Attachment 3 - Frontier Definition Handouts

Rural Assistance Center:

Frontier Frequently Asked Questions

Question: What is the definition of frontier?

Answer: Frontier areas are sparsely populated rural areas that are isolated from population centers and services. While frontier is sometimes defined simplistically as places having a population density of six or fewer people per square mile this does not take into account other important factors that may isolate a community. Therefore, preferred definitions are more complex and address isolation by considering distance in miles and travel time in minutes to services.

Definitions of frontier for specific state and federal programs vary, depending on the purpose of the project being researched or funded. Some of the issues that may be considered in classifying an area as frontier include population density, distance from a population center or specific service, travel time to reach a population center or service, functional association with other places, availability of paved roads, and seasonal changes in access to services. Frontier may be defined at the county level, by ZIP code or by census tract.

Rural-Urban Commuting Areas (RUCAs) can be used to identify very remote areas, which could be considered frontier-like due to their isolation from population centers. Under the RUCA definition, types of rural and urban are defined by proximity to urban areas and the portion of the population that commute for work from place to place. For instance, a RUCA code of 10 is assigned to isolated, small rural census tracts. The WWAMI Rural Health Research Center publication RUCA Version 1.11:RUCA Data: Travel Distance and Time, Remote, Isolated, and Frontier discusses a method of combining the Rural-Urban Commuting Area (RUCA) codes with travel distance to urban areas and larger rural towns, in order to identify areas that are very remote. RUCAs are available by census tract and by ZIP code area. RUCA Version 1 uses 1990 Census and 1998 ZIP code areas, while Version 2 uses 2000 Census data and 2004 ZIP code areas. RUCAs were first introduced in a 1999 article by Richard Morrill, John Cromartie, and Gary Hart - "Metropolitan, Urban, and Rural Commuting Areas: Toward a Better Depiction of the United States Settlement System." *Urban Geography* 20: 727-

748.

In 2006, with funding from the Health Resources and Services Administration's Office for the Advancement of Telehealth, an expert panel developed a new frontier area definition that could be applied to telehealth programs. The frontier definition and the process by which it was developed are described in the report, Defining the Term "Frontier Area" for Programs Implemented through the Office for the Advancement of Telehealth. The recommended frontier area definition from the panel is: "ZIP code areas whose calculated population centers are more than 60 minutes or 60 miles along the fastest paved road trip to a short-term non federal general hospital of 75 beds or more, and are not part of a large rural town with a concentration of over 20,000 population." This report also provides an overview of other currently used frontier definitions.

The National Center for Frontier Communities, formerly known as the Frontier Education Center, in 1997-98 brought together a multi-disciplinary group of experts as a consensus group that developed a matrix for determining frontier status, based on population density, distance to the closest "market" for services, and travel time. State Offices of Rural Health participate in determining the areas considered frontier in each state. For more detailed description of this frontier definition, please see the Frontier: A New Definition. A number of other documents analyzing frontier areas and the "consensus" definition are found on the National Center for Frontier Communities website Developing the Consensus Definition.

More information about the challenges of defining non-metropolitan areas is available on the What is Rural? information guide.

Question: How much of the U.S. is frontier?

Answer: Frontier is more of a concept than a specific definition, so the number of people living in the frontier and the amount of land that is frontier will vary depending on the definition you select. The North Carolina Rural Health Research and Policy Analysis Center's map, Frontier Counties, United States, 2004, identifies 440 counties that meet the frontier definition of fewer than seven people per square mile, with a total population for those counties of nearly 2.9 million people. Based on the USDA Economic Research Service's Measuring Rurality: Urban Influence Codes, over three million people live in rural counties that are not adjacent to a metropolitan or micropolitan county (having an Urban Influence Code of 11 or 12), and these counties cover an area of over 770,000 square miles. Using the counties and areas provided to the National Center for Frontier Communities by the State Offices of Rural Health, 56% of the land area of the United States is frontier and more than 9 million people, or less than 4% of the population of the country live in these isolated areas.

Question: How can I find out if my county is a frontier county?

Answer: There are several answers to this question.

You can determine if your county meets the "six or fewer people per square mile" definition of frontier by using the U.S. Census Bureau's State and County Quick Facts. Select your state and

then your county. Scroll down to the Geography Quick Facts section near the bottom of the page and look for "Persons per square mile."

You can use the National Center for Frontier Communities' List of Frontier Counties from the 2000 U.S. Census. You may also want to review their Frontier Designation Matrix, which describes how frontier status is calculated by the State Offices of Rural Health and reported to the National Center for Frontier Communities.

The U.S. Department of Agriculture's Economic Research Service provides a list of Rural-Urban Commuting Area (RUCA) codes for each state. A RUCA code of 10 is assigned to isolated, small rural census tracts.

Question: What are some of the challenges facing frontier areas?

Answer: The isolation and distances that classify an area as frontier results in long trips to attend school, shop for groceries, get health care, and reach other basic services. Public transportation options are often limited or unavailable in frontier areas, making access to needed services difficult for low-income households, the elderly and disabled. Frontier areas face seasonal travel barriers that can make travel difficult. For those living in mountainous areas, some roads and passes may be closed in winter, leading to longer travel times. Residents may find that winter driving in the frontier extends travel times because they need to slow down to adequately account for road conditions and limited visibility. Flooding caused by melting snow and heavy rains can force the closure of main roads for unexpected and extended periods of time in both mountainous and flatland landscapes. Some island residents and residents of roadless areas are limited to sea and air access particular in emergencies, These are not always available because there are sometimes weather conditions when airplanes are unable to fly.

The economy in frontier areas is usually based on a few specific resources or activities and so are more at risk of downturns and boom-bust cycles. Tourism, farming, ranching, logging, and mining are some of the businesses that are common in rural areas. Frontier communities may be more vulnerable to less desirable sources of business income, such as nuclear waste disposal. Frontier areas where much of the land is federally owned may lack an adequate tax base to pay for needed services.

The USDA's Economic Research Service report, Understanding Rural Population Loss, notes that counties with low population density, such as frontier counties, are most at risk for population loss. Communities with cultural or natural amenities are likely to fare better than remote communities that have fewer attractions to offer tourists and retirees.

Question: What are some of the health care challenges in frontier areas?

Answer: The National Center for Frontier Communities' publication Addressing the Nursing Shortage: Impacts and Innovations in Frontier America notes that over 30% of frontier counties lack a hospital. Frontier counties that do have hospitals may face higher costs than non-frontier hospitals, due to the lower volume of patients served. Frontier counties with nurse shortages or no hospitals are often clustered together, compounding the distance residents must travel to

reach a hospital.

Frontier areas face the same difficulties as other rural areas in maintaining their health care workforce. These thinly populated regions cannot easily compete with the wages and amenities offered to physicians and nurses by hospitals and clinics in metropolitan areas. Even communities that do have adequate staffing are often one doctor or nurse away from a shortage. For more information, please see our guide on Health Care Workforce.

Some areas must cope with seasonal variations in health care needs, when the population surges with tourists or retirees. Limited health resources in frontier areas, including volunteer health services and costly medical evacuation services, may be needed to care for people vacationing in the area, taking away from the resources available for local residents. For more information, please see the Seasonal Population Fluctuations in Rural and Frontier Areas: Phase One: The View from State Offices of Rural Health and Impact of Seasonal Population Variations on Frontier Communities: Maintenance of the Healthcare Infrastructure.

Rural communities are at higher risk for substance abuse among youth, higher motor vehicle fatalities, hypertension, cigarette smoking, suicide, and death from serious injuries. While many studies have identified health disparities for all rural communities, fewer have focused specifically on the remote rural areas of the frontier. The National Center for Frontier Communities' report, Frontier Youth: Living on the Edge, provides an overview of the behavioral health issues facing frontier youth, using rural data where frontier-specific data is not available, but with discussion that focuses on frontier. According to the December 2003 working paper from the WWAMI Rural Health Research Center, "Prevalence and Trends in Smoking: A National Rural Study," 24.9 percent of residents in remote rural areas smoke, compared to 22 percent in urban areas. Obesity in remote, rural areas tends to be higher than in urban areas, and a college education may have less impact in these remote areas to reduce levels of obesity (A National Study of Obesity Prevalence and Trends by Type of Rural County, Journal of Rural Health, Spring 2005.)

Question: How can telehealth services help frontier areas?

Answer: Telehealth, the provision of health services over a distance through the use of technology, can help frontier communities connect with health care services and specialists that would otherwise be unavailable or require travel. Some of the telehealth applications that can benefit frontier communities include telemental health and telepharmacy. The availability and cost of telecommunications access are potential barriers to the use of telehealth in frontier areas. For more information on this technology, see the Technology information guide and the Telehealth information guide.

Question: Are there funding or reimbursement advantages to being considered a frontier area?

Answer: Most of the programs that frontier areas can access for grants and enhanced reimbursement are available through shortage designations, including the Health Professional Shortage Area (HPSA) and Medically Underserved Area (MUA) designations, rather than through a designation as a frontier area. The Community Health Center program gives special

consideration to sparsely populated or frontier areas. One program that is specific to frontier is the Frontier Extended Stay Clinic (FESC) Cooperative Agreement Program. The Centers for Medicare and Medicaid Services (CMS) also has a project for the FESC model, the Frontier Extended Stay Clinic Demonstration Project.

Frontier communities are rural and so qualify for many rural-specific funding programs, such as the Office of Rural Health Policy's Rural Health Care Services Outreach Grant Program and Rural Health Network Development Grant Program. For additional funding programs available to frontier and other rural areas, please see our Funding section.

Question: What is a Frontier Extended Stay Clinic (FESC)?

Answer: The Frontier Extended Stay Clinic (FESC) is a new provider type to better meet the needs of remote communities far from a hospital. This program is currently a cooperative agreement program in Alaska and Washington. The FESC designation allows a primary care clinic located in a remote area to provide and be reimbursed for monitoring and observation of patients for a limited period of time, in cases where patients cannot or should not be transferred. For more information, please see the Office of Rural Health Policy's Frontier Extended Stay Clinic (FESC) Cooperative Agreement Program.

Credits

Mary Amundson, University of North Dakota, Department of Family & Community Medicine; Mary Wakefield, formerly of the University of North Dakota, Center for Rural Health; Carol Miller, National Center for Frontier Communities; and Thomas C. Ricketts, Cecil G. Sheps Center for Health Services Research.
Past contributors: Gary Hart, WWAMI Rural Health Research Center

Sources: Addressing the Nursing Shortage: Impacts and Innovations in Frontier America, Frontier Education Center; Bridging the Health Divide: The Rural Public Health Research Agenda, Frontier Education Center; Focusing on "Frontier": Isolated Rural America, Frontier Mental Health Services Resource Network; Frontier: A New Definition, Frontier Education Center; Frontier Youth: Living on the Edge, Frontier Education Center; Health Care in Frontier America: A Time for Change, Office of Rural Health Policy; A National Study of Obesity Prevalence and Trends by Type of Rural County. Journal of Rural Health 21 (Spring (2) 2005); 140-148; Prevalence and Trends in Smoking: A National Rural Study. WWAMI Rural Health Research Center: December 2003; Understanding Rural Population Loss, Economic Research Service.

Maintained by: Kathy Spencer, kathy@raconline.org

DEPARTMENT OF HEALTH & HUMAN SERVICES
HEALTH RESOURCES AND SERVICES ADMINISTRATION_____
BUREAU OF HEALTH CARE DELIVERY AND ASSISTANCE
MEMORANDUM

Date: June 10, 1986
From: Acting Director
Subject

: Primary Care Activities in Frontier Areas – Regional Program Guidance Memorandum 86 –

10_____

To: Regional Health Administrators, PHS Regions I-X

In the course of implementing the Rural Strategy of the Bureau of Health Care Delivery and Assistance (BHCDA), it has become apparent that it is difficult to analyze some number of existing grantees and freestanding National Health Service Corps (NHSC) sites, as well as some areas being considered for capacity expansion, using the same criteria as that used to review rural areas in general. These grantees/sites/areas are generally characterized as having a relatively small population base spread over a considerable geographic area. This distinction is important, because the manner in which the services are delivered in these areas which have come to be referred to as “frontier,” varies from rural areas having greater population density.

The purpose of this memorandum is to: (1) define frontier areas, (2) establish eligibility criteria for BHCDA support, (3) identify priorities for funding new or continuation applications in frontier areas, and (4) establish a timeline for implementing this policy. It should be noted that any activity related to support for frontier areas must be consistent with the State-based planning efforts ongoing in each State and must involve the participation of the State Health Department and the State Primary Care Association, as well as other appropriate State based agencies, to assure coordination of all available resources.

Definitions:

For the purpose of this guidance, a “frontier: area shall be defined as follows:

- Frontier areas are those areas located throughout the country which are characterized by a small population base (generally six persons per square mile or fewer), which is spread over a considerable geographic area.

Eligibility Criteria:

To be eligible for BHCDA primary care support as a “frontier” area, the following criteria must be met:

- Service Area: a rational area in the frontier will have at least 500 residents within a 25-mile radius of the health services delivery site or within the rationally established trade area. Most areas will have between 500-3,000 residents and cover large geographic areas.

- Population Density: the service area will have six or fewer persons per square mile.

- Distance: the service area will be such that the distance from a primary care delivery site within the service area to the next level of care will be more than 45 miles and/or the average travel time more than 60 minutes. When defining the "next level of care," we are referring to a facility with 24-hour emergency care, with 24-hour capability to handle an emergency Cesarean section or a patient having a heart attack and some specialty mix to include at a minimum, obstetrics, pediatrics, internal medicine, and anesthesia services.

Because of the unique nature of frontier areas and the difficulty in developing eligibility criteria which fit all cases, there will be an opportunity for organizations to justify any unusual circumstances which may qualify them as frontier, for example, geography, exceptional economic conditions, or special health needs.

Priorities for Funding:

Programs serving or proposing to serve frontier areas must meet the legal and regulatory expectations of all Community Health Centers (CHC) programs; however, because of the special nature of frontier areas, the manner in which these expectations are met may differ. All frontier area programs will be assessed to assure that they address the following:

1. Relative demand for services: the determination of the relative need for services will be based on a consideration of the following:

- Economic factors affecting the population's access to health services, with emphasis on percentage below poverty, unemployment, and extent of health insurance coverage.

- Available health resources in relation to the size of the area and its population.

- Demographic factors affecting the population's need and demand for health services including such factors as seasonal unemployment and/or seasonal variations in population.

2 Systems development: program services need to be provided in a manner appropriate to the needs of the service area. Activities in frontier areas should build upon systems of care which are based in or linked to existing programs whenever possible. An effort should be made to use the strengths of existing CHC's. A priority of resource investment in frontier areas will be to stabilize existing systems of care including, where appropriate, private as well as public entities. An essential component of the systems development must be the ability to arrange for inpatient services at the appropriate level of care. Inclement weather will be considered as a design factor for a programmatic response rather than a reason for a year-round project.

3 Clinical system: frontier sites must, through staff and supporting resources, or through contracts or cooperative agreements with other public or private entities, provide primary health care services that are available, accessible and assure continuity of care. Essential primary health care services must include physicians or mid-level practitioners who provide diagnosis and treatment, preventive health services, and emergency medical services. Primary care in these areas should include the capability to stabilize patients for transport to more advanced levels of care. Provision must be made for lab, x-ray, and pharmacy services, if not available on site.

4 Governance: frontier applicants must be governed by a board that meets all CHC criteria to assure user involvement in the planning, directing, and allocating of resources. Systems of care such as consortia or networks covering large geographic areas must make alternative provisions for community participation.

Timeline for Implementation:

For the remainder of Fiscal Year 1986, the following activities are necessary:

Existing grantees:

- Utilizing the criteria of this memorandum, regional offices will identify all existing grantees in frontier areas by June 13, 1986.

- A review of all existing frontier grantees will be completed by regional offices and submitted to Central Office as soon as possible but no later than July 1, 1986. This review will summarize the results of each of the elements under Priorities for Funding described above, as well as the results of the ZBA analysis. A map of the service area and contiguous areas will be included. This map will describe the size of the service area (number of square miles), the population density of the service area, and show the location and highway distance to the next level of care as described in this policy.

Central Office review of frontier programs will be completed and decisions for continuation funding in sequence with project's anniversary dates will be finalized as soon as possible but no later than August 1, 1986.

New Areas of Activity:

- As part of the Rural Strategy, a limited number of frontier areas may be identified for primary care capacity expansion or consortia development activities. In Fiscal Year 1986, resources will generally be allocated for planning and development activities.

- Consistent with the Federal Register notice of February 28, 1986, proposals for new activities in frontier areas will be due in the regional offices by June 1, 1986. Regional offices will submit by July 1, 1986, a 2-3 page summary, for each project, of their review, which includes: documentation of eligibility according to the definitions, a description of the proposed service area, a map of the proposed service area as described above, and a determination of the priority for funding using the criteria in this

memorandum. Final decisions on the funding of capacity expansion and consortia development proposals will be agreed to by the regional and Central Offices no later than August 15, 1986.

Any questions regarding this memorandum should be directed to Mr. Siegel Young, Chief, Rural Health Branch, Division of Primary Care Services. Mr. Young's telephone number is 443-2220.

Vince L. Hutchins, M.D.

National Center for Frontier Communities

THE CONSENSUS DEFINITION FOR FRONTIER - 2007 UPDATE

BACKGROUND

In 1997, a group of rural and frontier experts from around the United States was convened to develop an appropriate way to categorize and define frontier areas. The group agreed to use a Consensus Development Process, based on the methodology used by the National Institutes of Health to develop consensus statements.

The process combined reading an introductory packet of background materials with a series of conference calls for discussion among the group members. As one or more of the experts recommended an element of a definition, a table with the recommendations was circulated to the whole group. Each member then weighted each element by relevancy and importance. It took four rounds of this process and numerous conference calls before the group achieved consensus.

CONSENSUS REACHED ON A WEIGHTED MATRIX

Although it took almost a full year, the group did reach a consensus recommending a weighted matrix of population density, distance in miles to a service/market center and travel time in minutes. This weighted matrix was named the Consensus Definition and in April of 1998 a final report on the process was completed. The full report, Frontier: A New Definition, the Final Report of the Consensus Development Project, is both archived online at www.frontierus.org/documents/consensus_paper.htm and available from the National Center for Frontier Communities. This consensus definition has been formally adopted by both the National Rural Health Association and the Western Governors' Association and most recently has been used by the National Institute of Mental Health to develop a frontier mental health research initiative. This consensus definition has been formally adopted by both the National Rural Health Association and the Western Governors' Association and most recently has been used by the National Institute of Mental Health to develop a frontier mental health research initiative.

USING THE MATRIX AND STATE FEEDBACK LOOP

The matrix has been used to develop a list of frontier counties and sub-county areas first with 1990 Census data and then again after the 2000 US Census.

The Center believes that States and communities should be involved in frontier designation. Local involvement is necessary because local people are most aware of the realities of the areas in their state. The Center put the consensus definition of frontier into practice by developing a list of counties based on the matrix and finalizing the list after consultation with State Offices of Rural Health (SORH). Both times, the Center had 100% participation of the SORH's in states with frontier areas. By consulting with local experts, a list of frontier counties that more accurately reflects the conditions in each county is developed. This process is unique in that is has followed a "bottom-up" approach which acknowledges the diversity among frontier counties.
The Matrix

DESIGNATION OF

Total Possible Points 105
Minimum Points Necessary for Frontier Designation = 55
"Extremes" = 55-105

DENSITY - PERSONS PER SQUARE MILE	POINTS
0-12	45
12.1-16	30
16.1-20	20
NOTE: PER COUNTY OR PER DEFINED SERVICE AREA WITH JUSTIFICATION	
TOTAL POINTS DENSITY	
DISTANCE - IN MILES TO SERVICE/MARKET	
>90 Miles	30
60-90	20
30-60	10
<30	0
NOTE: STARTING POINT MUST BE RATIONAL, EITHER A SERVICE SITE OR PROPOSED SITE	
TOTAL POINTS DISTANCE IN MILES	
TRAVEL TIME - IN MINUTES TO SERVICE/MARKET	
>90 Minutes	30
60-90	20
30-60	10
<30	0
NOTE: USUAL TRAVEL TIME; EXCEPTIONS MUST BE DOCUMENTED (i.e. WEATHER, GEOGRAPHY, SEASONAL)	
TOTAL POINTS TRAVEL TIME IN MINUTES	
TOTAL POINTS ALL CATEGORIES	

FRONTIER

Newly-Defined Frontier HPSA

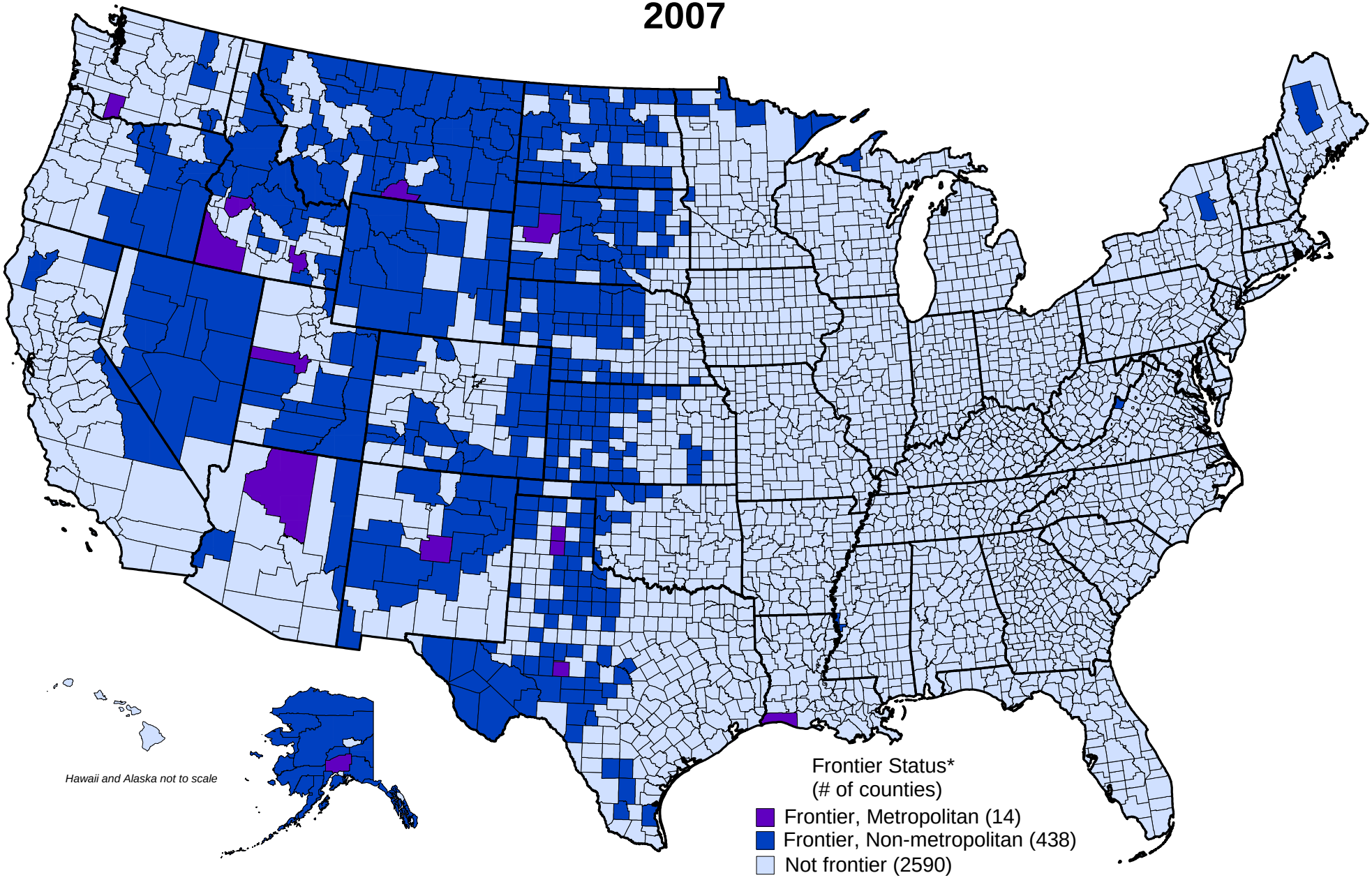
[Page 1274 – PPAHA]

‘‘(**18) FRONTIER HEALTH PROFESSIONAL SHORTAGE AREA**.—The term ‘frontier health professional shortage area’ means an area—

‘‘(A) with a population density less than 6 persons per square mile within the service area; and

‘‘(B) with respect to which the distance or time for the population to access care is excessive.

Frontier Counties, 2007



*Frontier counties are defined as having fewer than seven persons per square mile.
Source: Area Resource File, 2008: US Department of Health and Human Services, Health Resources and Services Administration.
Prepared by: The North Carolina Rural Health Research and Policy Analysis Center, Cecil G. Sheps Center for Health Services Research, University of North Carolina at Chapel Hill.