

7. USING OMB AND CENSUS DESIGNATIONS TO IMPLEMENT HEALTH PROGRAMS

There is no uniformity in how rural areas are defined for purposes of Federal program administration and distribution of funds. Even within agencies different definitions maybe used. This may occur when agencies implement programs or policies for which rural areas have been defined legislatively. For example, the MSA/nonMSA designations are used to categorize hospitals as urban or rural areas for purposes of hospital reimbursement under Medicare. On the other hand, in the case of clinics certified under the Rural Health Clinics Act, "rural" is defined as Census Bureau-designated nonurbanized areas. Certified clinics receive cost-based reimbursement from Medicare and Medicaid. These two examples of how the MSA and Census designations are used are described in more detail in the following section. Finally, the definition of "frontier" areas is described as it is used by the Department of Health and Human Services (DHHS).

Medicare Reimbursement: Using MSAs To Define Urban and Rural Areas

Several geographic designations affect hospital reimbursement under Medicare's prospective payment system (PPS). Different reimbursement rates are calculated for hospitals located in rural, large urban (population of more than a million),¹ and other urban areas. Under PPS, Congress directed the Health Care Financing Administration (HCFA) to define "rural" and "urban" hospitals as those located in nonmetropolitan and metropolitan areas, respectively.² On average, urban hospital per-case payments are 40 percent higher than those of rural hospitals

because of differences in urban and rural standardized amounts, average wage and case-mix indexes, and other factors.

Rural hospitals designated as "sole community hospitals" are not subject to the same reimbursement methods as other rural hospitals.³ These hospitals are "by reason of factors such as isolated location, weather conditions, travel conditions, or absence of other hospitals, the sole source of inpatient hospital services reasonably available in a geographic area to Medicare beneficiaries." An exception is also made for large nonmetropolitan hospitals that serve as "rural referral centers" for Medicare patients. These hospitals are reimbursed at the same rate as urban hospitals (58).

The rural/urban reimbursement differential has not been well-accepted by some hospitals. In some cases, the concerns of nonmetropolitan hospitals have prompted legislators to change the designation of the county in which the hospital is located from nonmetropolitan to metropolitan. The HCFA metropolitan/nonmetropolitan hospital reimbursement standards were modified by the Omnibus Reconciliation Act of 1987.⁴ Some hospitals located in nonMSAs were reassigned to the urban (MSA) category. Accordingly, a hospital located in a nonmetropolitan county adjacent to one or more metropolitan area is treated as being in the metropolitan area to which the greatest number of workers in the county commute, if:

- the nonMSA county would otherwise be considered part of an MSA area but for the fact that the nonMSA county does not meet the standard relating to the

¹ In New Engl and County Metropol i tan Areas (NECMAs), a large urban area includes a population of more than 970,000.

² Certain nonmetropolitan New England counties were deemed to be parts of metropol i tan areas for purposes of PPS.

³ The prospective payment rates for sole *community* hospitals equal 75 percent of the hospital-specific base payment rate plus 25 percent of the appropriate regional prospective payment rate (58).

⁴ Public Law 100-203 Sec. 4005.

rate of commutation between the non MSA county and the central county or counties of any adjacent MSA; and

- either 1) the number of residents of the non MSA county who commute for employment to the central county or counties of any adjacent MSA is equal to at least 15 percent of the number of residents of the nonMSA county who are employed; or 2) the sum of the number of residents of the nonMSA county who commute for employment to the central county or counties of any adjacent MSA and the number of residents of any adjacent MSA who commute for employment to the nonMSA county is at least equal to 20 percent of the number of residents of the nonMSA county who are employed.

Thirty-nine non MSA counties meet these standards (53 FR 38498).

Some hospitals dissatisfied with the rural/urban reimbursement differential have resorted to lawsuits in order to receive urban rates. For example, 28 hospitals in Missouri nonMSAs have sued DHHS, contending that MSA designations are not related to the costs of providing medical care and that DHHS underpays for the services provided to Medicare patients. Under the current regulations, a hospital in Jefferson City, for example, is paid less than a hospital in Columbia 30 miles away, because the first hospital is located outside an MSA (15). The National Rural Health Association has filed a class action suit against DHHS, charging that rural hospitals' Fifth Amendment rights to due process are being violated on two counts related to "unreasonably low reimbursement for rural hospitals" (16).

In a congressionally mandated study, DHHS examined the feasibility and impact of phasing out or eliminating separate urban and rural payment rates, retaining regional or hospital-specific rates, refining the wage index, and other alternatives to separate urban/rural rates (58). The study suggests that

the PPS formula should be refined so that continuous measures are used to adjust a single reimbursement rate. HCFA is examining the feasibility of using severity measures as a more sensitive alternative to geographically based separate rates (65).

The Prospective Payment Assessment Commission (ProPAC), a body formed to make recommendations to the Congress on PPS, has stated that before it can make a recommendation to either maintain or eliminate separate urban and rural rates, it must better understand why there is an approximate 40 percent difference in average Medicare cost per case between urban and rural hospitals. This cost difference was present when the PPS rates were first established and has persisted through at least the first three years of PPS. The PPS rural/urban payment differential reflects poorly understood geographic practice pattern variations that cannot be attributed to measurable differences in patient characteristics, quality of care, or market area features. The issue is complicated by the unknown relationship between practice pattern variations, revenues, costs, and quality (34).

Defining Rural Labor Market Areas ---

The PPS formula includes a wage index adjustment that takes into account geographic differences in labor costs. A different wage index is applied to urban and rural labor market areas. Labor market areas are rather precisely defined for urban areas--each MSA is defined as a labor market area. In contrast, there is one rural labor market area defined for each State, which includes all nonMSA counties in that State.

Recognizing wide variation in hospital wage levels within these broadly defined labor markets, ProPAC has recommended that rural hospital labor market areas be redefined to distinguish between urbanized rural counties and other rural counties within each State. Accordingly, urbanized rural counties would be defined as counties with a city or town having a population of 25,000 or great-

er⁵(33). Analyses of 1982 data show average hospital wages in State's "urbanized rural counties" to be 8.5 percent higher than wages in "other rural counties" (\$7.54 v. \$6.95) (32). DHHS asserts that wage differentials are already taken into account to some degree through other PPS adjustments (i.e., the indirect medical education and disproportionate share adjustments) and the special treatment for rural referral centers (53 FR 38498).

ProPAC has also recommended (31,32,33) that definitions of urban hospital labor market areas be modified to include a distinction between an MSA's central urban and outlying areas. They suggest that urbanized areas within an MSA, as defined by the Bureau of the Census, could be distinguished from nonurbanized areas. DHHS has rejected this proposal, in part because of the difficulty of assigning a hospital to an urbanized area, the boundaries of which are defined below the MSA level. Determining whether or not a hospital is inside or outside of an urbanized area involves pinpointing the hospital location in terms of the smallest units of Census geography (the block or block group). In a study conducted for ProPAC (1), a process is described whereby the location of a hospital can be specified in terms of Census geography and then mapped to urbanized area boundaries. According to DHHS, however, defining labor markets below the county level would be confusing and difficult to administer.

The Rural Health Clinics Act

Ambulatory services can be reimbursed on an at-cost basis by Medicare and Medicaid if facilities and providers meet certification requirements of the Rural Health Clinics Act (Public Law 95-210). To be certified, a practice must be located in a rural area that is designated either as a health manpower

shortage area (HMSA) or a medically underserved area (MUA). The practice must use a mid-level practitioner (physician assistant or nurse practitioner) at least 60 percent of the time that the practice is open. There has been renewed interest in this Act following an increase in the ceiling of reasonable costs reimbursed by Medicare and Medicaid programs. The payment cap is indexed to the Medicare Economic Index (36).⁶

Rural areas, for purposes of the Rural Health Clinics Act, are "areas not delineated as urbanized areas in the last census conducted by the Census Bureau." Nonurbanized areas encompass a larger area than either the non MSA or Census-defined rural areas. Therefore, Rural Health Clinics can be located within an MSA (see figure 3) or in a nonMSA town with a population of 2,500 or more (such a town is urban according to the Census Bureau).

In summary, for purposes of hospital reimbursement under Medicare, the MSA designation is used (with certain specific exceptions) to distinguish urban from rural hospitals. Persistent MSA/nonMSA hospital cost differences have been noted since the PPS rates were first established, but it is likely that MSA location is an indirect measure of hospital cost. Hospital-specific measures are being sought to replace the MSA adjustment in the PPS formula.

Geographic designations are also used to define urban and rural labor market areas. Dissatisfaction with having only one rural labor market area per State (i.e., one labor market for all non MSA counties) has led ProPAC to recommend two labor market areas for nonMSA counties. They have suggested recognizing as urbanized, nonMSA counties with a city or town with a population of 25,000 or greater (33). The average

⁵ This definition of an urbanized rural county should not be confused with the Bureau of the Census definition of an urban or urbanized area.

⁶ These changes to the Rural Health Clinics Act were contained in the Budget Reconciliation Act of 1987.

hospital wage is 8.5 percent higher in urbanized rural counties than in nonurbanized rural counties (32). There are less than 125 nonMSA towns with 25,000 or more population, so few of the 2,393 nonMSA counties would be classified as urbanized (49). In fact, this distinction would create only 37 new areas (32).

Although HCFA has chosen not to use urbanized areas to refine labor market areas, HCFA does use urbanized area designations when certifying hospitals and clinics under the Rural Health Clinic Act. Rural Health Clinics must be located in nonurbanized areas that are designated as either a health manpower shortage area or a medically undeserved area. This liberal interpretation of "rural" (e. g., it includes some areas within MSAs) seems appropriate, given the requirement that the area must also be medically undeserved. This allows some medically undeserved areas within MSAs--but isolated from an urbanized area by factors other than distance--to be certified.

Providing Services in "Frontier" Areas

Health services may be difficult to provide in large, sparsely populated areas. Areas with a population density of 6 persons per square mile or less, called "frontier" areas, are common West of the Mississippi river (30) (figure 9). In 1980, by this definition, there were at least 378 frontier counties with a total population of nearly 3 million persons (42). It may take an hour or more for residents of frontier areas to reach health providers and facilities. Frontier physicians tend to be generalists, solely responsible for a large service area, and have limited access to hospitals and health care technology (11). Recognizing the unique characteristics of frontier areas,⁷ DHHS in early 1986 agreed to use different criteria to evaluate Community

⁷ The Frontier Task Force of the National Rural Health Association (established in 1985) was instrumental in documenting the unique health care needs of rural areas (63).

Health Center (CHC) grantees (and new applicants for CHC support) and National Health Service Corps sites.⁸ Frontier areas were defined as (59):

Those areas located throughout the country which are characterized by a small population base (generally 6 persons per square mile or fewer) which is spread over a considerable geographic area.

To be eligible for Bureau of Health Care Delivery and Assistance (BHCDA) support as a frontier area, the following service area criteria must be met (59):⁹

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 to 3,000 residents and cover large geographic areas.

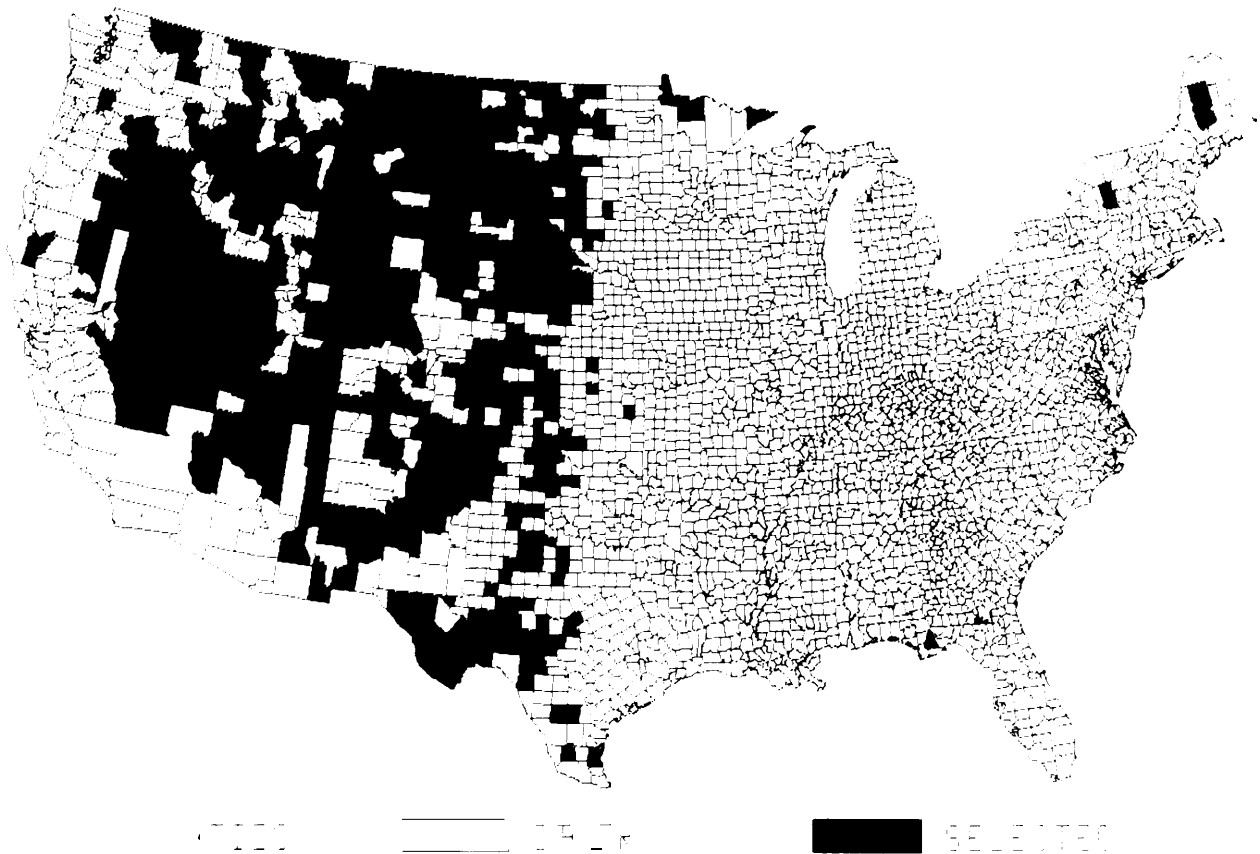
Population Density: the service area will have six or fewer persons per square mile.

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 caesarean section or a patient having a heart attack and some specialty mix to include at a minimum, obstetric, pediatric, internal medicine, and anesthesia services.

⁸ The 1988 authorizing legislation for Public Health Service programs of assistance for primary health care included recommendations for DHHS to support primary health care planning, development, and operations in frontier areas (46).

⁹ If the eligibility criteria are not strictly met, an organization may justify any unusual circumstances which may qualify them as frontier, for example, geography, exceptional economic conditions, or special health needs (59).

Figure 9--- Frontier Counties: Population Density of 6 or Less



SOURCE: U.S. Department of Health and Human Services, Public Health Service, Health Resources and Services Administration, Bureau of Health Professions, Office of Data and Management, Area Resource File, June 16, 1986.

Some State Health Departments have had trouble identifying service areas meeting these criteria (26). Whole counties can be identified as frontier areas on the basis of population density, but available sub-county geographic units are sometimes inadequate for identifying health service areas. Population data from the 1980 Census are available for sub-county areas such as Census County Divisions (CCDs), and Enumeration Districts (EDs) (see appendix D) but these areas can be large and may not represent a rational health service area.¹⁰ ZIP Codes¹¹ may be aggregated to form a rational service area, but this poses some technical difficulties (19). Following the 1990 Census, Block Numbering Areas will be available for all nonurbanized areas (see appendix D.--1980 Census geography).¹²

10 Some States have defined primary care service areas (e. g., New York).

11 population data from the Census are available by ZIP Code. Some investigators have used ZIP Code-level census data to describe three types of rural area based upon density within zip code: semi-rural (density of 16 to 30 per square mile); rural (density 6 to 15 per square mile); and frontier (density less than 6 per square mile) (10).

12 In 1980, Block Numbering Areas were only available for nonurbanized places with over 10,000 population.

It is useful to distinguish frontier area counties with evenly distributed small settlements from counties with one or two large population settlements and large areas with little or no settlement. For example, the health service needs of two frontier counties in New Mexico with similar population densities differ because of the way the populations are distributed. One county has a total population of approximately 8,000, of whom about 6,000 live in one town. In contrast, the other county has a total population of 2,500 living in six widely dispersed towns. If suitable sub-county areas were available, the Hoover Index, which measures population concentration or dispersion, could be used to distinguish between these counties. An automated geographic information system called TIGER (Topologically Integrated Geographic Encoding and Referencing System) has been developed¹³ that will enhance the ability to conduct spatial analyses of population data from the 1990 decennial census (23).

13 TIGER has been developed jointly by the U.S. Geological Survey and the U.S. Bureau of the census.