ignation (or withdrawal of designation), to:

(1) The Governor of each State in which the area, population group, medical facility, or other public facility so designated is in whole or in part located;

(2) Each HSA for a health service area which includes all or any part of the area, population group, medical facility, or other public facility so designated;

(3) The SHPDA for each State in which the area, population group, medical facility, or other public facility so designated is in whole or in part located; and

(4) Appropriate public or nonprofit private entities which are located in or which have a demonstrated interest in the area so designated.

(b) The Secretary will periodically publish updated lists of designated health professional(s) shortage areas in the FEDERAL REGISTER, by type of professional(s) shortage. An updated list of areas for each type of professional(s) shortage will be published at least once annually.

(c) The effective date of the designation of an area shall be the date of the notification letter to the individual or agency which requested the designation, or the date of publication in the FEDERAL REGISTER, whichever comes first.

(d) Once an area is listed in the FEDERAL REGISTER as a designated health professional(s) shortage area, the effective date of any later withdrawal of the area's designation shall be the date when notification of the withdrawal, or an updated list of designated areas which does not include it, is published in the FEDERAL REGISTER.

APPENDIX A TO PART 5—CRITERIA FOR DESIGNATION OF AREAS HAVING SHORTAGES OF PRIMARY MEDICAL CARE PROFESSIONAL(S)

Part I—Geographic Areas

A. *Criteria.*

A geographic area will be designated as having a shortage of primary medical care professionals if the following three criteria are met:

1. The area is a rational area for the delivery of primary medical care services.

2. One of the following conditions prevails within the area:

(a) The area has a population to full-time-equivalent primary care physician ratio of at least 3,500 : 1.

(b) The area has a population to full-time-equivalent primary care physician ratio of less than 3,500 : 1 but greater than 3,000 : 1 and has unusually high needs for primary care services or insufficient capacity of existing primary care providers.

3. Primary medical care professionals in contiguous areas are overutilized, excessively distant, or inaccessible to the population of the area under consideration.

B. *Methodology.*

In determining whether an area meets the criteria established by paragraph A of this part, the following methodology will be used:

1. *Rational Areas for the Delivery of Primary Medical Care Services.*

(a) The following areas will be considered rational areas for the delivery of primary medical care services:

(i) A county, or a group of contiguous counties whose population centers are within 30 minutes travel time of each other.

(ii) A portion of a county, or an area made up of portions of more than one 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 to such resources.

(iii) Established neighborhoods and communities within metropolitan areas which display a strong self-identity (as indicated by a homogeneous socioeconomic or demographic structure and/or a tradition of interaction or interdependency), have limited interaction with contiguous areas, and which, in general, have a minimum population of 20,000.

(b) The following distances will be used as guidelines in determining distances corresponding to 30 minutes travel time:

(i) Under normal conditions with primary roads available: 20 miles.

(ii) In mountainous terrain or in areas with only secondary roads available: 15 miles.

(iii) In flat terrain or in areas connected by interstate highways: 25 miles.

Within inner portions of metropolitan areas, information on the public transportation system will be used to determine the distance corresponding to 30 minutes travel time.

2. *Population Count.*

The population count used will be the total permanent resident civilian population of the area, excluding inmates of institutions, with the following adjustments, where appropriate:

(a) Adjustments to the population for the differing health service requirements of various age-sex population groups will be computed using the table below of visit rates for 12 age-sex population cohorts. The total expected visit rate will first be obtained by multiplying each of the 12 visit rates in the table by the size of the area population within that particular age-sex cohort and adding the resultant 12 visit figures together. This total expected visit rate will then be divided by the U.S. average per capita visit rate of 5.1, to obtain the adjusted population for the area.

Sex	Age groups					
	Under 5	5–14	15–24	25–44	45–64	65 and over
Male	7.3	3.6	3.3	3.6	4.7	6.4
Female	6.4	3.2	5.5	6.4	6.5	6.8

(b) The effect of transient populations on the need of an area for primary care professional(s) will be taken into account as follows:

(i) Seasonal residents, i.e., those who maintain a residence in the area but inhabit it for only 2 to 8 months per year, may be included but must be weighted in proportion to the fraction of the year they are present in the area.

(ii) Other tourists (non-resident) may be included in an area's population but only with a weight of 0.25, using the following formula: Effective tourist contribution to population = 0.25 × (fraction of year tourists are present in area) × (average daily number of tourists during portion of year that tourists are present).

(iii) Migratory workers and their families may be included in an area's population, using the following formula: Effective migrant contribution to population = (fraction of year migrants are present in area) × (average daily number of migrants during portion of year that migrants are present).

3. *Counting of Primary Care Practitioners.*

(a) All non-Federal doctors of medicine (M.D.) and doctors of osteopathy (D.O.) providing direct patient care who practice principally in one of the four primary care specialities—general or family practice, general internal medicine, pediatrics, and obstetrics and gynecology—will be counted. Those physicians engaged solely in administration, research, and teaching will be excluded. Adjustments for the following factors will be made in computing the number of full-time-equivalent (FTE) primary care physicians:

(i) Interns and residents will be counted as 0.1 full-time equivalent (FTE) physicians.

(ii) Graduates of foreign medical schools who are not citizens or lawful permanent residents of the United States will be excluded from physician counts.

(iii) Those graduates of foreign medical schools who are citizens or lawful permanent residents of the United States, but do not have unrestricted licenses to practice medicine, will be counted as 0.5 FTE physicians.

(b) Practitioners who are semi-retired, who operate a reduced practice due to infirmity or other limiting conditions, or who provide patient care services to the residents of the area only on a part-time basis will be discounted through the use of full-time equivalency figures. A 40-hour work week will be used as the standard for determining full-time equivalents in these cases. For practitioners working less than a 40-hour week, every four (4) hours (or ½ day) spent providing patient care, in either ambulatory or inpatient settings, will be counted as 0.1

FTE (with numbers obtained for FTE's rounded to the nearest 0.1 FTE), and each physician providing patient care 40 or more hours a week will be counted as 1.0 FTE physician. (For cases where data are available only for the number of hours providing patient care in office settings, equivalencies will be provided in guidelines.)

(c) In some cases, physicians located within an area may not be accessible to the population of the area under consideration. Allowances for physicians with restricted practices can be made, on a case-by-case basis. However, where only a portion of the population of the area cannot access existing primary care resources in the area, a population group designation may be more appropriate (see part II of this appendix).

(d) Hospital staff physicians involved exclusively in inpatient care will be excluded. The number of full-time equivalent physicians practicing in organized outpatient departments and primary care clinics will be included, but those in emergency rooms will be excluded.

(e) Physicians who are suspended under provisions of the Medicare-Medicaid Anti-Fraud and Abuse Act for a period of eighteen months or more will be excluded.

4. *Determination of Unusually High Needs for Primary Medical Care Services.*

An area will be considered as having unusually high needs for primary health care services if at least one of the following criteria is met:

(a) The area has more than 100 births per year per 1,000 women aged 15-44.

(b) The area has more than 20 infant deaths per 1,000 live births.

(c) More than 20% of the population (or of all households) have incomes below the poverty level.

5. *Determination of Insufficient Capacity of Existing Primary Care Providers.*

An area's existing primary care providers will be considered to have insufficient capacity if at least two of the following criteria are met:

(a) More than 8,000 office or outpatient visits per year per FTE primary care physician serving the area.

(b) Unusually long waits for appointments for routine medical services (i.e., more than 7 days for established patients and 14 days for new patients).

(c) Excessive average waiting time at primary care providers (longer than one hour where patients have appointments or two hours where patients are treated on a first-come, first-served basis).

(d) Evidence of excessive use of emergency room facilities for routine primary care.

(e) A substantial proportion (2/3 or more) of the area's physicians do not accept new patients.

(f) Abnormally low utilization of health services, as indicated by an average of 2.0 or less office visits per year on the part of the area's population.

6. *Contiguous Area Considerations.*

Primary care professional(s) in areas contiguous to an area being considered for designation will be considered excessively distant, overutilized or inaccessible to the population of the area under consideration if one of the following conditions prevails in each contiguous area:

(a) Primary care professional(s) in the contiguous area are more than 30 minutes travel time from the population center(s) of the area being considered for designation (measured in accordance with paragraph B.1(b) of this part).

(b) The contiguous area population-to-full-time-equivalent primary care physician ratio is in excess of 2000:1, indicating that practitioners in the contiguous area cannot be expected to help alleviate the shortage situation in the area being considered for designation.

(c) Primary care professional(s) in the contiguous area are inaccessible to the population of the area under consideration because of specified access barriers, such as:

(i) Significant differences between the demographic (or socio-economic) characteristics of the area under consideration and those of the contiguous area, indicating that the population of the area under consideration may be effectively isolated from nearby resources. This isolation could be indicated, for example, by an unusually high proportion of non-English-speaking persons.

(ii) A lack of economic access to contiguous area resources, as indicated particularly where a very high proportion of the population of the area under consideration is poor (i.e., where more than 20 percent of the population or the households have incomes below the poverty level), and Medicaid-covered or public primary care services are not available in the contiguous area.

C. *Determination of Degree of Shortage.*

Designated areas will be assigned to degree-of-shortage groups, based on the ratio (R) of population to number of full-time equivalent primary care physicians and the presence or absence of unusually high needs for primary health care services, according to the following table:

	High needs not indicated	High needs indicated
Group 1	No physicians	No physicians; or $R \geq 5,000$
Group 2	$R \geq 5,000$	$5,000 > R \geq 4,000$
Group 3	$5,000 > R \geq 4,000$	$4,000 > R \geq 3,500$
Group 4	$4,000 > R > 3,500$	$3,500 > R \geq 3,000$

D. *Determination of size of primary care physician shortage.* Size of Shortage (in number of FTE primary care physicians needed) will be computed using the following formulas:

(1) For areas without unusually high need or insufficient capacity:

Primary care physician shortage = area population/3,500 − number of FTE primary care physicians

(2) For areas with unusually high need or insufficient capacity:

Primary care physician shortage = area population/3,000 − number of FTE primary care physicians

Part II—Population Groups

A. *Criteria.*

1. In general, specific population groups within particular geographic areas will be designated as having a shortage of primary medical care professional(s) if the following three criteria are met:

(a) The area in which they reside is rational for the delivery of primary medical care services, as defined in paragraph B.1 of part I of this appendix.

(b) Access barriers prevent the population group from use of the area's primary medical care providers. Such barriers may be economic, linguistic, cultural, or architectural, or could involve refusal of some providers to accept certain types of patients or to accept Medicaid reimbursement.

(c) The ratio of the number of persons in the population group to the number of primary care physicians practicing in the area and serving the population group is at least 3,000 : 1.

2. Indians and Alaska Natives will be considered for designation as having shortages of primary care professional(s) as follows:

(a) Groups of members of Indian tribes (as defined in section 4(d) of Pub. L. 94-437, the Indian Health Care Improvement Act of 1976) are automatically designated.

(b) Other groups of Indians or Alaska Natives (as defined in section 4(c) of Pub. L. 94-437) will be designated if the general criteria in paragraph A are met.

B. *Determination of Degree of Shortage.*

Each designated population group will be assigned to a degree-of-shortage group, based on the ratio (R) of the group's population to the number of primary care physicians serving it, as follows:

Group 1—No physicians or $R > 5,000$.
Group 2—$5,000 > R \geq 4,000$.
Group 3—$4,000 > R \geq 3,500$.
Group 4—$3,500 > R \geq 3,000$.

Population groups which have received "automatic" designation will be assigned to degree-of-shortage group 4 if no information on the ratio of the number of persons in the group to the number of FTE primary care physicians serving them is provided.

C. *Determination of size of primary care physician shortage.* Size of shortage (in number of primary care physicians needed) will be computed as follows:

Primary care physician shortage = number of persons in population group/3,000 − number of FTE primary care physicians

Part III—Facilities

A. *Federal and State Correctional Institutions.*

1. *Criteria.*

Medium to maximum security Federal and State correctional institutions and youth detention facilities will be designated as having a shortage of primary medical care professional(s) if both the following criteria are met:

(a) The institution has at least 250 inmates.

(b) The ratio of the number of internees per year to the number of FTE primary care physicians serving the institution is at least 1,000:1.

Here the number of internees is defined as follows:

(i) If the number of new inmates per year and the average length-of-stay are not specified, or if the information provided does not indicate that intake medical examinations are routinely performed upon entry, then—Number of internees = average number of inmates.

(ii) If the average length-of-stay is specified as one year or more, and intake medical examinations are routinely performed upon entry, then—Number of internees = average number of inmates + (0.3) × number of new inmates per year.

(iii) If the average length-of-stay is specified as less than one year, and intake examinations are routinely performed upon entry, then—Number of internees = average number of inmates + (0.2) × (1 + ALOS/2) × number of new inmates per year where ALOS = average length-of-stay (in fraction of year). (The number of FTE primary care physicians is computed as in part I, section B, paragraph 3 above.)

2. Determination of Degree of Shortage.

Designated correctional institutions will be assigned to degree-of-shortage groups based on the number of inmates and/or the ratio (R) of internees to primary care physicians, as follows:

Group 1—Institutions with 500 or more inmates and no physicians.

Group 2—Other institutions with no physicians and institutions with R greater than (or equal to) 2,000:1.

Group 3—Institutions with R greater than (or equal to) 1,000:1 but less than 2,000:1.

B. *Public or Non-Profit Medical Facilities.*

1. *Criteria.*

Public or non-profit private medical facilities will be designated as having a shortage of primary medical care professional(s) if:

(a) the facility is providing primary medical care services to an area or population group designated as having a primary care professional(s) shortage; and

(b) the facility has insufficient capacity to meet the primary care needs of that area or population group.

2. *Methodology*

In determining whether public or non-profit private medical facilities meet the criteria established by paragraph B.1 of this Part, the following methodology will be used:

(a) *Provision of Services to a Designated Area or Population Group.*

A facility will be considered to be providing services to a designated area or population group if either:

(i) A majority of the facility's primary care services are being provided to residents of designated primary care professional(s) shortage areas or to population groups designated as having a shortage of primary care professional(s); or

(ii) The population within a designated primary care shortage area or population group has reasonable access to primary care services provided at the facility. Reasonable access will be assumed if the area within which the population resides lies within 30 minutes travel time of the facility and non-physical barriers (relating to demographic and socioeconomic characteristics of the population) do not prevent the population from receiving care at the facility.

Migrant health centers (as defined in section 319(a)(1) of the Act) which are located in areas with designated migrant population groups and Indian Health Service facilities are assumed to be meeting this requirement.

(b) *Insufficient capacity to meet primary care needs.*

A facility will be considered to have insufficient capacity to meet the primary care needs of the area or population it serves if at least two of the following conditions exist at the facility:

(i) There are more than 8,000 outpatient visits per year per FTE primary care physician on the staff of the facility. (Here the number of FTE primary care physicians is computed as in Part I, Section B, paragraph 3 above.)

(ii) There is excessive usage of emergency room facilities for routine primary care.

(iii) Waiting time for appointments is more than 7 days for established patients or more than 14 days for new patients, for routine health services.

(iv) Waiting time at the facility is longer than 1 hour where patients have appointments or 2 hours where patients are treated on a first-come, first-served basis.

3. *Determination of Degree of Shortage.*

Each designated medical facility will be assigned to the same degree-of-shortage group as the designated area or population group which it serves.

[45 FR 76000, Nov. 17, 1980, as amended at 54 FR 8737, Mar. 2, 1989; 57 FR 2480, Jan. 22, 1992]

Appendix B to Part 5—Criteria for Designation of Areas Having Shortages of Dental Professonal(s)

Part I—Geographic Areas

A. *Criteria.*

A geographic area will be designated as having a dental professional shortage if the following three criteria are met:

1. The area is a rational area for the delivery of dental services.

2. One of the following conditions prevails in the area:

(a) The area has a population to full-time-equivalent dentist ratio of at least 5,000:1, or

(b) The area has a population to full-time-equivalent dentist ratio of less than 5,000:1 but greater than 4,000:1 and has unusually high needs for dental services or insufficient capacity of existing dental providers.

3. Dental professionals in contiguous areas are overutilized, excessively distant, or inaccessible to the population of the area under consideration.

B. *Methodology.*

In determining whether an area meets the criteria established by paragraph A of this part, the following methodology will be used:

1. *Rational Area for the Delivery of Dental Services.*

(a) The following areas will be considered rational areas for the delivery of dental health services:

(i) A county, or a group of several contiguous counties whose population centers are within 40 minutes travel time of each other.

(ii) A portion of a county (or an area made up of portions of more than one 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 of greater than 40 minutes to such resources.

(iii) Established neighborhoods and communities within metropolitan areas which display a strong self-identity (as indicated by a homogenous socioeconomic or demographic structure and/or a traditional of interaction or intradependency), have limited interaction with contiguous areas, and which, in general, have a minimum population of 20,000.

(b) The following distances will be used as guidelines in determining distances corresponding to 40 minutes travel time:

(i) Under normal conditions with primary roads available: 25 miles.

(ii) In mountainous terrain or in areas with only secondary roads available: 20 miles.

(iii) In flat terrain or in areas connected by interstate highways: 30 miles.

Within inner portions of metropolitan areas, information on the public transportation system will be used to determine the distance corresponding to 40 minutes travel time.

2. *Population Count.*

The population count use will be the total permanent resident civilian population of the area, excluding inmates of institutions, with the following adjustments:

(a) Seasonal residents, i.e., those who maintain a residence in the area but inhabit it for only 2 to 8 months per year, may be included but must be weighted in proportion to the fraction of the year they are present in the area.

(b) Migratory workers and their families may be included in an area's population using the following formula: Effective migrant contribution to population=(fraction of year migrants are present in area)×(average daily number of migrants during portion of year that migrants are present).

3. *Counting of Dental Practitioners.*

(a) All non-Federal dentists providing patient care will be counted, except in those areas where it is shown that specialists (those dentists not in general practice or pedodontics) are serving a larger area and are not addressing the general dental care needs of the area under consideration.

(b) Full-time equivalent (FTE) figures will be used to reflect productivity differences among dental practices based on the age of the dentists, the number of auxiliaries employed, and the number of hours worked per week. In general, the number of FTE dentists will be computed using weights obtained from the matrix in Table 1, which is based on the productivity of dentists at various ages, with different numbers of auxiliaries, as compared with the average productivity of all dentists. For the purposes of these determinations, an auxiliary is defined as any non-dentist staff employed by the dentist to assist in operation of the practice.

TABLE 1—EQUIVALENCY WEIGHTS, BY AGE AND NUMBER OF AUXILIARIES

	<55	55-59	60-64	65+
No auxiliaries	0.8	0.7	0.6	0.5
One auxiliary	1.0	0.9	0.8	0.7
Two auxiliaries	1.2	1.0	1.0	0.8
Three auxiliaries	1.4	1.2	1.0	1.0
Four or more auxiliaries	1.5	1.5	1.3	1.2

If information on the number of auxiliaries employed by the dentist is not available, Table 2 will be used to compute the number of full-time equivalent dentists.

TABLE 2—EQUIVALENCY WEIGHTS, BY AGE

	<55	55-59	60-64	65+
Equivalency weights	1.2	0.9	0.8	0.6

The number of FTE dentists within a particular age group (or age/auxiliary group) will be obtained by multiplying the number of dentists within that group by its corresponding equivalency weight. The total supply of FTE dentists within an area is then computed as the sum of those dentists within each age (or age/auxiliary) group.

(c) The equivalency weights specified in tables 1 and 2 assume that dentists within a particular group are working full-time (40 hours per week). Where appropriate data are available, adjusted equivalency figures for dentists who are semi-retired, who operate a reduced practice due to infirmity or other limiting conditions, or who are available to the population of an area only on a part-time basis will be used to reflect the reduced availability of these dentists. In computing these equivalency figures, every 4 hours (or ½ day) spent in the dental practice will be counted as 0.1 FTE except that each dentist working more than 40 hours a week will be counted as 1.0. The count obtained for a particular age group of dentists will then be multiplied by the appropriate equivalency weight from table 1 or 2 to obtain a full-time equivalent figure for dentists within that particular age or age/auxiliary category.

4. *Determination of Unusually High Needs for Dental Services.*

An area will be considered as having unusually high needs for dental services if at least one of the following criteria is met: