	16	30,862	1,929
Idaho	44	82,738	1,880
Washington	39	66,544	1,706
Colorado	64	103,711	1,621
North Dakota	53	68,977	1,302
Hawaii	5	6,423	1,285
South Dakota	66	75,806	1,149
Texas	254	261,697	1,030

Source: National Association of Counties (www.naco.org); Population Division, U.S. Census Bureau, 2005

It is also important to note that the average county size for the states of Alaska, Arizona, and Nevada is more than 6,000 square miles per county, which is larger than the total size of many states. The states where the size of the entire state is less than 6,000 square miles are: Delaware, Connecticut and Rhode Island.

(2) ***Population size varies dramatically across counties diminishing the county parameter as a determinate for the placement of a health center***. In addition to concerns associated with utilizing counties as a geographic parameter, the range of population size of counties also varies significantly from densely populated to sparsely populated regions, creating another area of concern. As seen in the Table 2 below, there are 18 states and the

District of Columbia with an average population of over 120,000 per county. California has the highest population density per county in the entire country. According to the Uniform Data System (2003), the average health center site serves 2483 patients annually.[1] It would be impossible, therefore, for one health center per county to serve the 'unserved' in the counties in these 18 states and others because one health center obviously cannot have the capacity to serve the needs of hundreds of thousands of residents currently living in many counties.

Table 2: States With Average Population ≥ 120,000 Per County

State	Number of counties	Population 7/1/2004	Average Population per County
California	58	35,893,799	618,859
District of Columbia	1	553,523	553,523
Massachusetts	14	6,416,505	458,322
Connecticut	8	3,503,604	437,951
New Jersey	21	8,698,879	414,232
Arizona	15	5,743,834	382,922
New York	62	19,227,088	310,114
Delaware	3	830,364	276,788
Florida	67	17,397,161	259,659
Hawaii	5	1,262,840	252,568
Maryland	24	5,558,058	231,586
Rhode Island	5	1,080,632	216,126
Pennsylvania	67	12,406,292	185,169
Washington	39	6,203,788	159,071
Nevada	17	2,334,771	137,339
Ohio	88	11,459,011	130,216
New Hampshire	10	1,299,500	129,950
Illinois	102	12,713,634	124,643
Michigan	83	10,112,620	121,839

Source: National Association of Counties (www.naco.org); Population Division, U.S. Census Bureau, 2005

(3) ***Alternative to county level estimation: Rational Service Areas.*** Recognizing that counties can be unreasonable service areas for many states, the Health Resources and Services Administration (HRSA) adopted regulations for defining a rational service area in 42 CFR Chapter 1, Part 5. The regulations define rational service areas as 1) a county or a group of

[1] Derived from 2003 UDS data: Total patients served: 12,391,270 divided by Total number of Service Delivery Sites: 4,990.

contiguous counties, whose population centers are within 30 minutes travel time of each other, or 2) a portion of a county, whose population, because of topography, market or transportation patterns, distinctive population characteristics or other factors, has limited access to contiguous area resources, as measured generally by a travel time greater than 30 minutes. We believe rational service areas -- rather than counties alone -- are a more appropriate geographic parameter for equitably determining where a new health center should be placed. We encourage HRSA to use its current regulations to determine expansion of the health center system.

Utilizing California as a case study demonstrates the significant number of low-income individuals whose needs would be ignored in a county-based analysis, such as the methodology used in *Nation's Health at Risk III*. Although California is the only state that we analyzed, we believe our state demonstrates the inequities that would be experienced by most west, west central, and some north-east states if HRSA does a county-based analysis for the entire country.

(4) ***The case for California.*** Some states, like California, provide examples of the variation in the demographics across the state with some areas being more populated than others. Further analysis of California on a county-wide basis revealed that the range of residents per county varies from a minimum of 1,190 residents in Alpine County (Population Division, U.S. Census Bureau, 2005) to a maximum number of residents living in Los Angeles county with a population size of approximately 10 million people (Population Division, U.S. Census Bureau, 2005). Table 3 below shows the 5 most populated counties of California and the county size, followed by Table 4 showing the 5 least populated counties in the state of California and the county size to provide a better picture of the extreme population estimates.

Table 3: California's most densely populated counties

County	Population	County popn. as % of California popn.	County Area (sq. miles)
Riverside County	1,871,950	5.215	7,208
San Bernardino County	1,921,131	5.352	20,062
San Diego County	2,931,714	8.168	4,204
Orange County	2,987,591	8.323	790
Los Angeles County	9,937,739	27.687	4,060
California	**35,893,799**		

Source: Population Division, U.S. Census Bureau, 2005

Table 4: California's most thinly populated counties

County	Population	County popn. as % of California popn.	County Area (sq. miles)
Alpine County	1,190	0.003	739
Sierra County	3,490	0.010	953
Modoc County	9,599	0.027	3,944
Mono County	12,766	0.036	3,044
Trinity County	13,671	0.038	3,179
California	**35,893,799**		

Source: Population Division, U.S. Census Bureau, 2005

Utilizing counties as a geographic parameter for a health center initiative will discriminate against states with dramatically large counties, including California. In densely populated counties, such as those in Table 3, one health center would not have the capacity to serve the county's entire population. In large counties that are sparsely populated, such as those in Table 4, one health center would still be ineffective in serving these communities because extreme geographic isolation would create an insurmountable barrier to many with limited resources.

(4a) ***Alternative to county level estimation: Rational Service Areas.*** Because California's average county is 2689 square miles in size and includes 618,859 people, it is clear that counties do not serve as a logical unit for establishing service areas. California relies on HRSA's regulatory authority to develop California's rational service areas. HRSA currently uses California's Medical Study Service Areas (MSSAs) as rational service areas to assess the need and determine locations for health centers in California. The MSSAs provide a more accurate picture of the health care landscape than county-based geographic subdivisions. An MSSA is composed of one or more complete Census Tracts and does not cross county lines. In their formulation, MSSAs are delineated to represent a cohesive, rational service area within which the population should normally expect to receive primary health care services.

When analyzing area and population density (see Table 5a and 5b), California's MSSAs are directly comparable to counties on the East Coast and, therefore, MSSAs represent a logical alternative to county level estimations for California. Table 5a provides information on 12 East Coast counties. In conducting this comparison to California's MSSAs, the counties containing the capital of each state were used in Table 5a. Table 5b provides information on California MSSA's in each county.

The *population density per MSSA* column in Table 5b represents an average of this demographic criterion for all the MSSA's in each county. Those counties containing MSSAs with

low average population density -- such as Alpine, Calaveras, Del Norte, Inyo, Lassen, etc. -- are California's rural/frontier areas. Because of their rural/frontier character, these counties also have MSSAs that are significantly larger than most of the East Coast counties in Table 5a.

POPN. DENSITY OF EAST COAST COUNTIES **TABLE 5a**

State	Capital City	County of Capital City	2000 County Pop.	County Area (sq. miles)	Pop. density county
Massachusetts	Boston	Suffolk	689,807	58	11,893
Virginia	Richmond	City of Richmond	197,790	60	3,297
New Jersey	Trenton	Mercer	350,761	226	1,552
Rhode Island	Providence	Providence	621,602	413	1,505
Maryland	Annapollis	Anne Arundel	489,656	416	1,177
Connecticut	Hartford	Hartford	857,183	736	1,165
New York	Albany	Albany	294,565	524	562
Pennsylvania	Harrisburg	Dauphin	251,798	525	480
Delaware	Dover	Kent	126,697	591	214
New Hampshire	Concord	Merrimack	136,225	934	146
Maine	Augusta	Kennebec	117,114	868	135
Vermont	Montpelier	Washington	58,039	690	84

POPULATION DENSITY OF CALIFORNIA'S MSSAS **TABLE 5b**

California Counites	# of MSSAs per county	Avg area per MSSA	Popn. density per MSSA (persons per sq. mile)
Alameda County	16	51	28,123
Alpine County	1	744	2
Amador County	3	202	174
Butte County	8	210	969
Calaveras County	1	1,041	39
Colusa County	4	289	65
Contra Costa County	11	73	12,988
Del Norte County	1	1,230	22
El Dorado County	5	358	437
Fresno County	14	430	1,860
Glenn County	3	442	60
Humboldt County	5	810	156

Imperial County	5	896	159
Inyo County	4	2,557	7
Kern County	15	544	1,216
Kings County	3	464	279
Lake County	5	266	219
Lassen County	4	1,180	29
Los Angeles County	100	48	200,306
Madera County	3	718	172
Marin County	4	207	1,194
Mariposa County	2	730	23
Mendocino County	12	323	267
Merced County	6	328	642
Modoc County	3	1,401	7
Mono County	2	1,566	8
Monterey County	8	471	852
Napa County	6	131	946
Nevada County	2	487	189
Orange County	27	35	81,057
Placer County	6	250	992
Plumas County	5	523	40
Riverside County	22	332	4,655
Sacramento County	14	71	17,208
San Benito County	1	1,391	38
San Bernardino County	26	773	2,211
San Diego County	38	119	23,626
San Francisco County	8	29	26,784
San Joaquin County	10	143	3,954
San Luis Obispo County	5	723	341
San Mateo County	10	74	9,543
Santa Barbara County	8	474	843
Santa Clara County	16	81	20,652
Santa Cruz County	6	101	2,526
Shasta County	8	481	339
Sierra County	1	962	4
Siskiyou County	8	793	56
Solano County	6	151	2,612
Sonoma County	9	196	2,335
Stanislaus County	9	168	2,654
Sutter County	3	203	389
Tehama County	4	740	76
Trinity County	4	802	16
Tulare County	9	538	685
Tuolumne County	4	569	96
Ventura County	9	245	3,070
Yolo County	6	171	989
Yuba County	3	214	281

There are 541 MSSAs in the state of California.[2] Given its size of 571,933 square miles and population of 35,893,799, this allows for a better assessment of the healthcare landscape than the 58 county level analysis of California. The California Primary Care Association conducted the MSSA analysis at three levels. First we identified the number of MSSAs within each county. Then, we utilized the *Nation's Health at Risk III* methodology for identifying poor counties and applied this methodology to California's MSSAs. Finally, we gleaned out MSSAs where 330-funded health centers are currently located.

(4b) ***Identifying Poor Areas in California.*** Utilizing the *Nation's Health at Risk III* methodology for identifying "poor counties" and replacing counties with MSSAs, 236 out of 541 of California's MSSAs are poor. Following the *Nation's Health at Risk III* methodology, a "poor MSSA" is defined as an MSSA with more than 35.3 percent of its population living below 200% of the federal poverty level. The *Nation's Health at Risk III* defines 'poor counties' as those with a poverty rate higher than the national median (35.3% of the population living in poverty). Poverty is defined as below 200% of federal poverty level. The 236 poor MSSAs are the home to 39.2% of California's population. Ninety-one of the 236 MSSAs have 50% of its population living below 200 percent of the federal poverty level.

If counties are used as the geographic parameter for health center placement, none of California's 236 poor MSSAs would be eligible for a health center. None of the 6,590,105 people under 200% of the federal poverty level residing in these MSSAs would have their health care needs taken into consideration under a county-based health center initiative. Table 6 lists the 25 MSSAs with the highest concentration of individuals under 200 percent of the federal poverty level. Many are in urban Los Angeles county, a significant number are in California's rural Central Valley; and all have population concentrations large enough to necessitate at least one health center.

[2] Data sources are U.S. Census Bureau, and the Office of Statewide Health Planning and Development, California.

TABLE 6 25 MSSAs with the Highest Concentration of "Poor" Individuals

COUNTY	MSSA-ID	MSSA_NAME	R/U	POP2000	POP200 POV	PCT200 POV
Los Angeles	78.2mmm	Downtown Southeast/Florence North	Urban	90,501	67,565	74.7
Kern	61	Arvin/Lamont/Weed Patch	Rural	33,175	23,989	72.3
Los Angeles	78.2ggg	South Central Northeast	Urban	93,975	67,612	71.9
Fresno	26	Cantua Creek/San Joaquin/Tranquility	Rural	7,463	5,316	71.2
Los Angeles	78.2jjj	Long Beach West Central	Urban	118,750	84,602	71.2
Merced	97.2	El Nido/Merced Southwest	Rural	21,300	15,141	71.1
Los Angeles	78.2b	Pico-Union	Urban	155,004	109,224	70.5
Fresno	25	Firebaugh/Mendota	Rural	19,362	13,544	70.0
Los Angeles	78.2aaa	Watts/Willowbrook	Urban	78,423	54,449	69.4
Tulare	227.2	Cutler-Orosi	Rural	15,541	10,701	68.9
Los Angeles	78.2h	Boyle Heights Central/City Terrace West	Urban	99,593	68,194	68.5
Los Angeles	78.2fff	Firestone/Florence South	Urban	90,586	61,985	68.4
Los Angeles	78.2s	South Central Southwest	Urban	88,762	59,969	67.6
Imperial	46	Bard/Winterhaven	Rural	3,387	2,278	67.3
Kern	66b	Bakersfield East/Lakeview/La Loma	Urban	120,422	79,945	66.4
Fresno	35d	Fresno East Central	Urban	95,443	62,411	65.4
Riverside	128	Arabia/Coachella/Desert Beach/Flowing Wells/Indio South/La Quinta East/Mecca/Oasis/Thermal	Rural	70,953	45,696	64.4
Los Angeles	78.2l	Exposition Park/Leimert Park	Urban	83,494	53,497	64.1
Los Angeles	78.2g	Hollywood South Central/Inner Sunset	Urban	124,265	79,414	63.9
Los Angeles	78.2ffff	Boyle Heights Northwest/Chinatown/Downtown Northwest/Little Tokyo/Westlake	Urban	101,013	62,995	62.4
Merced	97.3	Le Grand/Planada	Rural	7,888	4,918	62.3
Los Angeles	78.2d	City Terrace East/East Los Angeles	Urban	94,030	58,531	62.2
Los Angeles	78.2bbb	Compton East	Urban	86,777	53,696	61.9
Los Angeles	78.2ddd	Bell Southwest/Cudahy/Vernon	Urban	84,947	52,598	61.9
Orange	116b	Santa Ana Central	Urban	124,403	76,894	61.8

(4c) *330-Funded Health Centers in California's Poor Areas.*

Utilizing the *Nation's Health at Risk III* methodology, the California Primary Care Association (CPCA) analyzed the demographics of the poor MSSA's in California without a 330-funded health center.

Of California's 541 MSSAs, 351 do not have a 330-funded health center site located within the MSSA. As discussed in section (4b), using the *Nation's Health at Risk III* methodology, California has 236 poor MSSAs. Of these poor MSSAs, 114 do not have a 330-funded health center site located within the MSSA.[3] As discussed in section (4a), all of California's MSSAs, including these poor MSSA's without a 330-funded health center site, are comparable to counties on the east coast in terms of the geographic and population sizes. California's poor MSSAs (poor MSSAs have over 35.3 percent population living under 200 percent FPL) are home to 13,300,243 individuals, including 2,978,621 people under 100% of the federal poverty line and 6,590,105 people under 200% of the federal poverty line. This represents 15.53% [4] of California's residents living in poor areas without a health center. Some of these individuals may be able to access care via a health center in a contiguous area, however, many will not.

By using a county as the geographic parameter, as in *Nation's Health at Risk III*, only California's predominantly frontier counties are identified as poor counties without a 330-funded health center: Alpine, Mariposa, Modoc, Tehama, and Trinity County. As with all of California's counties, these five counties are too large to act as rational service areas (with Alpine=739 sq. miles; Mariposa=1,451 sq. miles; Modoc=3,944 sq. miles; Tehama=2,951 sq. miles; Trinity=3,179 sq. miles). Unlike most of California's counties, these counties are sparsely populated (Alpine=2 persons per sq. miles; Mariposa=12 persons per sq. miles; Modoc=2 persons per sq. miles; Tehama=19 persons per sq. miles; Trinity=4 persons per sq. mile).

When a county analysis is used, these frontier counties represent only 0.3% of California's residents living in a poor area without a 330-funded health center versus 15.53% of California's residents living in a poor area when an MSSA analysis is used. If counties are used as a

[3] Some satellite sites could not be included because a few health centers include the encounters in satellite sites in their main site report to the Office of Statewide Health Planning and Development (OSHPD). OSHPD could not identify these sites by MSSA and therefore, they could not be included.

[4] For deriving the 15.53% estimate, poor areas are defined as MSSAs with over 35.3% of the population living under 200 percent FPL (the total number of individuals in these poor areas is 5,511,973). Total California population = 35,484,453 (source: Census 2000). Hence 15.53% = 5,511,973 / 35,484,453*100.

geographic parameter for the new President's Initiative, the health care needs of 50.36%[5] of California's poor residents, or 5,511,973 individuals under 200% of the federal poverty line, will be ignored based purely on these individuals' residency in the west.

(5) ***Conclusion***

If the President's New Initiative uses counties as a geographic parameter, a significant number of states - especially in the west central, the west and the north-east - would be significantly disadvantaged in a similar manner as California. We strongly urge the President and HRSA to allow states to utilize rational service areas that have been recognized by HRSA as an appropriate geographic parameter in seeking to place new access points.

[5] For deriving the 50.36% estimate, poor residents living in poor areas without a 330-funded health center = 5,511,973; Total California population living under 200 percent FPL = 10,943,136 (source: Census 2000). Hence 50.36% = 5,511,973 / 10,943,136*100.