

CHAPTER 3 APPALACHIAN HEALTHCARE ACCESS

3.1 APPLICATION OF INDEX

Data for each component for each county in the United States were rank ordered and assigned a percentile. The rank ordered percentiles are assigned an extension “_R.” The following tables document the metrics, method, source, variable name and date for the data elements in each component of the HCCA. Following publication, raw data for these analyses will be available from www.ARC.gov/research. Maps in Section 3.2 of this report reflect choroplethic ratings of the percentile distribution of values in the HCCA and its subcomponent indices. All maps are scaled in quintiles and adjusted so that red represents low percentiles and blue represents high percentiles. White is average.

TABLE 4 - HEALTHCARE COST, COVERAGE AND ACCESS (HCCA) INDEX CALCULATION

Equation	Basic Scaling Method	Input Item	Final Rescaled Variable Name
$HCCA = (HCRA_R + HIC_R + HCC_R) / 3$	Percentile Value	Rank ordered then converted to a percentile	HCCA_R

TABLE 5 – HEALTH CARE COSTS (HCC) COMPONENT CALCULATION

Input Item Definition	Data Source	Time Periods	Basic Scaling Method	Input Item	Final Rescaled Variable Name
HCC = CMS Hospital Wage Index Rescaled	CMS	FY 2009 Wage Index – calculated from 2005 Wage Data	Percentile Value	The CMS labor cost Index Rank ordered then converted to a percentile. Tied counties are given tied ranks for percentile ranking	HCC_R

TABLE 6 - HEALTH INSURANCE COVERAGE (HIC) COMPONENT CALCULATION

Input Item Definition	Data Source	Time Periods	Basic Scaling Method	Input Item	Final Rescaled Variable Name
HIC = Percent of residents 0 to 64 years old insured by public or private sources Rescaled	SAHIE	2007	Percentile Value	Insured residents 0 -64 years old as percent of 0-64 year-olds from SAHIE. Rank ordered then converted to a percentile	HIC_R

TABLE 7 – HEALTH CARE RESOURCE AVAILABILITY (HCRA) COMPONENT CALCULATION

Input Item	Input Item Definition	Data Source	Time Periods	Basic Scaling Method	Computation Refinements	Final Rescaled Variable Name
PCP	Primary Care Physicians per Census Bureau 100K pop	ARF	Averaged across the 3 most recent years (2006, 2007, 2008)	Percentile value	Counties without physicians (tied at zero) will be arrayed so most populated counties have a greatest degree of physician shortage	PCP_R
NPCP	Non-primary care Physicians per Census Bureau 100K pop	ARF	Averaged across the 3 most recent years (2006, 2007, 2008)	Percentile Value	Counties without physicians (tied at zero) will be arrayed so most populated counties have a greatest degree of physician shortage	NPCP_R
DDS	Dentists per Census Bureau 100K pop	ARF	2007 (latest available data)	Percentile Value	Counties without dentists (tied at zero) will be arrayed so most populated counties have a greatest degree of physician shortage	DDS_R
HOSP BEDS	Short term general hospital beds per Census Bureau 10K population	ARF	Averaged across the 3 most recent years (2005, 2006, 2007)	Percentile value	Counties without hospitals (tied at zero) will be arrayed so most populated counties have a greatest degree of physician shortage.	HOSBEDS_R
HCRA= (PCP_R + NPCP_R + DDS_R + HOSPBEDS_R)/4				Average of the 4 percentile values	The average of the 4-item summed percentile scores is then again rank ordered and converted to a percentile across all U.S. counties	HCRA_R

Throughout the rest of the report, for ease of reading, we have dropped the “_R” extension. Tables above are useful only for persons using the data tables that accompany this report. Maps in the following section compare the United States and the Appalachian Region for the HCCA Index and its subcomponents. Note that Lafayette County, Mississippi is outside the Appalachian Region; so it appears blank on the ARC maps.

3.2 MAPS OF HEALTHCARE COST, COVERAGE AND ACCESS INDEX (HCCA) AND COMPONENTS

The following pages contain maps of counties in the United States and the Appalachian Region showing geographic differences for the Health Care Cost, Coverage and Access Index (HCCA) and its components. All maps are scaled in five quintiles with red the least desirable and blue the most desirable score.

3.2.1 HEALTHCARE COST, COVERAGE AND ACCESS (HCCA) INDEX

FIGURE 10 – COUNTY HCCA INDEX IN THE U.S., 2011

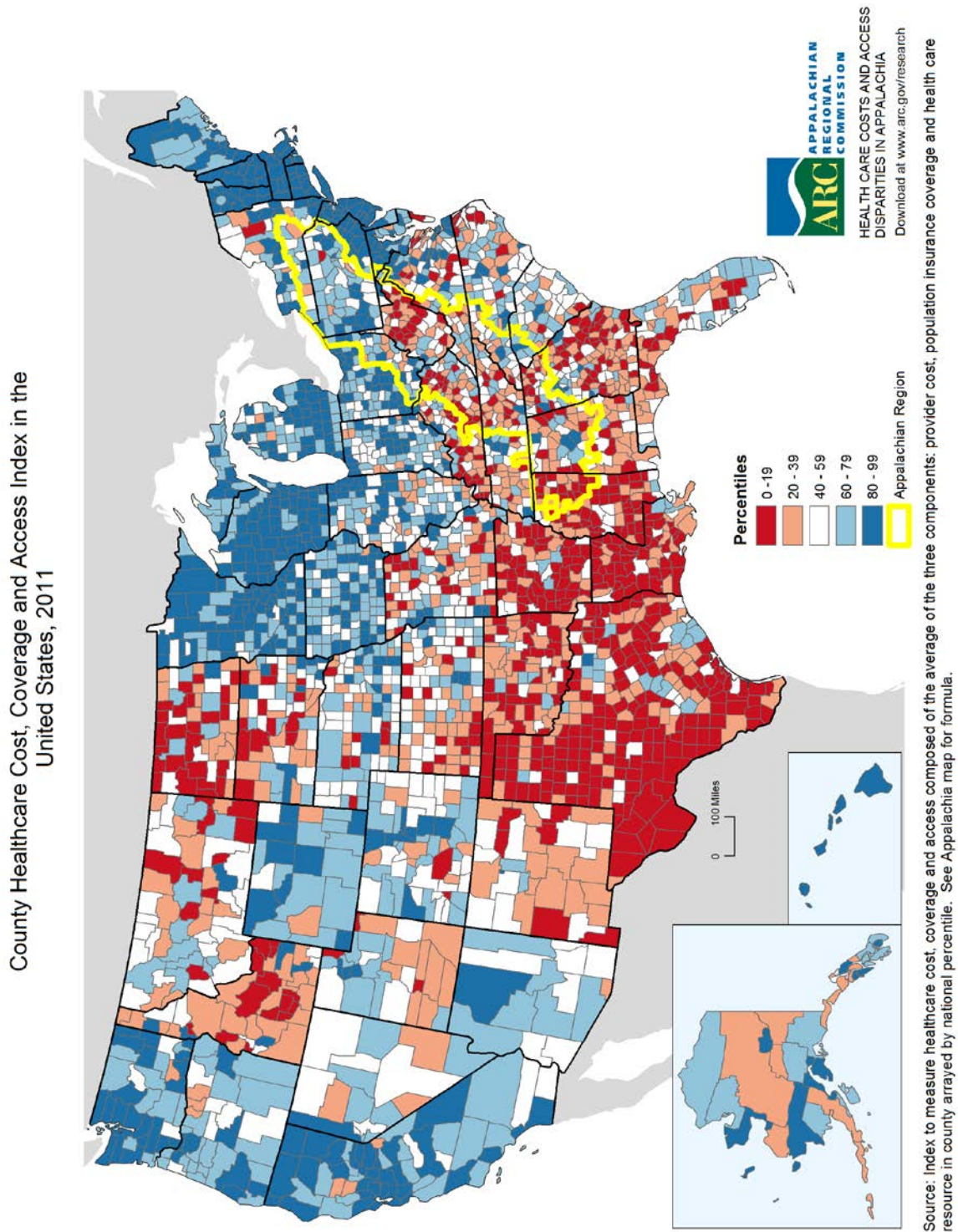
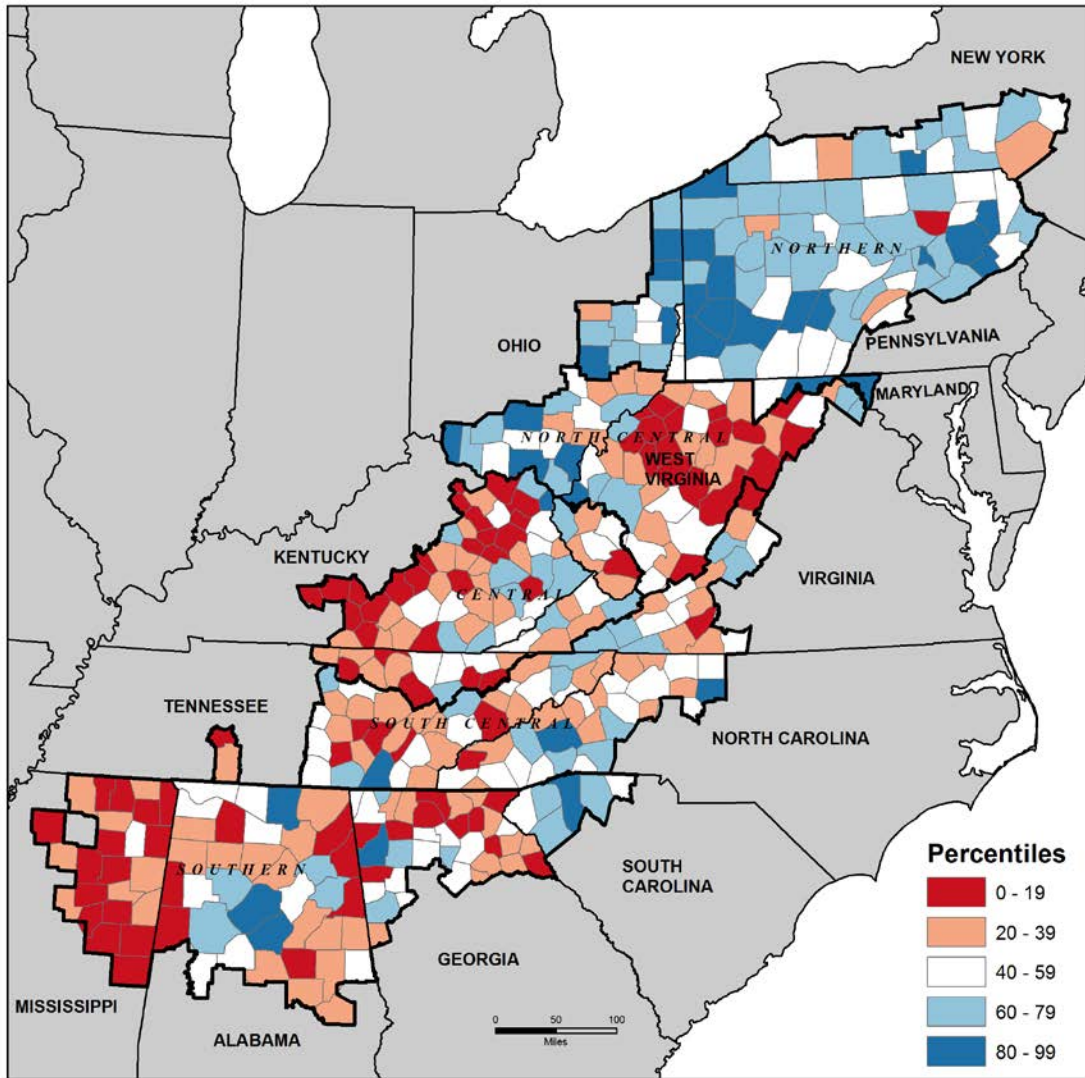


FIGURE 11 - COUNTY HEALTHCARE COST, COVERAGE AND ACCESS (HCCA) INDEX IN APPALACHIA, 2011



Formula: Percentile of ((Health Cost Percentile + Health Insurance Percentile + Health Resource Percentile) / 3)

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The HCCA does not follow traditional patterns of distress in Appalachia, or elsewhere. Extremely low scores in broad areas of Texas and Louisiana are consistent with immigrant patterns. Those same extremely low scores in Appalachia occur in very rural areas. Every Appalachian state, except South Carolina and Maryland, has a pocket of extremely low HCCA score. Generally, northern states fare better than those in central Appalachia and the south. These maps show percentiles; the whole nation is compared to itself. Top performers are in the 80th percentile and above.

3.2.2 HEALTH CARE COST (HCC) COMPONENT

FIGURE 12 – COUNTY HCC COMPONENT IN THE U.S., 2011

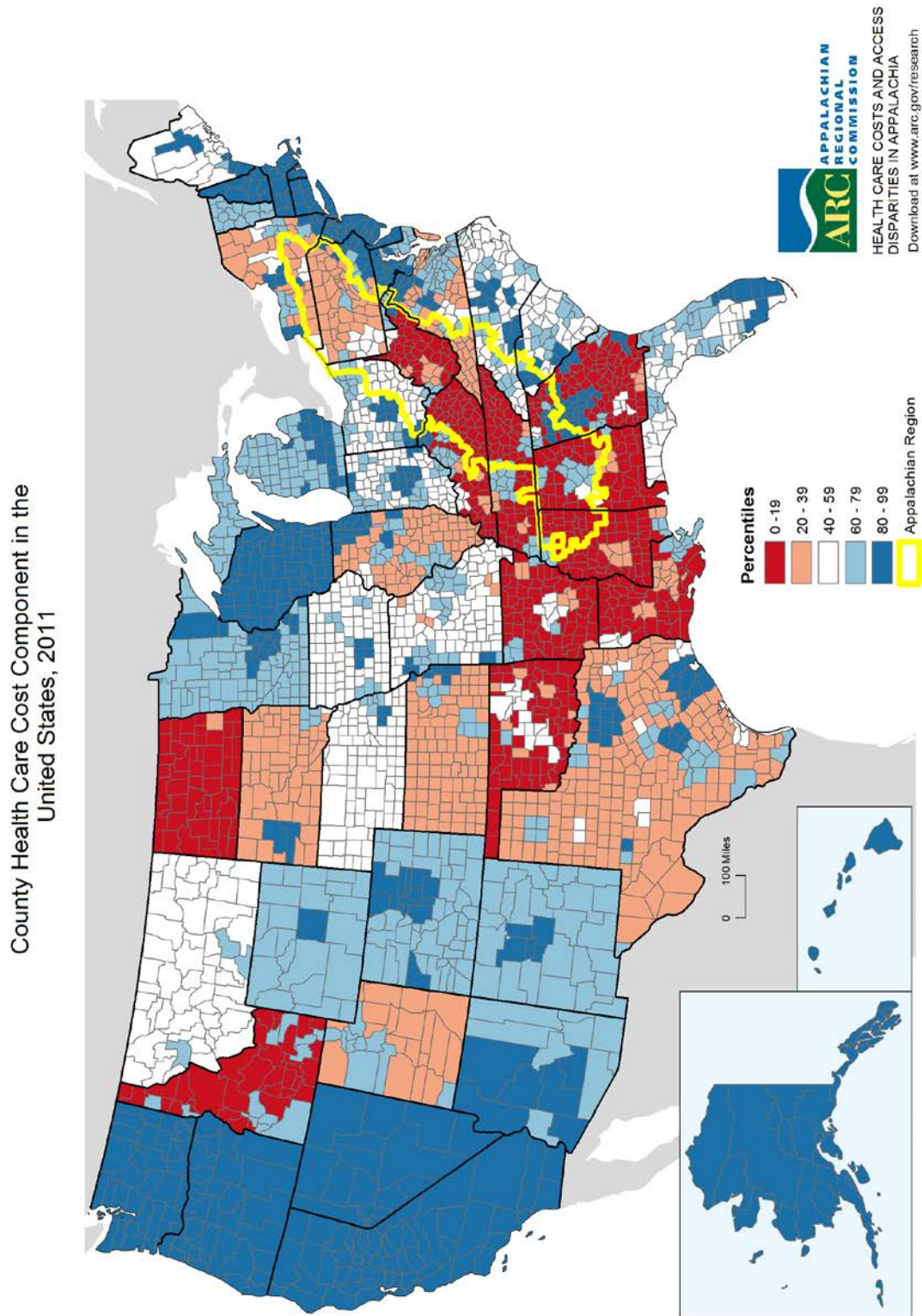
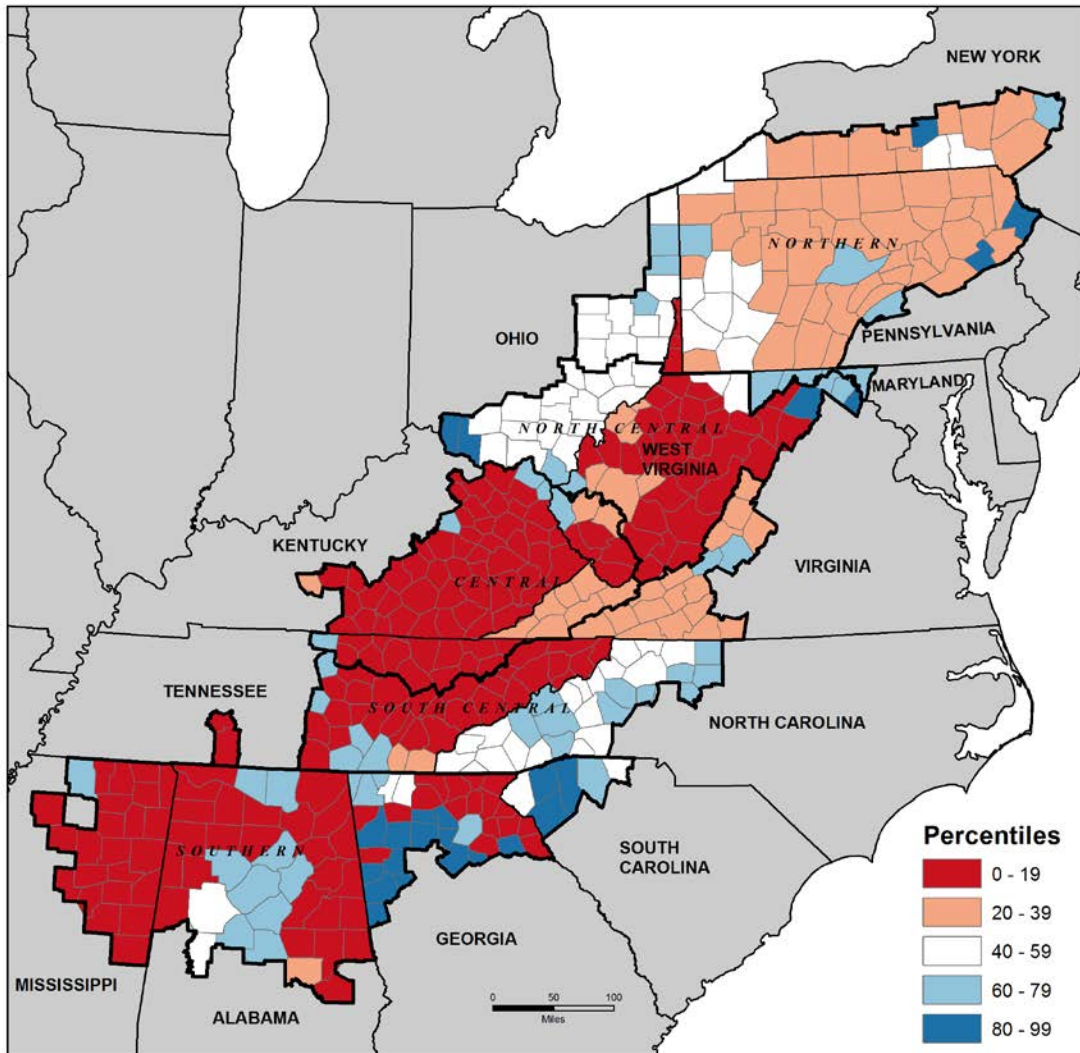


FIGURE 13 – COUNTY HEALTH CARE COST (HCC) COMPONENT IN APPALACHIA, 2011



Source: 2009 CMS Hospital Geographic Wage Index (calculated by CMS from year 2005 Wage Data). Department of Health and Human Services, Centers for Medicare & Medicaid Services 2010, Wage Index and Capital Geographic Adjustment Factor by CBSA 2009.

Prepared by Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill in cooperation with PDA, Inc, Raleigh, North Carolina, 2011



HCC reflects and reinforces severe disparities in Central and Southern Appalachia and the southern United States in general. This means that wages paid by hospitals are lowest here. This low wage sets the benchmark for 60 percent of the Medicare payment rate for hospitals and by reference for most other Medicare healthcare services. Other payers set payments on a percent of Medicare, thus low wages beget low payments, as other insurers benchmark to Medicare.

3.2.3 HEALTH INSURANCE COVERAGE (HIC) COMPONENT

FIGURE 14 - COUNTY HIC COMPONENT IN THE U.S., 2011

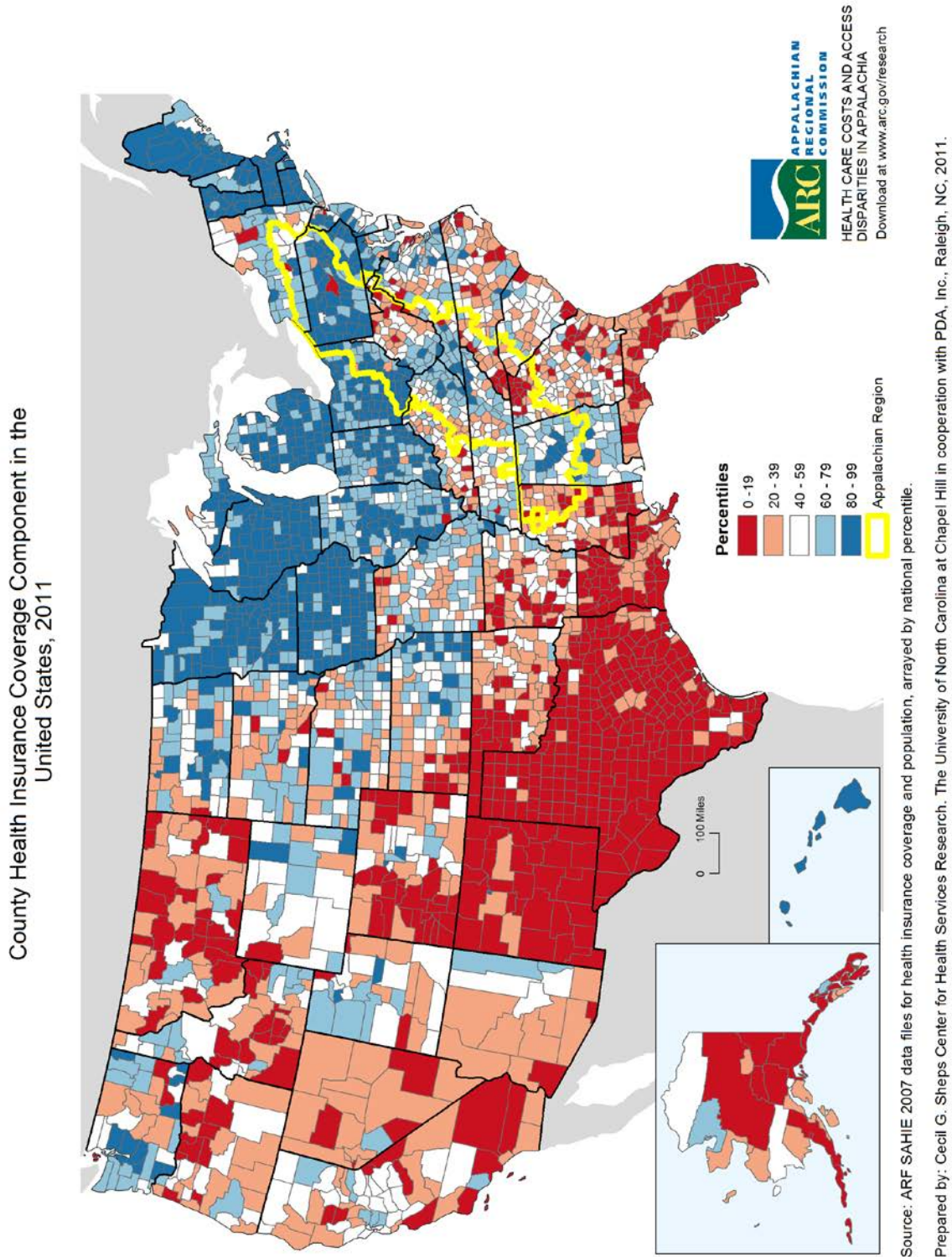
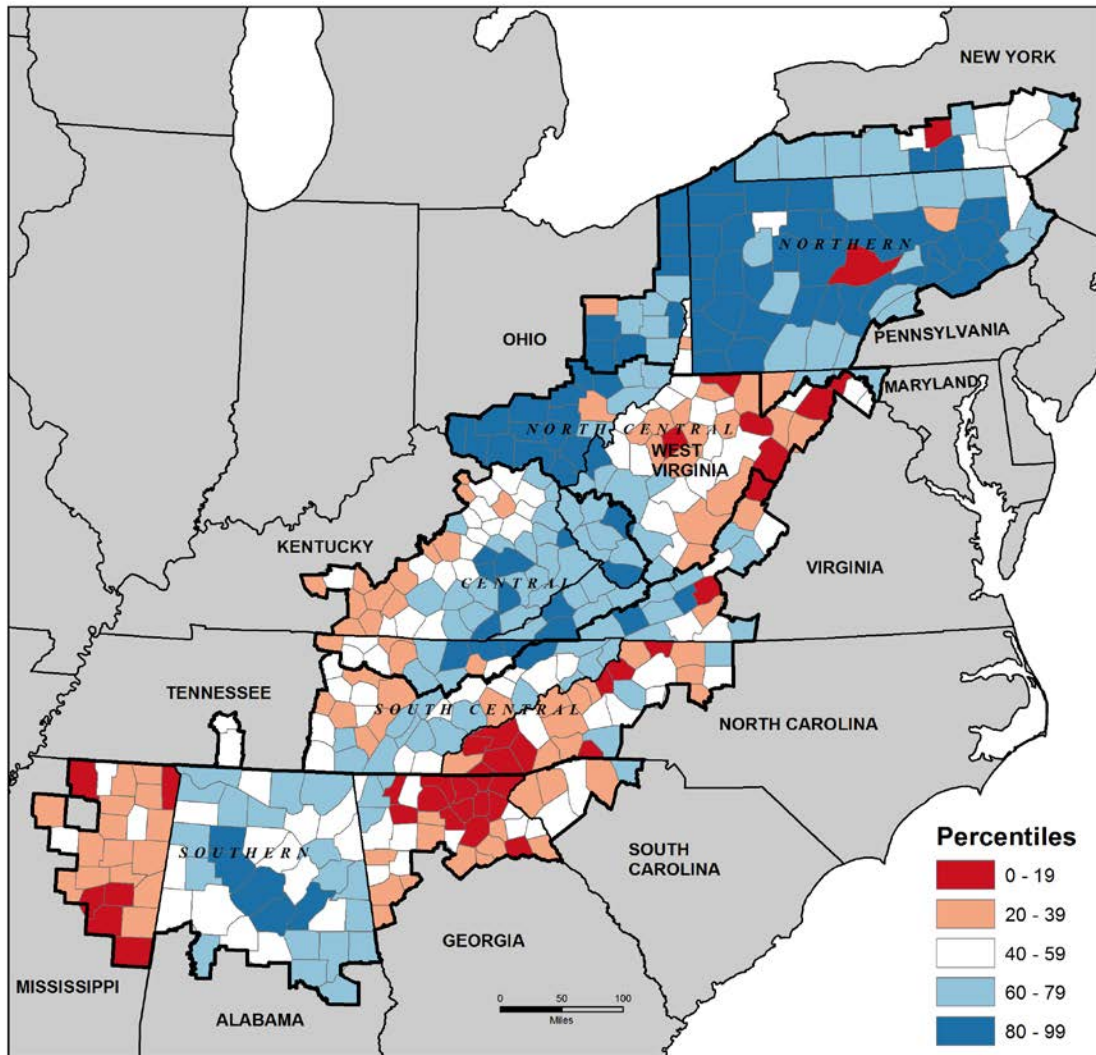


FIGURE 15 – COUNTY HEALTH INSURANCE COVERAGE (HIC) COMPONENT IN APPALACHIA, 2011



Source: Composite of the percent of residents under 65 years old with health insurance from at least one public or private source. Analysis of county data from the 2009 American Community Survey showed that 98 to 100 percent of persons over 65 have insurance coverage. Differentiation occurs only in age groups below 65. Numerator and denominator from Model-based Small Area Health Insurance Estimate (SAHIE) for Counties, and States; U.S. Census Bureau with support from other Federal Agencies; 2007.

Prepared by Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill in cooperation with PDA, Inc, Raleigh, North Carolina, 2011



As reflected in the HIC component, health insurance coverage in the Appalachian Region is actually better than many parts of the country. Nationally, the health insurance coverage patterns are closely aligned with union presence and with the philosophy of state Medicaid programs. Very rural, non-mining areas, particularly in states that focus on depth rather than breadth of Medicaid eligibility, tend to have less coverage. Severe disparities in Florida, Texas and New Mexico are consistent with high levels of immigrant populations in those areas.

3.2.4 HEALTH CARE RESOURCE AVAILABILITY (HCRA) COMPONENT

FIGURE 16 - COUNTY HCRA COMPONENT IN THE U.S., 2011

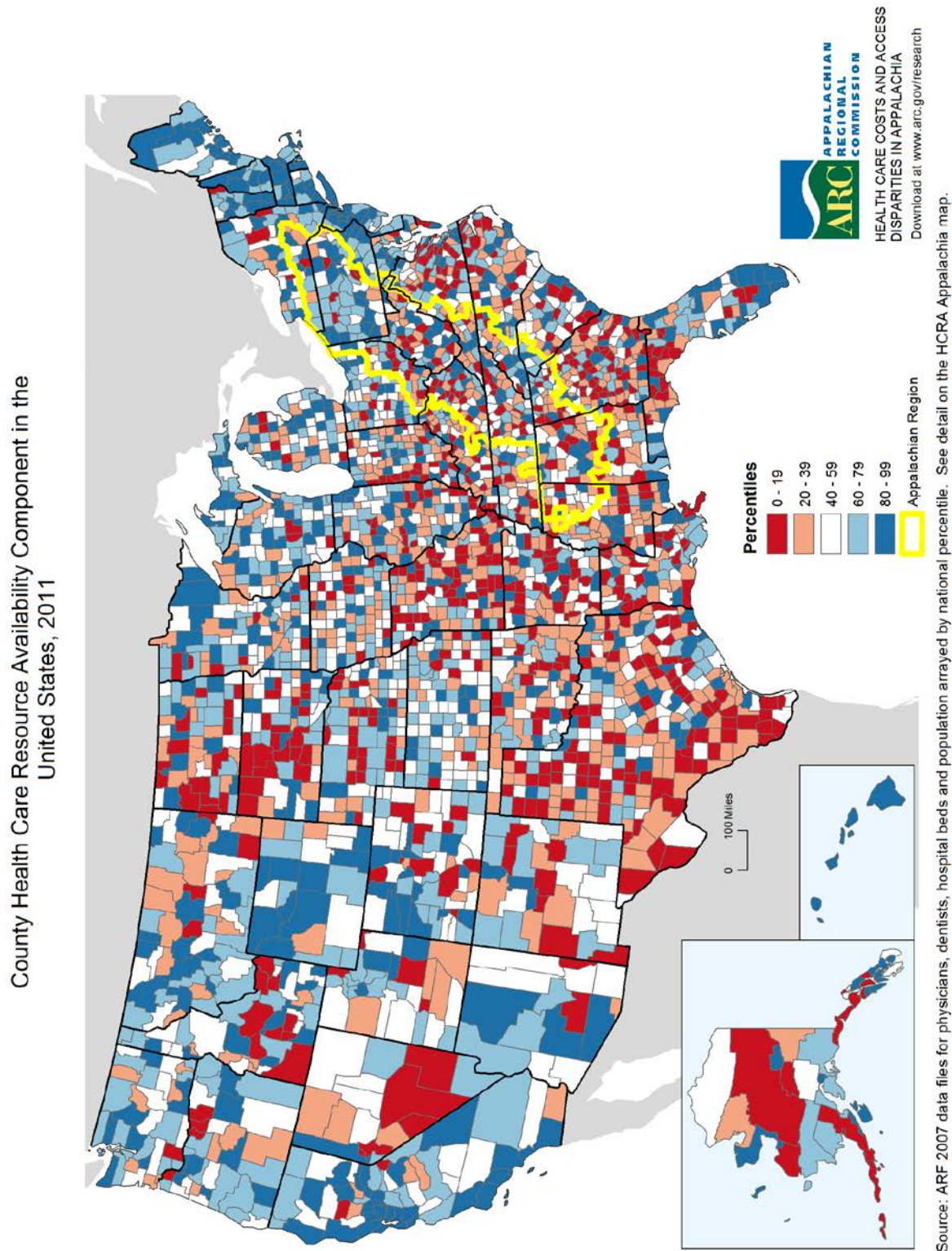
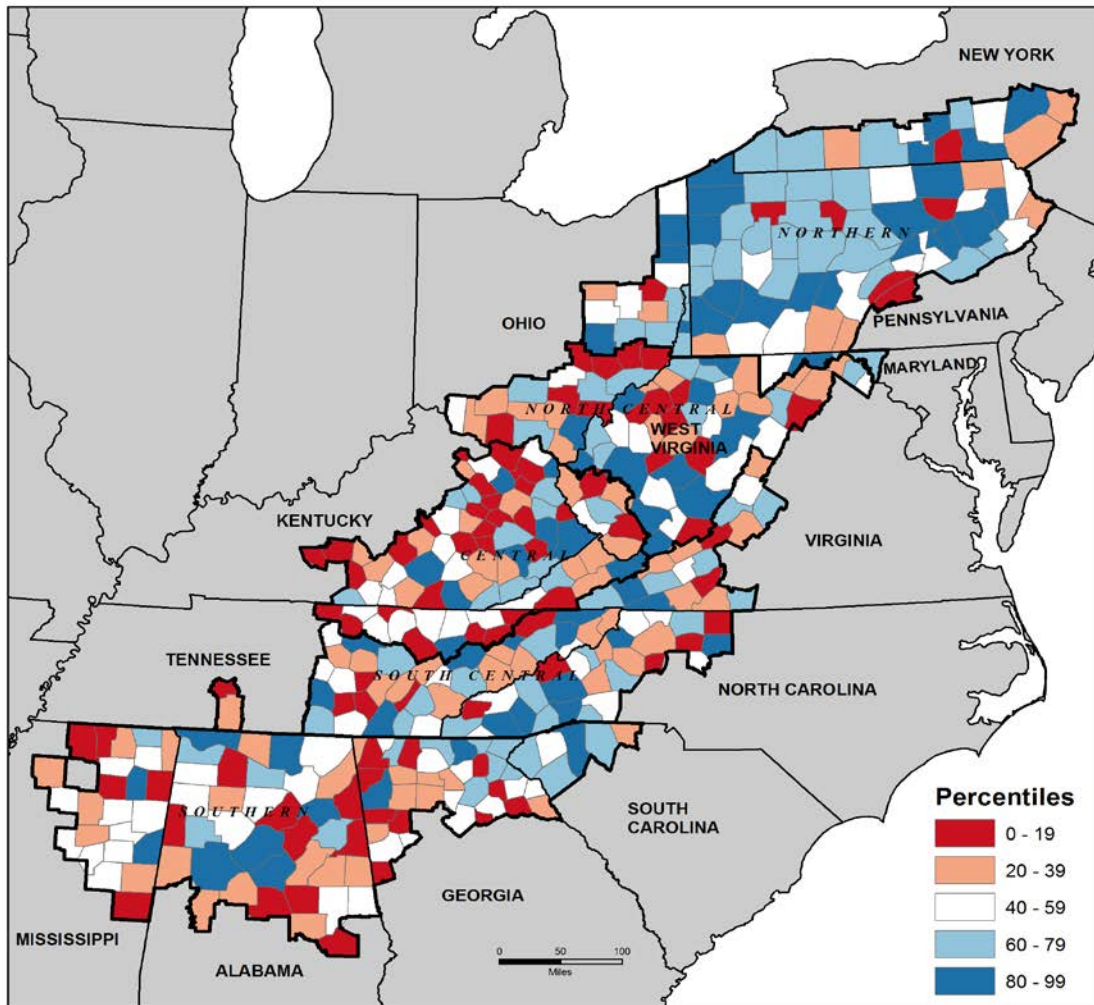


FIGURE 17 - COUNTY HEALTH CARE RESOURCE AVAILABILITY (HCRA) COMPONENT IN APPALACHIA, 2011



Source: Composite of Subindexes of Population-based rates of Primary Care Physicians, Dentist, and Short-Term General and Critical Access Hospital Beds. Area Resource File 2009-2010; Department of Health and Human Services, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Policy and Performance Management 2010.

Prepared by Cecil G. Sheps Center for Health Services Research, The University of North Carolina at Chapel Hill in cooperation with PDA, Inc, Raleigh, North Carolina, 2011



As reflected in the HCRA, resource disparities occur throughout the region and are more severe in very remote counties of Appalachia, the northern midwest and southwest Texas. Most of the high disparity communities have no hospital, or the hospital is very small. In cases where a high resource county is adjacent to a severe shortage county, residents may have better access than in areas in central and southern Appalachia, which have clusters of severe to high resource disparity.

The Dartmouth Atlas staff has tried to address this issue by defining the United States in terms of hospital service areas. Implicit in such analyses is the assumption that, in rural areas, traveling across county lines to get hospital care is inevitable. By contrast the HCRA component is a simple statement of fact about a county's relative resources.

3.3 SUMMARY OF FINDINGS FOR HEALTHCARE COST, COVERAGE, AND ACCESS (HCCA) INDEX IN APPALACHIAN REGION

Counties in Appalachian states and in the Appalachian Region favor the lower percentiles of the HCCA and most of its components.

FIGURE 18 - DISTRIBUTION OF COUNTIES IN ARC STATES BY INDEX AND COMPONENT (N=1070 COUNTIES)

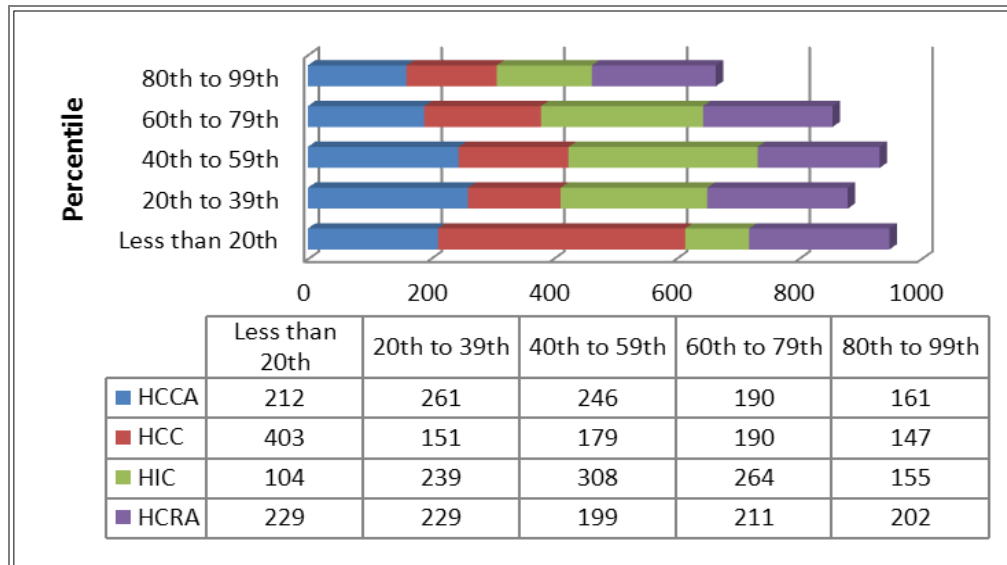
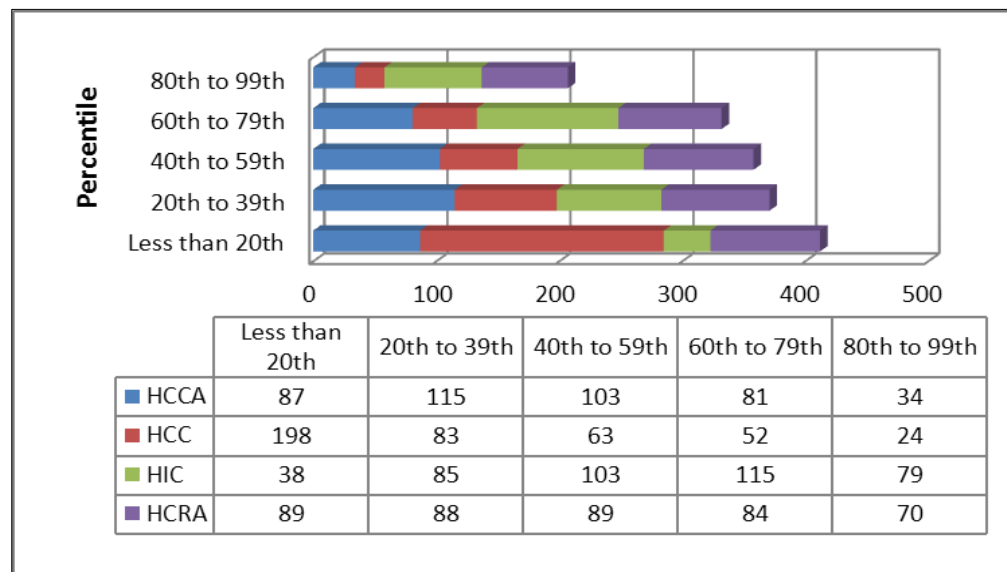


FIGURE 19 - DISTRIBUTION OF ARC COUNTIES BY INDEX AND COMPONENT (N=420)



To understand these distributions, it helps to understand that taken together, the 3,110 counties in the U.S. distribute evenly among the percentile groupings, as would be expected.

To put the percentiles in context, it is important to understand the variance between the values of highest and lowest percentiles. The spread of raw values in the HCRA and HCCA is very wide. The spread in HCC is smaller, because the value itself is indexed. HIC, insurance coverage, differences are the smallest nationwide.

TABLE 8 - RAW VALUES FOR HCCA AND SUBCOMPONENTS – ALL U.S. COUNTIES (N=3110 COUNTIES)

	HCCA	HCC	HIC	HCRA
Max	98.3	1.58	93.4	97.5
Min	3.3	0.73	50.4	2.5
Variance	95.0	0.84	43.0	95.0
Variance %	2850%	115%	85%	3800%

TABLE 9 - RAW VALUES FOR HCCA AND SUBCOMPONENTS – APPALACHIAN STATES (N=1070 COUNTIES)

	HCCA	HCC	HIC	HCRA
Max	96.0	1.30	91.0	97.5
Min	4.7	0.76	62.4	2.5
Variance	91.3	0.54	28.6	95.0
Variance %	1957%	71%	46%	3800%

TABLE 10 - RAW VALUES FOR HCCA AND SUBCOMPONENTS – APPALACHIAN COUNTIES (N=420 COUNTIES)

	HCCA	HCC	HIC	HCRA
Max	82.3	1.16	91.0	97.0
Min	8.0	0.76	71.2	3.5
Variance	74.3	0.39	19.8	93.5
Variance %	929%	52%	28%	2671%

According to the HCCA index, ARC counties have lower than average healthcare resources, insurance coverage, and reimbursement when compared to the nation as a whole. In the vocabulary of the ARC Economic Distress Index, if the lowest two quintiles are Distressed and At Risk, of the 420 ARC Counties, 202 (48.1 percent) are either Distressed or At-Risk while only 115 (27.4 percent) are either Competitive or at Attainment. This means that, compared to the nation as a whole, ARC counties are 20.2 percent more likely to have a lower than normal HCCA (48.1 percent / 40.0 percent – 1 = 20.2 percent). It also means ARC Counties are 31.5 percent less likely to have a higher than normal HCCA ((27.4 percent / 40.0 percent) – 1 = -31.5 percent). Patterns for individual states vary substantially.

3.4 RESULTS IN APPALACHIAN STATES

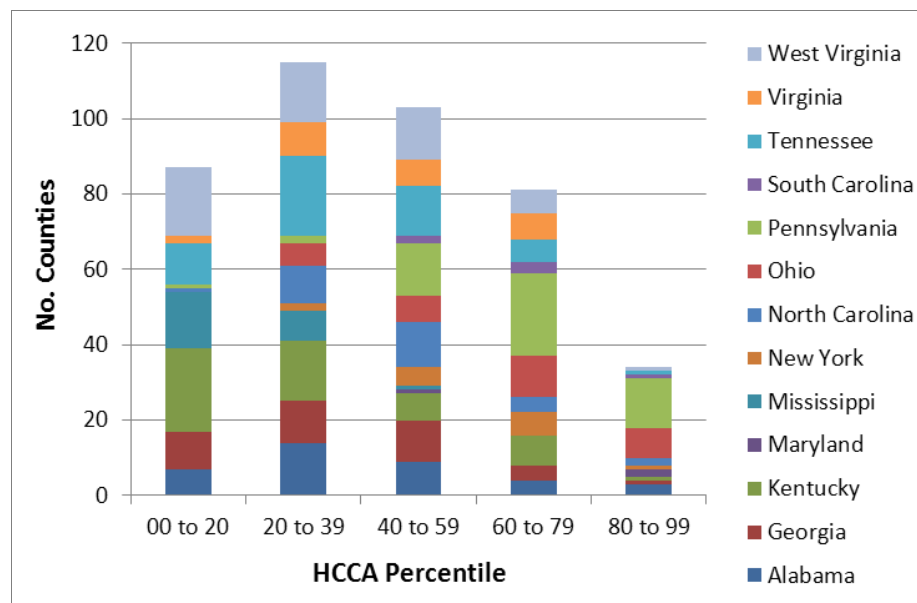
3.4.1 HEALTHCARE COST, COVERAGE, AND ACCESS (HCCA) INDEX

Individual states that skewed towards Attainment (high percentile) on the HCCA had low scoring counties or scored low on one of the components. South Carolina and Maryland counties in Appalachia have the best healthcare access, cost and coverage.

TABLE 11 – COUNT OF ARC COUNTIES BY HCCA PERCENTILE GROUP

Appalachian State	Percentile Group					Total
	00 to 20	20 to 39	40 to 59	60 to 79	80 to 99	
Alabama	7	14	9	4	3	37
Georgia	10	11	11	4	1	37
Kentucky	22	16	7	8	1	54
Maryland	0	0	1	0	2	3
Mississippi	15	8	1	0	0	24
New York	0	2	5	6	1	14
North Carolina	1	10	12	4	2	29
Ohio	0	6	7	11	8	32
Pennsylvania	1	2	14	22	13	52
South Carolina	0	0	2	3	1	6
Tennessee	11	21	13	6	1	52
Virginia	2	9	7	7	0	25
West Virginia	18	16	14	6	1	55
Total	87	115	103	81	34	420

FIGURE 20 - HCCA INDEX OF COUNTIES IN APPALACHIAN STATES



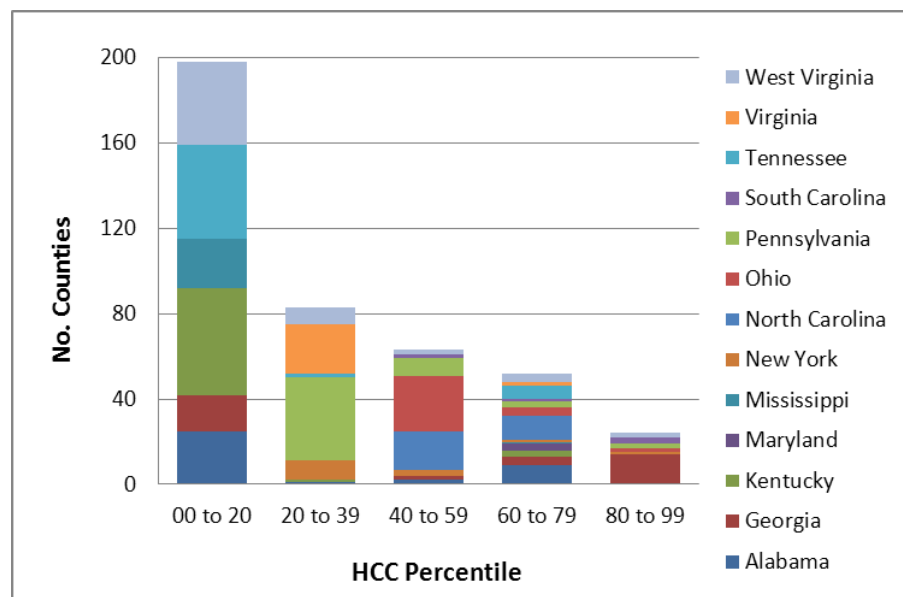
3.4.2 HEALTH CARE COST (HCC) COMPONENT

Overall, ARC counties have extremely poor reimbursement when compared to the nation. Of the 420 ARC counties, 198 (47.1 percent) could be called Distressed while only 24 (5.7 percent) would be at Attainment. In Kentucky and Mississippi, nearly all ARC counties are “Distressed”. It appears that only the greater Atlanta area and ARC counties in South Carolina reached consistent Attainment reimbursement.

TABLE 12 – COUNT OF ARC COUNTIES BY HCC PERCENTILE GROUP

Appalachian State	Percentile Group					Total
	00 to 20	20 to 39	40 to 59	60 to 79	80 to 99	
Alabama	25	1	2	9	0	37
Georgia	17	0	2	4	14	37
Kentucky	50	1	0	3	0	54
Maryland	0	0	0	3	0	3
Mississippi	23	0	0	1	0	24
New York	0	9	3	1	1	14
North Carolina	0	0	18	11	0	29
Ohio	0	0	26	4	2	32
Pennsylvania	0	39	8	3	2	52
South Carolina	0	0	2	1	3	6
Tennessee	44	2	0	6	0	52
Virginia	0	23	0	2	0	25
West Virginia	39	8	2	4	2	55
Total	198	83	63	52	24	420

FIGURE 21 - HCC PERCENTILE DISTRIBUTION OF COUNTIES IN THE APPALACHIAN STATES



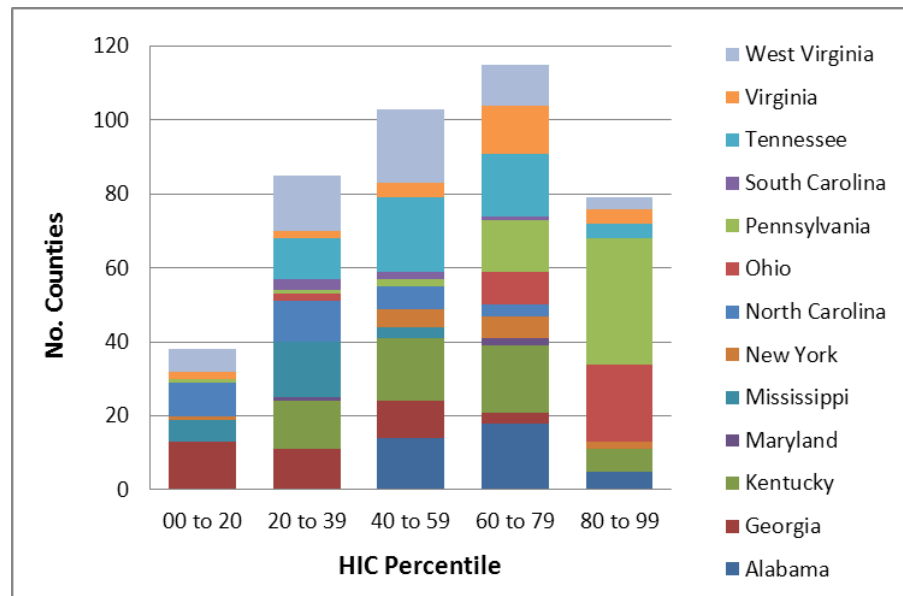
3.4.3 HEALTH INSURANCE COVERAGE (HIC) COMPONENT

When all types of health insurance are considered (public and private), ARC counties have higher than average coverage when compared to the nation. This may reflect the higher rates of Medicaid and Medicare Disability insurance coverage in ARC counties. The national average is affected by large populations in non-Appalachian states such as Texas, Florida and California, which have an abnormally high percentage of uninsured residents. These states also have large numbers of migrant and immigrant populations who would not qualify for federal programs.

TABLE 13 – COUNT OF ARC COUNTIES BY HIC PERCENTILE GROUP

Appalachian State	Percentile Group					Total
	00 to 20	20 to 39	40 to 59	60 to 79	80 to 99	
Alabama	0	0	14	18	5	37
Georgia	13	11	10	3	0	37
Kentucky	0	13	17	18	6	54
Maryland	0	1	0	2	0	3
Mississippi	6	15	3	0	0	24
New York	1	0	5	6	2	14
North Carolina	9	11	6	3	0	29
Ohio	0	2	0	9	21	32
Pennsylvania	1	1	2	14	34	52
South Carolina	0	3	2	1	0	6
Tennessee	0	11	20	17	4	52
Virginia	2	2	4	13	4	25
West Virginia	6	15	20	11	3	55
Total	38	85	103	115	79	420

FIGURE 22 – HIC DISTRIBUTION OF COUNTIES IN APPALACHIAN STATES



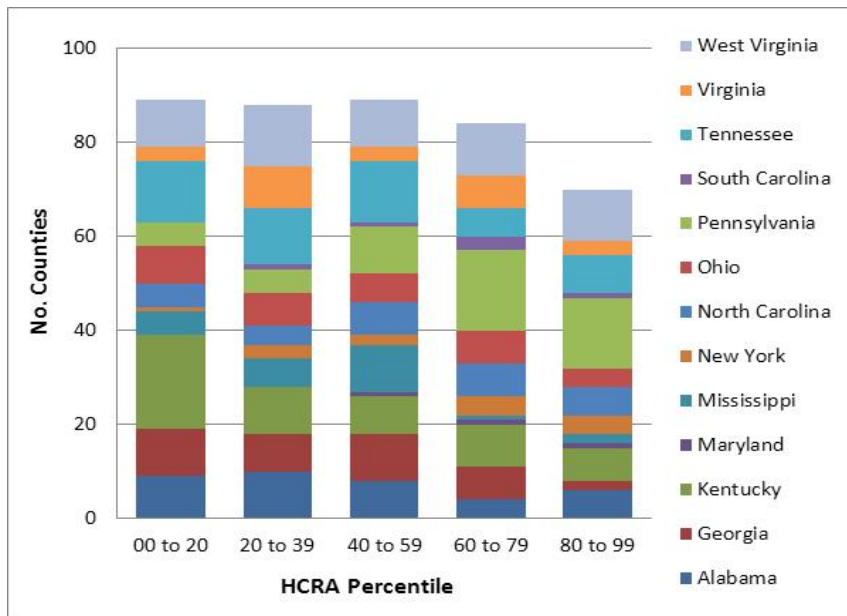
3.4.4 HEALTH CARE RESOURCE AVAILABILITY (HCRA) COMPONENT

Overall, ARC counties have slightly lower than normal access to healthcare resources when compared to the nation as a whole. Of the 420 ARC counties, 177 (42.1 percent) are either Distressed or At-Risk while only 154 (36.7 percent) are Competitive or at Attainment.

TABLE 14 – COUNT OF ARC COUNTIES BY HCRA PERCENTILE GROUPS

Appalachian State	Percentile Group					Total
	00 to 20	20 to 39	40 to 59	60 to 79	80 to 99	
Alabama	9	10	8	4	6	37
Georgia	10	8	10	7	2	37
Kentucky	20	10	8	9	7	54
Maryland	0	0	1	1	1	3
Mississippi	5	6	10	1	2	24
New York	1	3	2	4	4	14
North Carolina	5	4	7	7	6	29
Ohio	8	7	6	7	4	32
Pennsylvania	5	5	10	17	15	52
South Carolina	0	1	1	3	1	6
Tennessee	13	12	13	6	8	52
Virginia	3	9	3	7	3	25
West Virginia	10	13	10	11	11	55
Total	89	88	89	84	70	420

FIGURE 23 - HCRA DISTRIBUTION OF COUNTIES IN APPALACHIAN STATES



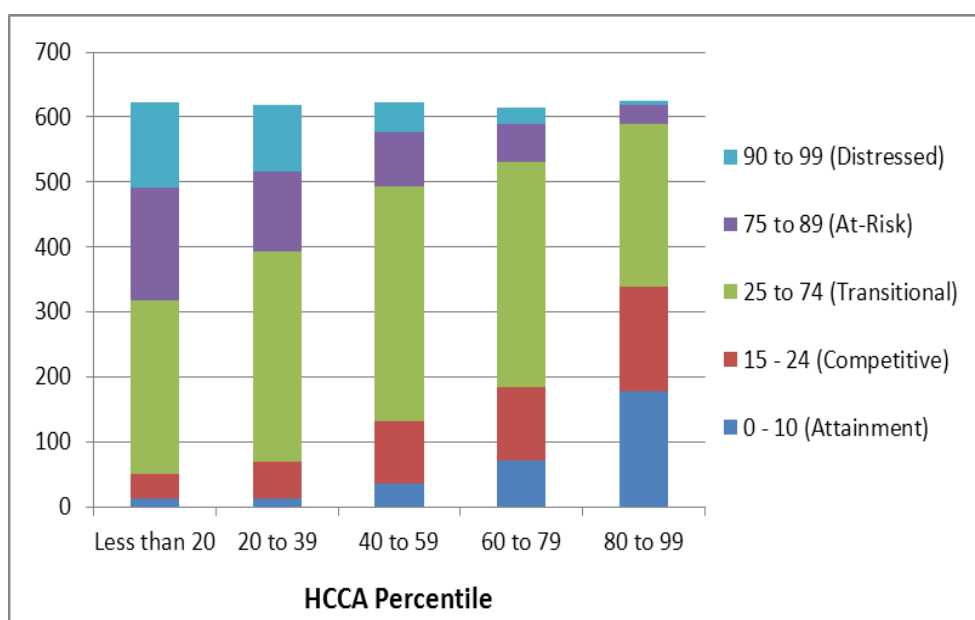
3.5 HEALTHCARE COST, COVERAGE, AND ACCESS (HCCA) INDEX AND DISTRESSED APPALACHIAN COUNTIES

We examined relationships among the HCCA Index components individually, and between the HCCA and ARC’s 2011 Economic Status Index expressed in terms of Economic Distress. The following tables show that within the sub-indices, poor scores on one are generally associated with poor scores on another index. The exception is HIC, the insurance component index. Areas of high insurance coverage have low access and cost scores, indicating that people are covered but they do not have access to resources equivalent to the national average. In reading these tables, note that the Economic Distress Index is ranked such that 99 is most distressed. The HCCA and components are in normal percentiles, where the 99th percentile reflects a more desirable situation.

TABLE 15 –HCCA BY ARC ECONOMIC DISTRESS INDEX 2011 FOR THE UNITED STATES (N=3110)

HCCA (Combined Healthcare Cost, Coverage and Access Index - percentile)	ARC Economic Distress Index (ArcEconSTATUS2011)					Total
	0 - 10 (Attainment)	15 - 24 (Competitive)	25 to 74 (Transitional)	75 to 89 (At-Risk)	90 to 99 (Distressed)	
Less than 20 (low)	13	37	269	172	132	623
20 to 39	12	57	325	123	101	620
40 to 59	36	96	362	83	45	624
60 to 79	72	113	345	59	26	618
80 to 99 (high)	177	162	251	29	6	625
Total	310	465	1552	466	310	3110

FIGURE 24 – COMPARISON OF HCCA PERCENTILE RANKING TO DISTRESS LEVEL FOR ALL COUNTIES IN U.S.



All percentiles in these charts are national rankings. Thus, in the national distribution of the HCCA, there is approximately the same number of counties in each percentile. Table 15 and Figure 24 show that even some high attainment counties scored low on the HCCA index. The dissociation of economic status and HCCA is more notable among competitive and transitional counties, the red and green bars in Figure 24. These counties have better economic status, but one in five (688 total) rank below the 40th percentile on the HCCA. These locations may have low Medicare hospital wage indices, be too small to have significant health resources or many of their workers may not have health insurance. Generally, however, the better economic counties (blue, red and green) dominate the top HCCA percentile.

TABLE 16 – HCCA BY ARC ECONOMIC DISTRESS INDEX 2011 FOR APPALACHIAN STATES (N=1070 COUNTIES)

HCCA (Combined Healthcare Cost, Coverage and Access Index - percentile)	ARC Economic Distress Index					Total
	0 - 10 (Attainment)	15 - 24 (Competitive)	25 to 74 (Transitional)	75 to 89 (At-Risk)	90 to 99 (Distressed)	
Less than 20 (low)	1	2	53	80	76	212
20 to 39	2	10	113	68	68	261
40 to 59	8	20	147	49	22	246
60 to 79	14	19	132	16	9	190
80 to 99 (high)	52	33	69	6	1	161
Total	77	84	514	219	176	1070

FIGURE 25 – COMPARISON OF HCCA PERCENTILE RANKING TO DISTRESS LEVEL FOR ALL COUNTIES IN APPALACHIAN STATES

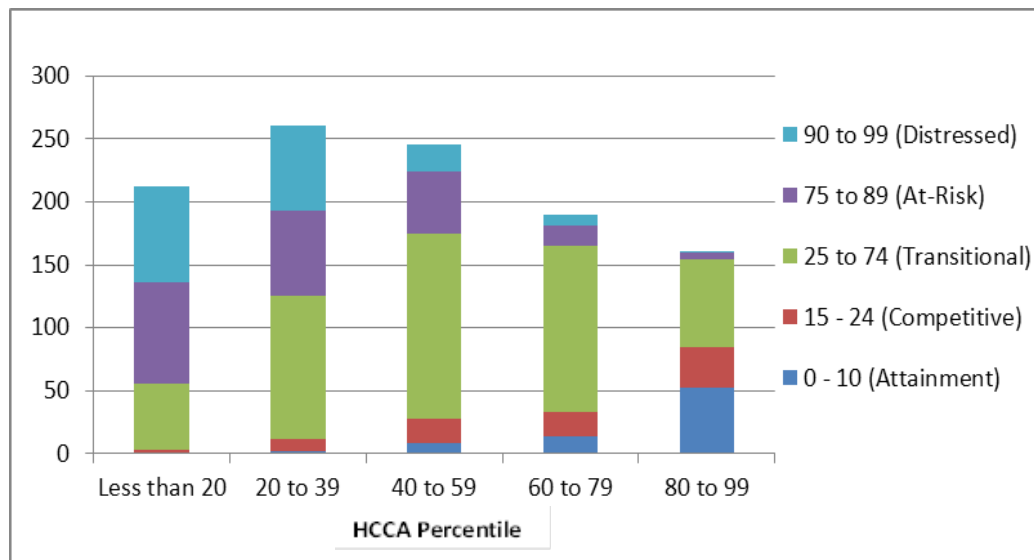


Table 16 and Figure 25 show that counties in Appalachian states tend to have lower HCCA scores. In Appalachia, only 17 percent (178) of the transitional and competitive counties ranked below the 40th percentile nationally. Nonetheless, they represent a third (37%) of the Appalachian states' low HCCA counties.

TABLE 17 -- HCCA BY ARC ECONOMIC DISTRESS INDEX 2011 FOR APPALACHIAN COUNTIES (N=420 COUNTIES)

HCCA (Combined Healthcare Cost, Coverage and Access Index - percentile)	ARC Economic Distress Index					Total
	0 - 10 (Attainment)	15 - 24 (Competitive)	25 to 74 (Transitional)	75 to 89 (At-Risk)	90 to 99 (Distressed)	
Less than 20 (low)	0	0	21	33	33	87
20 to 39	0	1	54	24	36	115
40 to 59	2	6	67	20	8	103
60 to 79	2	3	64	7	5	81
80 to 99 (high)	2	8	22	2	0	34
Total	6	18	228	86	82	420

FIGURE 26 - COMPARISON OF HCCA PERCENTILE RANKING TO DISTRESS LEVEL FOR APPALACHIAN COUNTIES

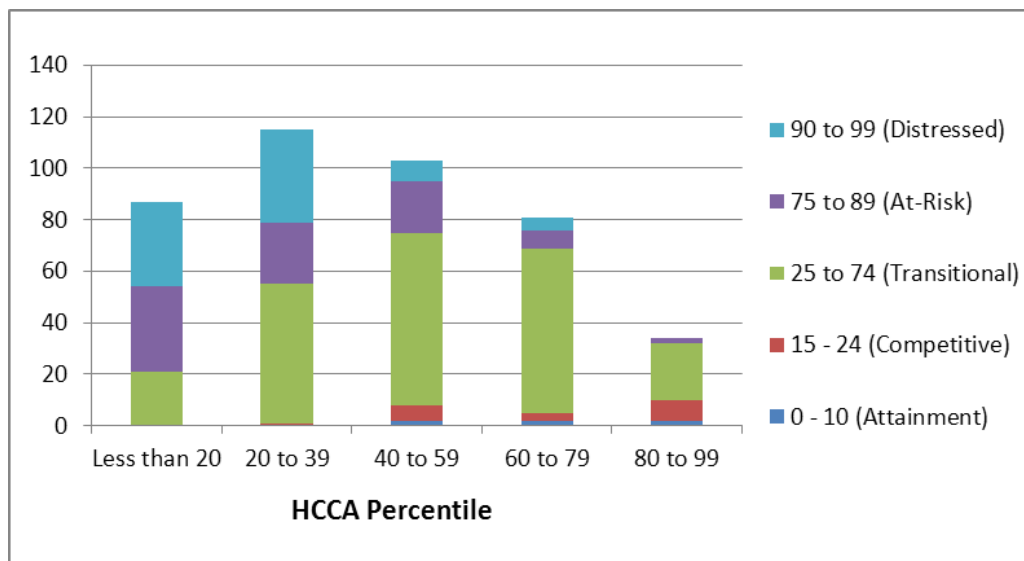


Table 17 and Figure 26 show almost half of the Appalachian counties (202 or 48%) are below the 40th percentile, with Distressed and At-Risk counties dominating the lower percentiles. Transitional counties in Appalachia distribute in a normal bell curve on the HCCA. Two distressed counties and two at risk counties defy the trend and rank in the highest HCCA percentile. Understanding why requires looking closer at how those counties ranked on the individual indices.

Relationships between ARC Economic measures and the HCCA and its sub-indices are explored in more depth in Appendix M.

3.6 OTHER MEASURES OF HEALTH CARE ACCESS

3.6.1 INDEPENDENT MEASURES

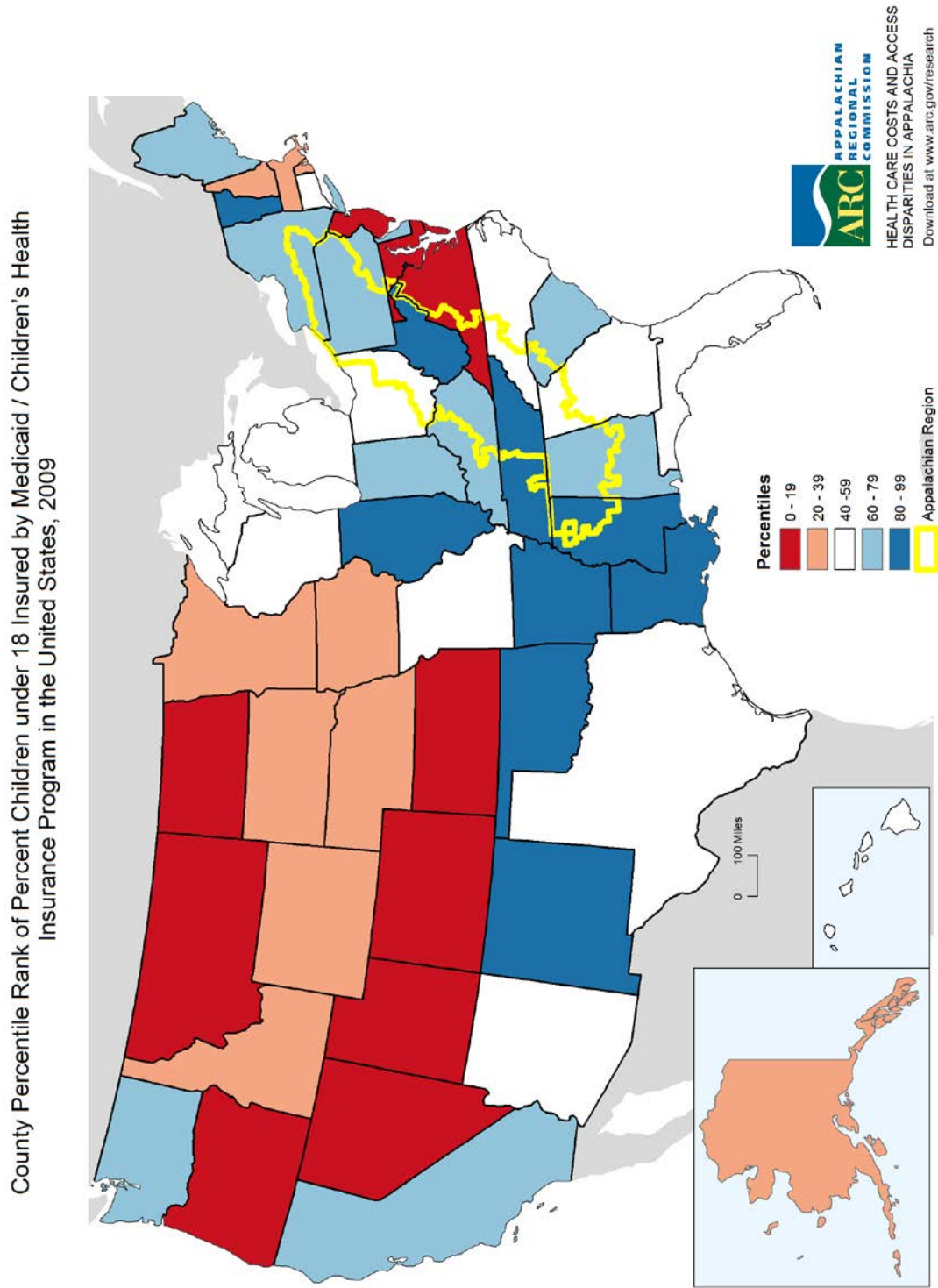
Independent of the HCCA, the research team compared Appalachian and non-Appalachian counties on five other measures of healthcare access and found some unexpected results.

TABLE 18 – INDEPENDENT MEASURES CALCULATION

Item Summary	Input Item Definition	Data Source	Time Periods	Basic Scaling Method	Computation Refinement
National Percentile of Percent of Children under 18 Insured by Medicaid	State-level estimates of Children under 18 Enrolled in Medicaid/Children's Health Insurance Program (CHIP)	Kaiser Family Foundation (KFF)	2009	Percentile Value	Percent Children Enrolled calculated with KFF child enrollment and child population data. Rank ordered then converted to a percentile.
National Percentile of Percent of Children Under 20 Insured	Percent of children 0 -19 years old insured by public or private coverage.	SAHIE	2007	Percentile Value	Percent Enrolled calculated with SAHIE data. Rank ordered then converted to a percentile
National Percentile of Percent of Population Insured by Medicare Disability	Percent of Census Population on Enrolled for Medicare Disability Coverage (Parts A and/or B)	CMS and Census Bureau	2007	Percentile Value	Percent Medicare Disability Enrollment calculated as percent of same-year Census population estimates. Rank ordered then converted to a percentile
National Percentile of Years of Potential Life Lost from Preventable Causes under 75 per 100,000 population (YPLL_75)	Calculated by source: premature deaths compared to standard population patterns	University of Wisconsin Population Health Institute. County Health Rankings	2005-2007	Percentile Value	Values in source data rank ordered then converted to a percentile
National Percentile of VA Utilization	Unique Patients in the VA system in reference to number of Veterans	Department of Veterans Affairs	2009	Percentile Value	Number of Individuals listed by Veterans Affairs living in county accessing VA health system as percent of Veterans living in county. Rank ordered then converted to a percentile

3.6.2 CHILDREN INSURED

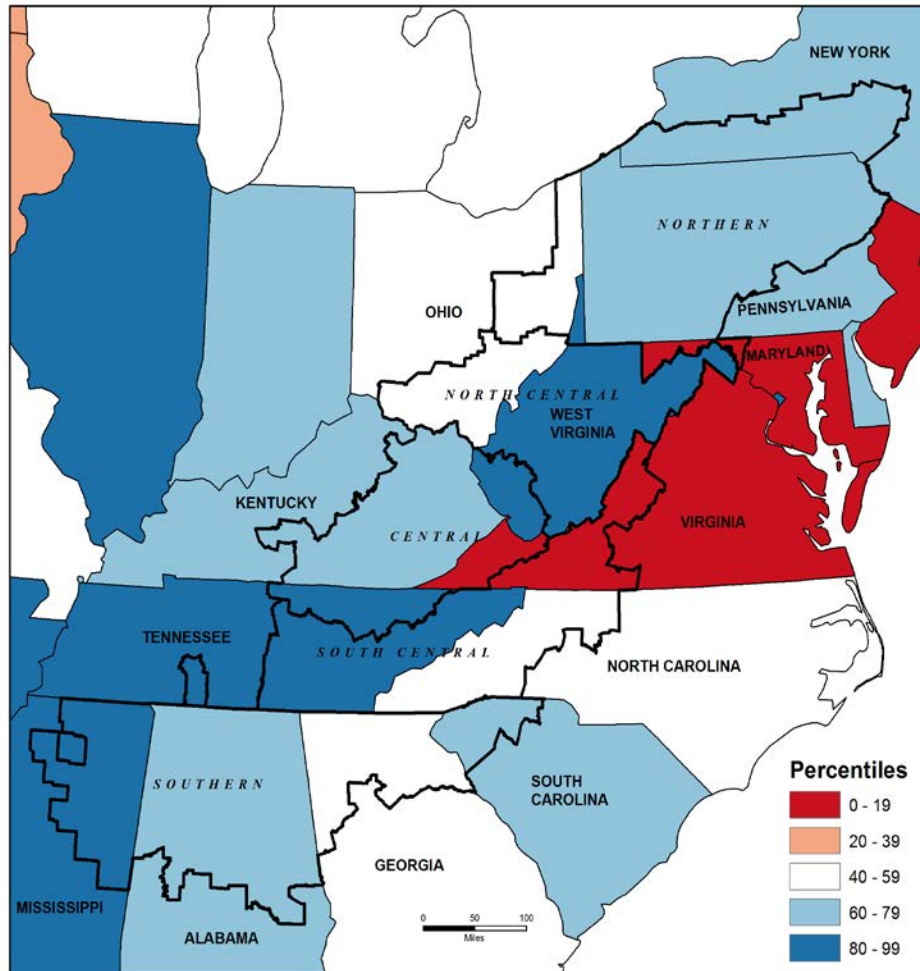
FIGURE 27 – COUNTY PERCENTILE OF CHILDREN UNDER 18 INSURED BY MEDICAID / CHIP IN THE U.S., 2009



Source: Children Enrollment in Medicaid/CHIP from Kaiser Family Foundation (KFF) in reference to total child population estimates from same source. Compiled by the Health Management Associates from state Medicaid enrollment reports for the Kaiser Commission on Medicaid and the Uninsured, 2011.

Prepared by: Cecil G. Sheps Center for Health Services Research. The University of North Carolina at Chapel Hill in cooperation with PDA, Inc., Raleigh, NC, 2011.

FIGURE 28 – COUNTY PERCENTILE RANK OF PERCENT CHILDREN UNDER 18 INSURED BY MEDICAID / CHILDREN’S HEALTH INSURANCE PROGRAM (CHIP) IN APPALACHIA, 2009



Source: Children Enrollment in Medicaid/CHIP from Kaiser Family Foundation (KFF) in reference to total child population estimates from same source. Compiled by the Health Management Associates from state Medicaid enrollment reports, for the Kaiser Commission on Medicaid and the Uninsured, 2011.

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Medicaid is funded by the state and federal governments, but, with the exception of minimum requirements, coverage and entitlement policies are set by the states. Most (ten of 13) Appalachian states rank at or above the national median in Medicaid coverage of children. An Appalachian map thus serves only to compare adjacent regions in the mountain area. It does highlight extreme differences for children in border areas, for example, where West Virginia, Kentucky and Virginia come together.

FIGURE 29 – COUNTY PERCENTILE OF CHILDREN UNDER 20 INSURED IN THE U.S., 2007

County Percentile Rank of Children under 20 Insured
in the United States, 2007

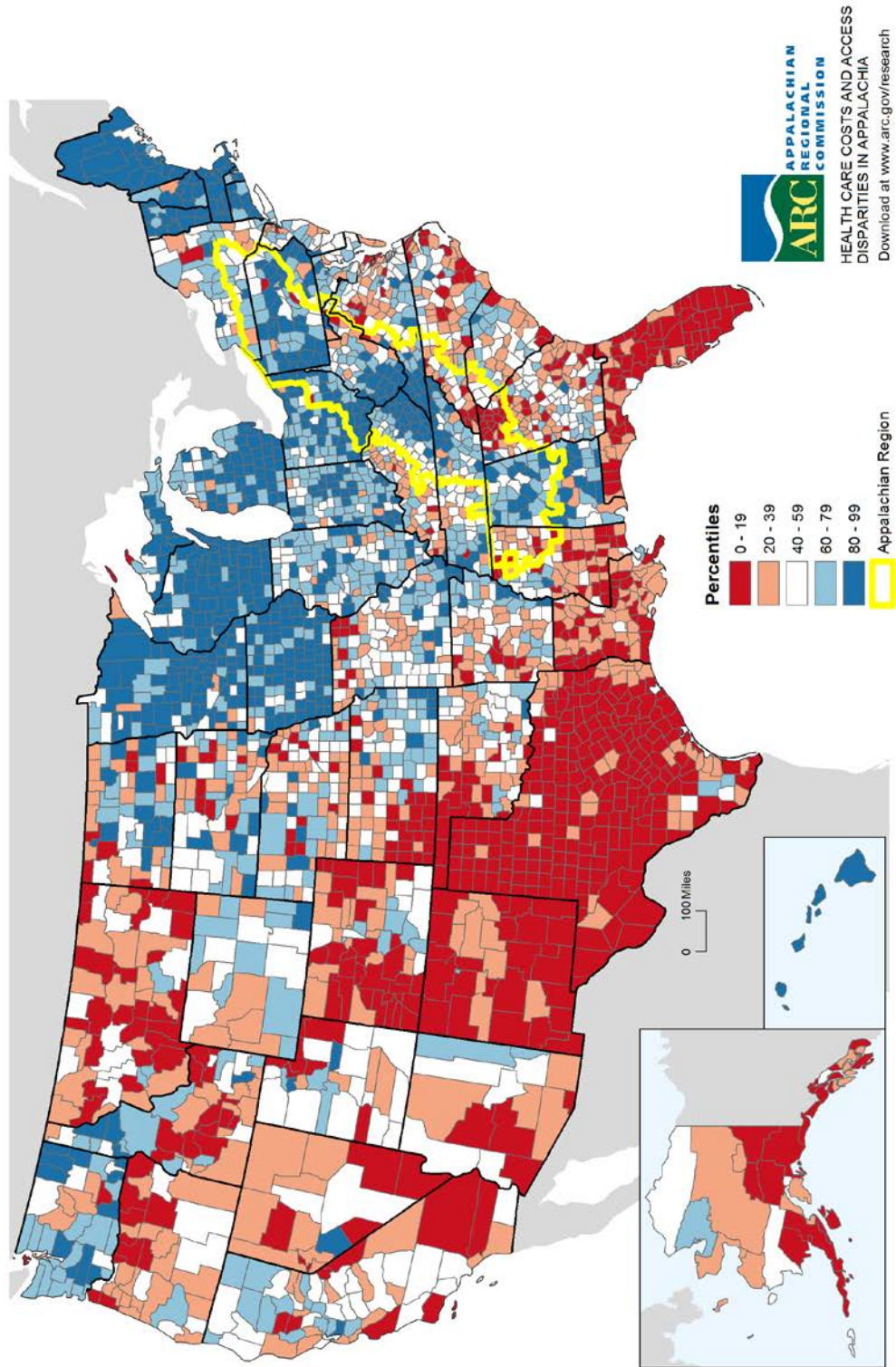
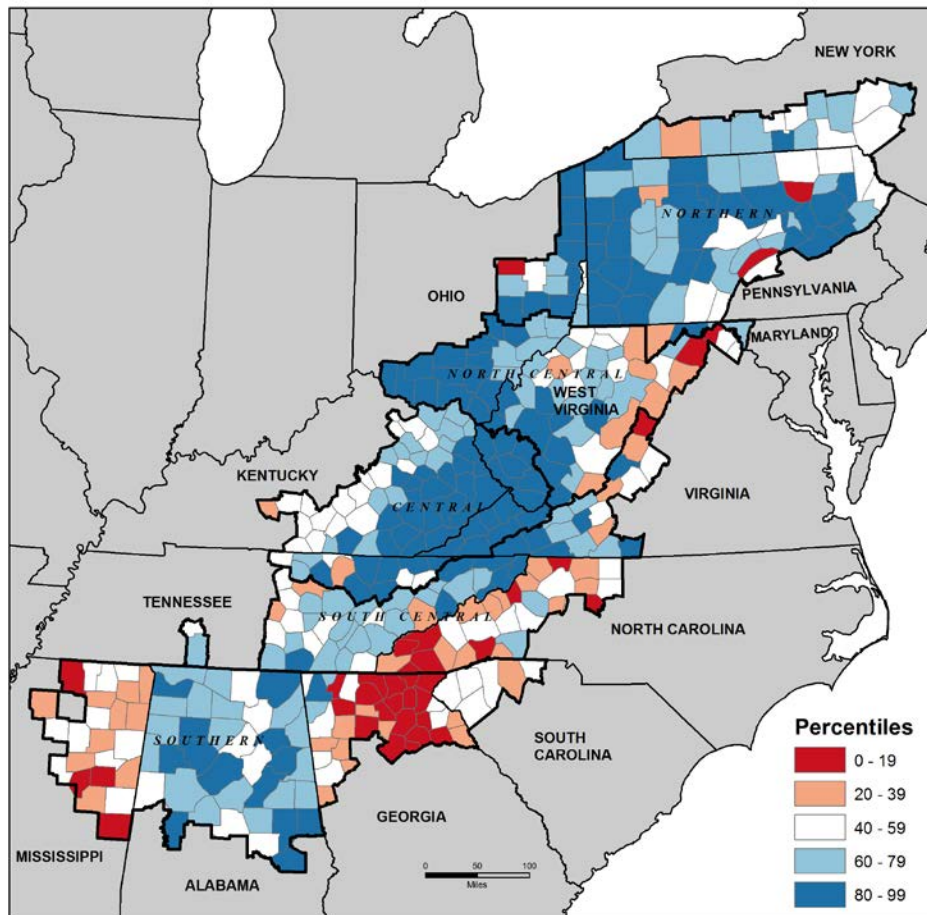


FIGURE 30 - COUNTY PERCENTILE RANK OF PERCENT OF CHILDREN UNDER 20 INSURED IN APPALACHIA, 2009



Source: Percent of children 0-19 years old insured by public or private coverage in reference to total 0-19 population from same source. Small Area Health Insurance Estimates (SAHIE) for counties and States, 2007. Department of Commerce, U.S. Census Bureau. 2010

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The SAHIE data shed very favorable light on access to some form of health insurance coverage for children in most of the Appalachian Region. The index makes no distinction about the extent of coverage, only that some form of insurance exists. The Index is missing data for one county in Mississippi. Coverage gaps occur in every state, but more in Georgia, North Carolina and Mississippi parts of the Appalachian Region. Nationally, the most severe gaps occur in Florida, Louisiana, Texas, Arizona, southern California and the Dakotas. Much of this reflects the influence of non-citizens and migrant workers.

3.6.3 DISABILITY COVERAGE

FIGURE 31 - COUNTY MEDICARE DISABILITY ENROLLMENT IN THE U.S., 2007

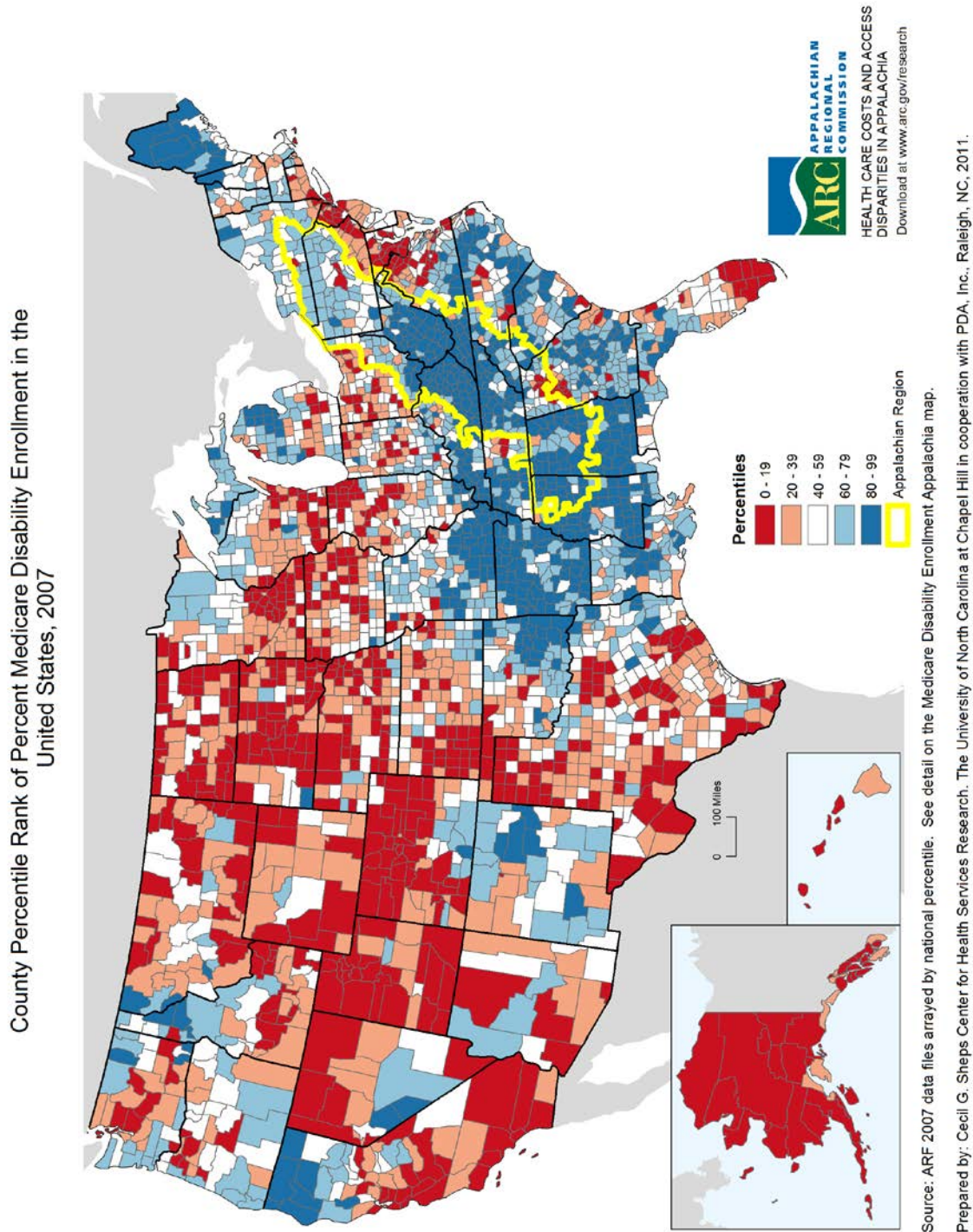
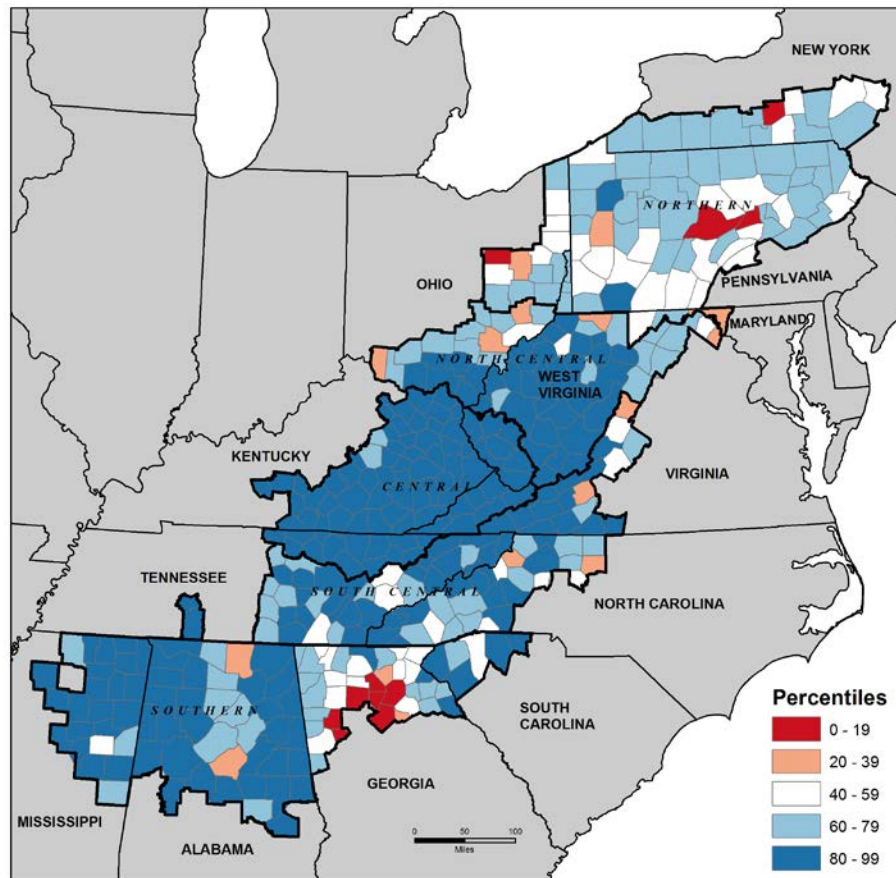


FIGURE 32 - COUNTY PERCENTILE RANK OF PERCENT MEDICARE DISABILITY ENROLLMENT IN APPALACHIA, 2007

Source: Percent Medicare Disability Enrollment calculated as percent of same-year census population estimates from the Area Resource File (ARF), Medicare Aged and Disabled by State and County 2007, Department of Health and Human Services, Center of Medicare & Medicaid Services (2010), ARF 2009-2010, Health Resources and Services Administration, Bureau of Health Professions, Office of Workforce Policy and Performance Management 2010.

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In addition to persons over 65, Medicare covers persons who are certified by the Social Security Administration as Disabled. Though counted in the HIC component, to the extent they are under 65, they are examined here as a stand-alone group. In Appalachian counties, Disability enrollment ranged from 0.9 to 15.6 percent of the population, with the average at 4.7 percent. Generally speaking central and southern Appalachia and the Delta counties of Arkansas, Louisiana, Alabama and Georgia have the highest proportion of their populations on Medicare Disability. Counties in Central and Southern Appalachia are in the top quintile of U.S. counties in this regard. In Figures 31 and 32, the blue colors indicate high Medicare Disability enrollment in 2007. The high concentration of Medicare Disability coverage in central Appalachia has significant economic implications. The process of qualifying can take years. This naturally makes a person reluctant to lose the coverage. Yet, people with Medicare Disability coverage must remain unemployed to retain the coverage. The very safety net that provides health coverage and income security also discourages return to the workforce. This may partially explain the low labor force participation in counties with high Medicare Disability enrollment.

3.6.4 HEALTH OUTCOMES

FIGURE 33 – COUNTY YEARS OF PREVENTABLE POTENTIAL LIFE LOST UNDER AGE 75 IN THE U.S., 2007

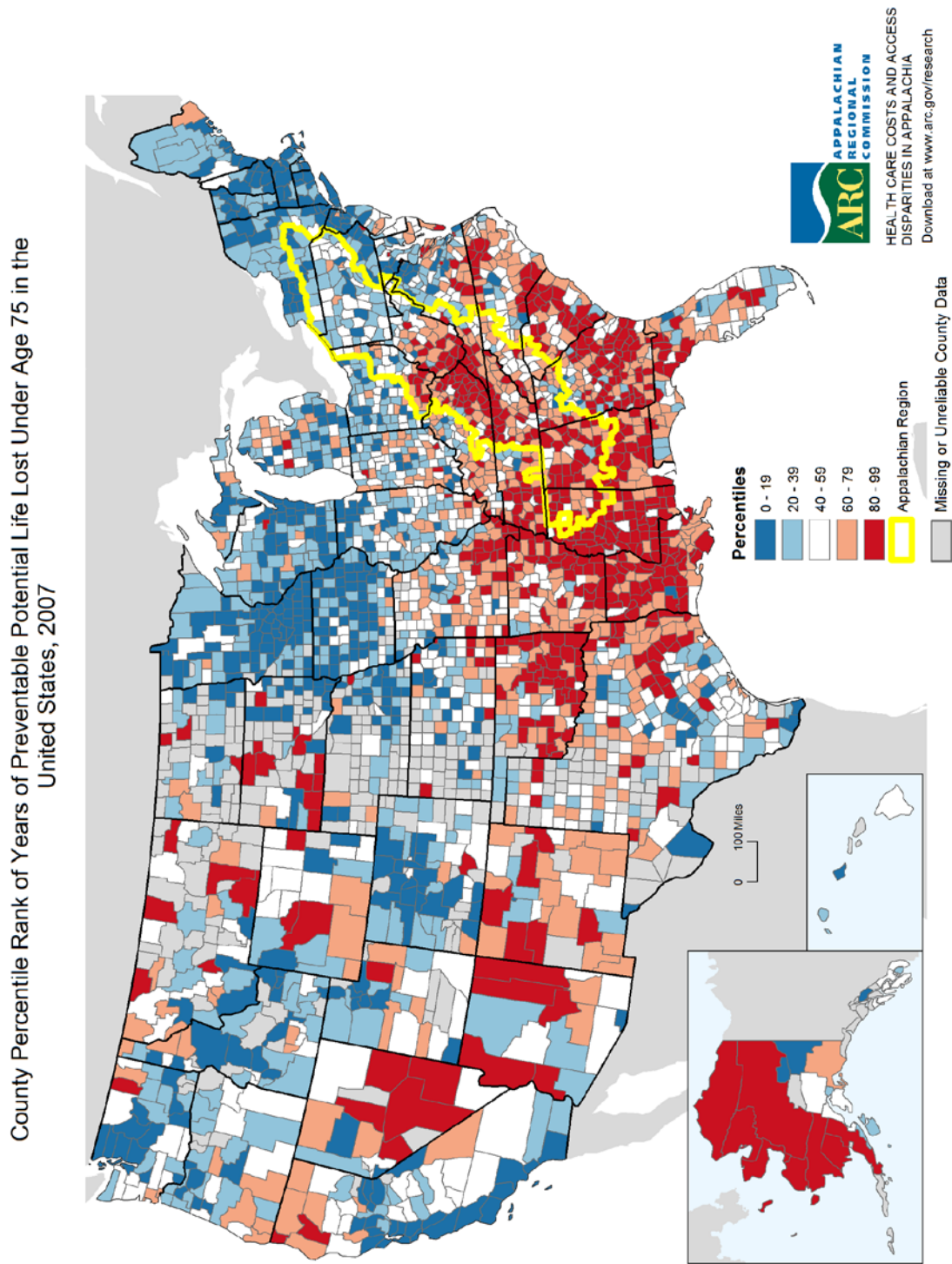
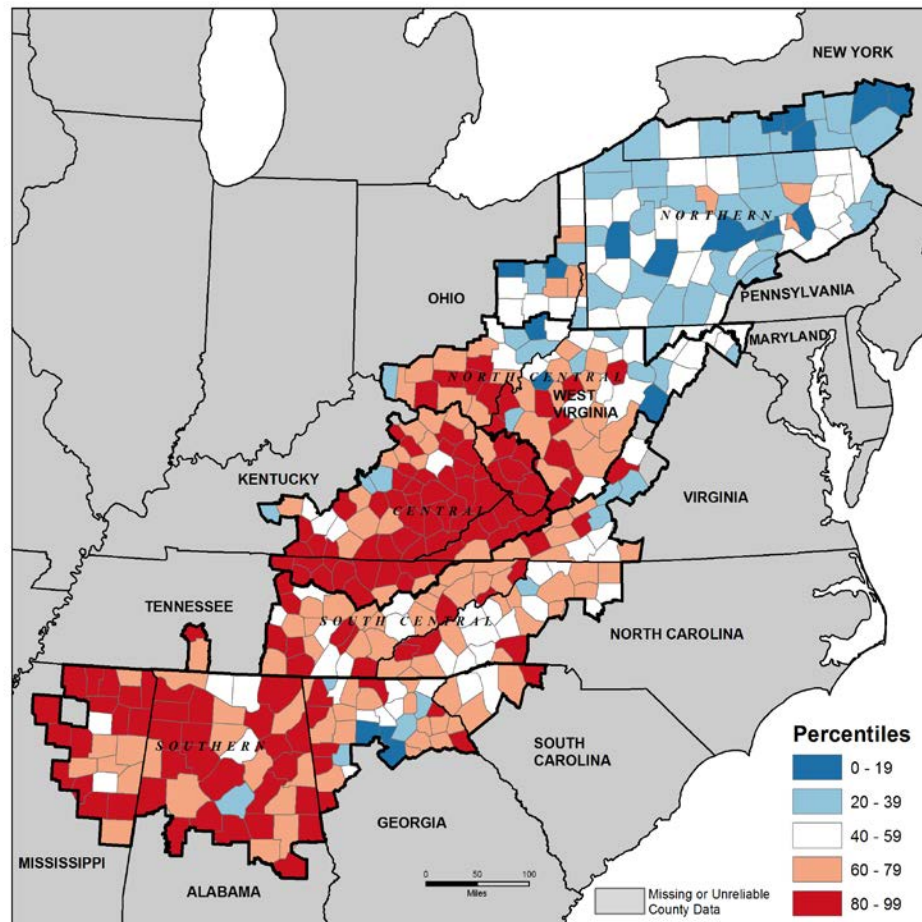


FIGURE 34 – COUNTY PERCENTILE RANK OF YEARS OF PREVENTABLE POTENTIAL LIFE LOST PER 100,000 POPULATION UNDER AGE 75 IN APPALACHIA, 2005-2007



Source: National Percentile of Years of Potential Life Lost per 100,000 population, 2005-2007, applies premature death (compared to standard population patterns) as a measure of local health status. Values in source data rank ordered and converted to a percentile. Source Data and further documentation available from University of Wisconsin Population Health Institute. County Health Rankings 2011.

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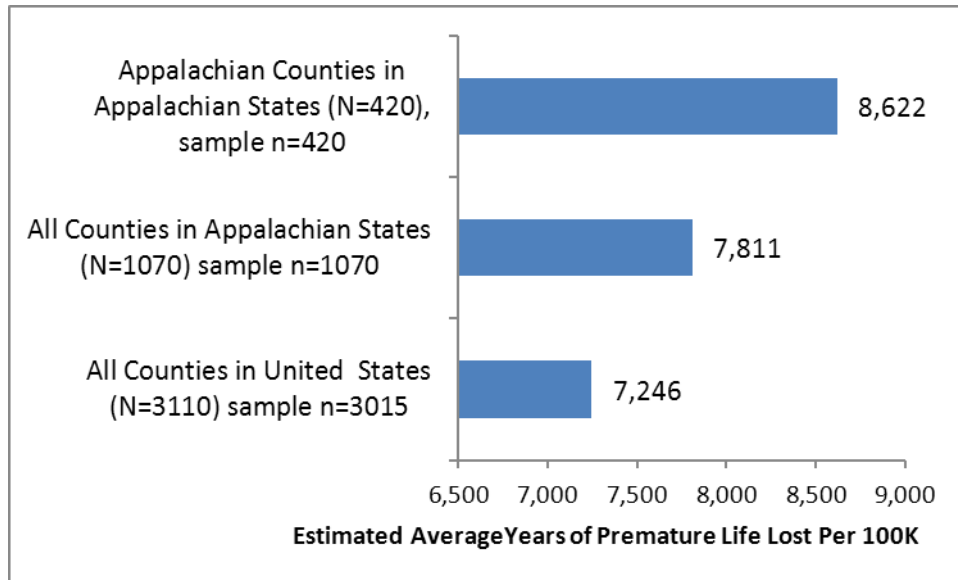


The health outcomes measure Years of Potential Life Lost from preventable causes, per 100,000 population under age 75. YPLL₇₅ is a standard used in public health to evaluate health outcomes. The YPLL index measures premature death at any age. These maps show that in Central Appalachia, the Delta and the south, people do not live as long as average Americans; northern Appalachians, the upper midwesterners and upper westerners live longer than average. Yet, these statements are not uniformly true. Every Appalachian state has at least a few counties at the national average. A few counties in central and southern Appalachia actually have longer than expected life spans relative to the nation as a whole (blue counties in Figure 34).

Figures 33 and 34 show areas in which the Appalachian Region might work in cooperation with other regional groups to address health status.

Wisconsin County Health Rankings publishes these by county, cautioning about aggregating them across states. Nevertheless, there is strong acceptance of the YPLL_75 estimates as a measure of health outcomes and their use is supported by the Wisconsin group in published reports and by the National Center for Health Statistics in their summaries and discussions. With caution, the project deconstructed and benchmarked rates for counties in the three comparison geographies. Rates for the Appalachian Region were about 19 percent higher than those for the U.S.

**FIGURE 35 – COMPARISON OF ESTIMATED PREVENTABLE MORTALITY IN 2005-2007
AVERAGE OF YEARS OF POTENTIAL LIFE LOST UNDER AGE 75 PER 100,000 POPULATION**



Source: University of Wisconsin County Health Rankings, Premature mortality for each county in the three geographies were estimated with the equation: County YPLL_75 / 100K x county population 2008 / 100,000. Mortality was summed for all counties and divided by the total population times 100,000

3.6.5 VETERANS HEALTH AFFAIRS UTILIZATION

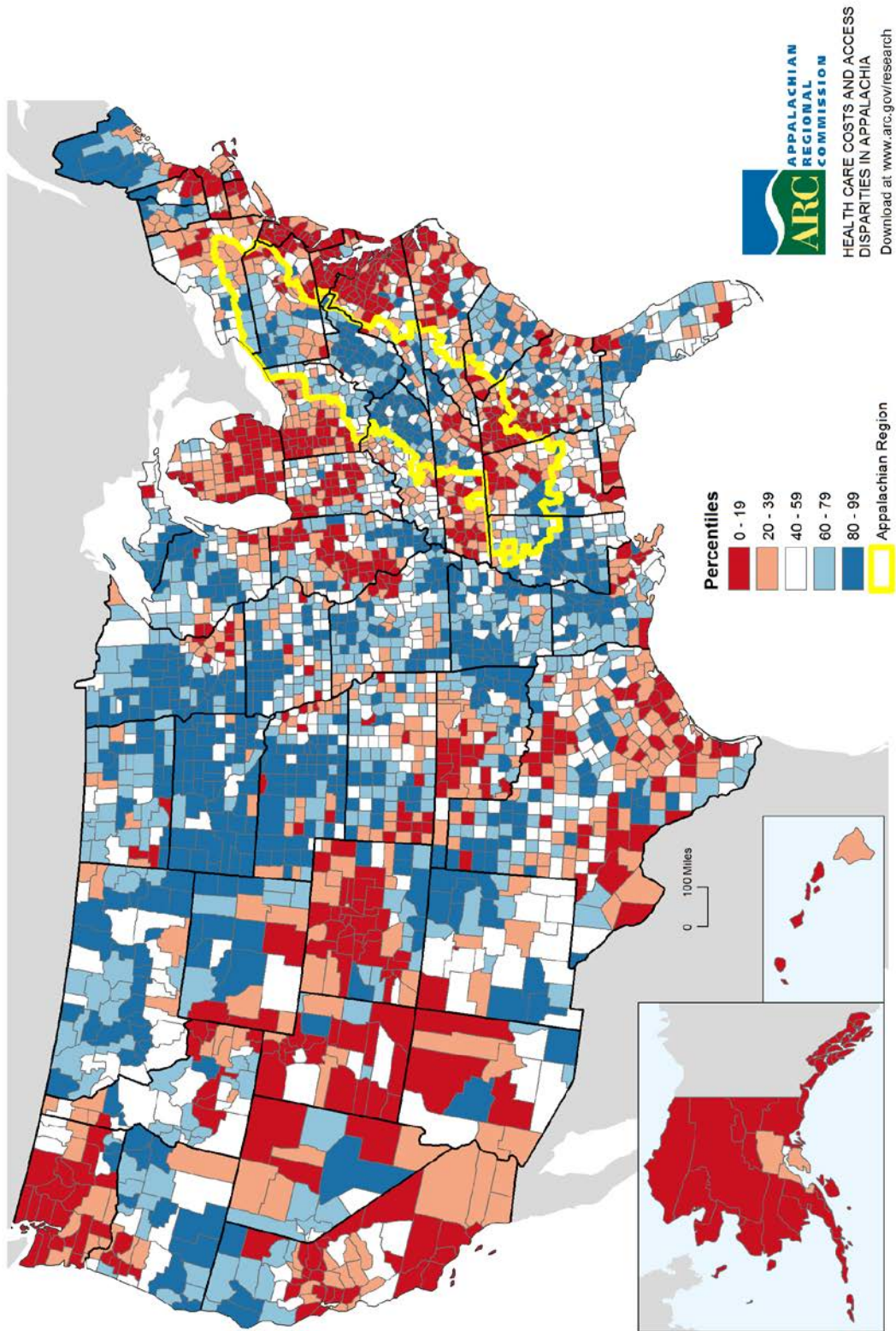
Veterans Health Administration (VHA) services are distributed nationally in 23 Veteran Integrated Services Networks (VISNs). They represent an element of healthcare cost, coverage, and access that is excluded from the HCCA.

Until the last decade, Veterans Administration healthcare resources were concentrated in VA hospitals, most of which were located adjacent or close to academic medical centers. A policy shift that began in the mid-nineties caused the VA to invest in outpatient facilities closer to where veterans live. Budgets and decisions are controlled at the VISN level. Veteran eligibility requirements are uniform throughout the country. A veteran may, however, elect to use private rather than VA services, if he/she has other coverage and choice.

Data and maps on the following pages illustrate the extent to which eligible veterans use this federally-subsidized healthcare system.

FIGURE 36 – COUNTY VETERAN USE OF VHA SERVICES IN THE U.S., 2009

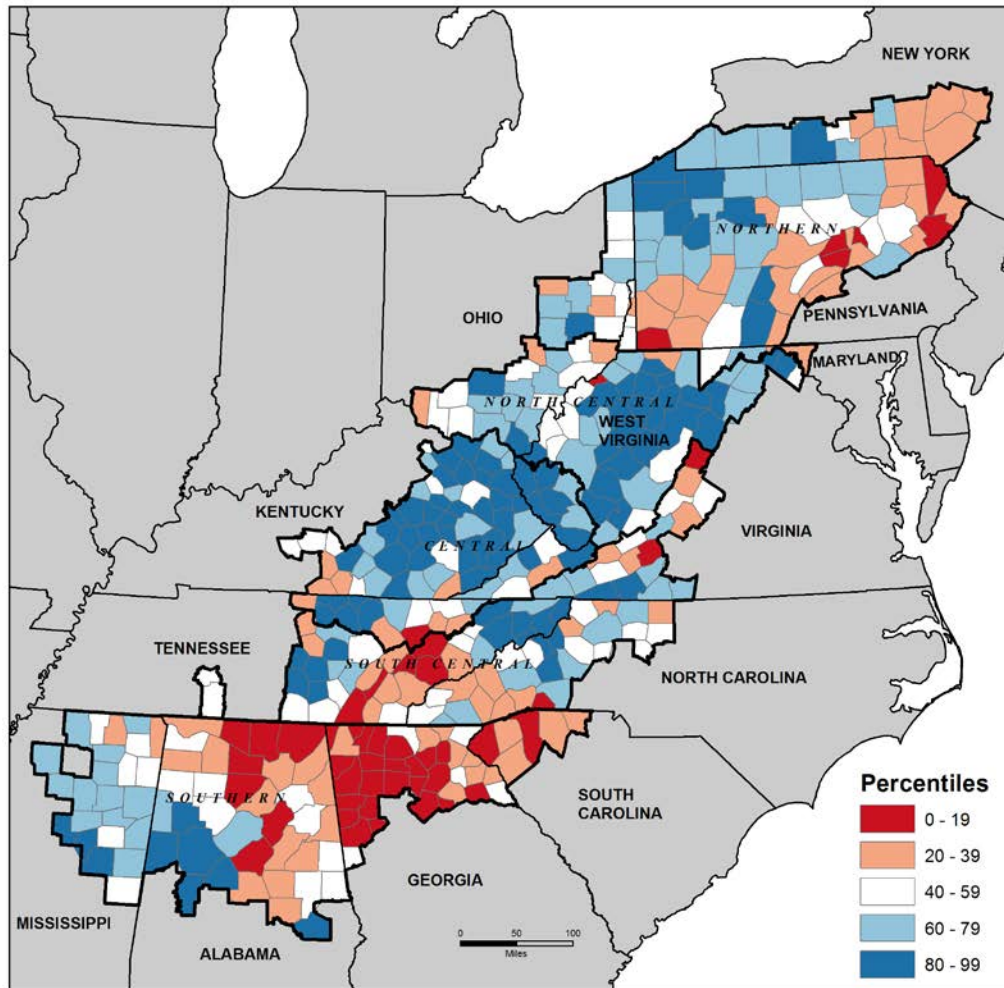
County Veteran Use of Veterans Health Administration Services in the United States, 2009



Source: VHA HERC database of unique veteran users divided by veteran eligibles arrayed by national percentile.

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FIGURE 37 – COUNTY VETERAN USE OF VETERANS HEALTH ADMINISTRATION (VHA) SERVICES IN APPALACHIA, 2009



Source: Percent National Percentile of Veterans Affairs (VA) Number of unique Veterans who used VA services as percent of Veterans living in county. Geographic Distribution of VA Expenditures 2009. Department of Veterans Affairs, 2010.

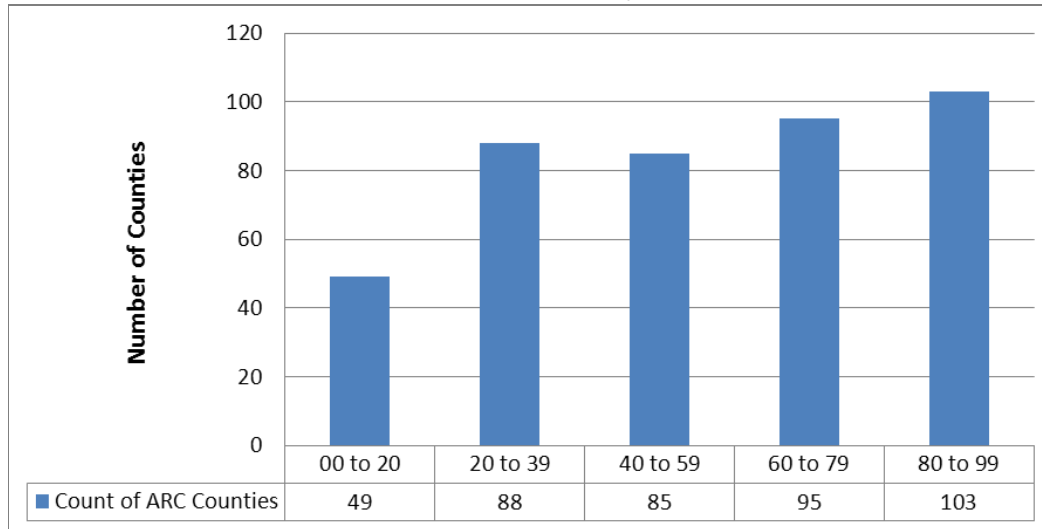
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In 2009, VHA users, as a proportion of eligible Veterans, were very high relative to the nation in central and northern Appalachia. Access in northeastern and southwestern Pennsylvania and the western counties of Appalachian New York is more like that in Alabama, Georgia, South Carolina and very west Tennessee. However, VHA use by veterans was relatively low.

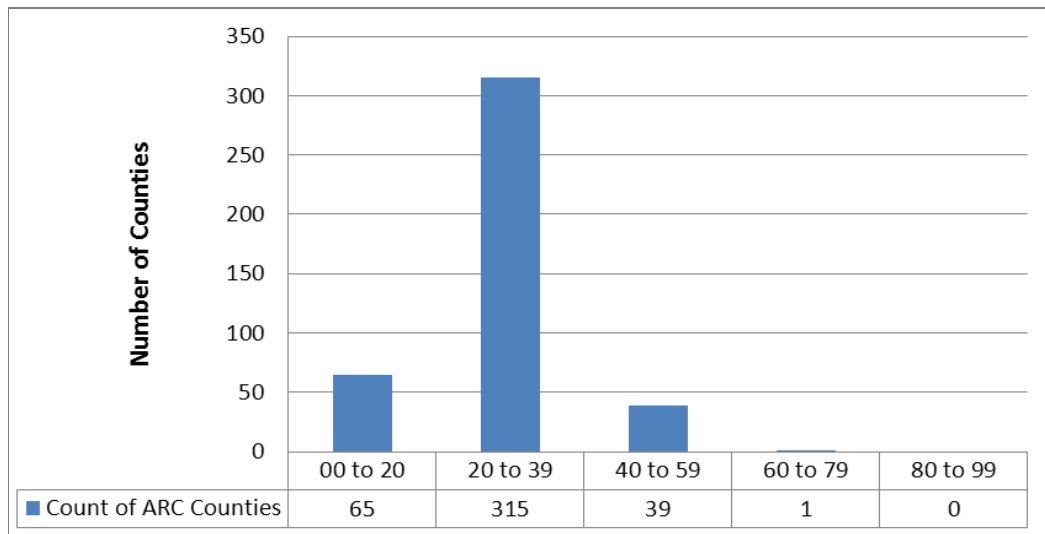
Nationally, 26.6 percent of eligible veterans used VHA services, in 2009. At the county level, VHA services were used by as few as 0.6 percent and as much as 95.7 percent of veterans. In the Appalachian Region, veteran use of VHA services, calculated as unique users per eligible veteran in 2009, was 28.2 percent, with a county high of 65.2 percent and a county low of 8.6 percent.

FIGURE 38 – PERCENTILE DISTRIBUTION OF UNIQUE USERS AS A PERCENTAGE OF VA ELIGIBLES, APPALACHIAN COUNTIES, 2009



Source data: VA Health Economics Resource Center Second Q, 2010

FIGURE 39 – UNIQUE USERS AS A PERCENTAGE OF VA ELIGIBLES, APPALACHIAN COUNTIES, 2009



Source data: VA Health Economics Resource Center Second Q, 2010

Appendix L contains state summaries for the Appalachian Region.