(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.

Age	Annual number of optometric visits required per person, by age					
	Under 20	20–29	30–39	40–49	50–59	60 and over
Number of visits	0.11	0.20	0.24	0.35	0.41	0.48

For geographic areas where the age distribution of the population is not known, it will be assumed that the percentage distribution, by age groups, for the area is the same as the distribution for the county of which it is a part.

(3) *Determination of Estimated Supply of Optometric Visits.*

The estimated supply of optometric services will be determined by use of the following formula:

Optometric visits supplied = 3,000 × (number of optometrists under 65)

Optometric visits supplied + 2,000 × (number of optometrists 65 and over)

Optometric visits supplied + 1,500 × (number of ophthamologists)

(4) *Determination of Size of Shortage.*

Size of shortage (in number of optometric visits) will be computed as follows:

Optometric visit shortage = visits required − visits supplied

(5) *Contiguous Area Considerations.*

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

(a) Vision care professional(s) in the contiguous area are more than 40 minutes travel time from the center of the area being considered for designation (measured in accordance with paragraph B.1(b) of this part).

(b) The estimated requirement for vision care services in the contiguous area exceeds the estimated supply of such services there, based on the requirements and supply calculations previously described.

(c) Vision care professional(s) in the contiguous area are inaccessible to the population of the area because of specified access barriers (such as economic or cultural barriers).

C. *Determination of Degree-of-Shortage.*

Designated areas (and population groups) will be assigned to degree-of-shortage groups, based on the ratio of optometric vis-

its supplied to optometric visits required for the area (or group), as follows:

Group 1—Areas (or groups) with no optometric visits being supplied (i.e., with no optometrists or ophthalmologists).

Group 2—Areas (or groups) where the ratio of optometric visits supplied to optometric visits required is less than 0.5.

Group 3—Areas (or groups) where the ratio of optometric visits supplied to optometric visits required is between 0.5 and 1.0.

Part II—Population Groups

A. *Criteria.*

Population groups within particular geographic areas will be designated if both the following criteria are met:

(1) Members of the population group do not have access to vision care resources within the area (or in contiguous areas) because of non-physical access barriers (such as economic or cultural barriers).

(2) The estimated number of optometric visits supplied to the population group (as determined under paragraph B.3 of part I of this Appendix) is less than the estimated number of visits required by that group (as determined under paragraph B.2 of part I of this Appendix), and the computed shortage is at least 1,500 optometric visits.

B. *Determination of Degree of Shortage.*

The degree of shortage of a given population group will be determined in the same way as described for areas in paragraph C of part I of this appendix.

APPENDIX E TO PART 5—CRITERIA FOR DESIGNATION OF AREAS HAVING SHORTAGES OF PODIATRIC PROFESSIONAL(S)

Part I—Geographic Areas

A. *Criteria.*

A geographic area will be designated as having a shortage of podiatric professional(s) if the following three criteria are met:

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

2. The area's ratio of population to foot care practitioners is at least 28,000:1, and the computed podiatrist shortage to meet this ratio is at least 0.5.

3. Podiatric professional(s) 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 Podiatric Services.*

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

(i) A county or a group of 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 and/or transportation patterns or other factors, has limited access to contiguous area resources, as measured generally by a travel time of greater than 40 minutes from its population center to these resources.

(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 area corresponding to 40 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, adjusted by the following formula to take into account the differing utilization rates of podiatric services by different age groups within the population:

Adjusted population=total population × (1 + 2.2 × (percent of population 65 and over) − 0.44 × (percent of population under 17)).

3. *Counting of Foot Care Practitioners.*

(a) All podiatrists providing patient care will be counted. However, in order to take into account productivity differences in podiatric practices associated with the age of the podiatrists, the following formula will be utilized:

Number of FTE podiatrists = 1.0 × (podiatrists under age 55)

+ .8 × (podiatrists age 55 and over)

(b) In order to take into account the fact that orthopedic surgeons and general and family practitioners devote a percentage of their time to foot care, the total available foot care practitioners will be computed as follows:

Number of foot care practitioners = number of FTE podiatrists

+ .15 × (number of orthopedic surgeons)

+ .02 × (number of general and family practioners).

4. *Determination of Size of Shortage.*

Size of shortage (in number of FTE podiatrists) will be computed as follows:

Podiatrist shortage = adjusted population/ 28,000 − number of FTE foot care practitioners.

5. *Contiguous Area Considerations.*

Podiatric 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) Podiatric professional(s) in the contiguous area are more than 40 minutes travel time from the center of the area being considered for designation.

(b) The population-to-foot care practitioner ratio in the contiguous areas is in excess of 20,000:1, indicating that contiguous area podiatric professional(s) cannot be expected to help alleviate the shortage situation in the area for which designation is requested.

(c) Podiatric professional(s) in the contiguous area are inaccessible to the population of the area under consideration because of specified access barriers (such as economic or cultural barriers).

C. *Determination of Degree of Shortage.*

Designated areas will be assigned to groups, based on the ratio (R) of adjusted population to number of foot care practitioners, as follows:

Group 1 Areas with no foot care practitioners, and areas with R > 50,000 and no podiatrists.

Group 2 Other areas with R > 50,000.

Group 3 Areas with 50,000 > R > 28,000.

APPENDIX F TO PART 5—CRITERIA FOR DESIGNATION OF AREAS HAVING SHORTAGES OF PHARMACY PROFESSIONAL(S)

Part I—Geographic Areas

A. *Criteria.*