

advantages and by opportunities to practice certain specialties not available elsewhere, which constitute another form of immobility.

In our estimation, improved mobility, in the direction indicated by income maximization, would result in a more even distribution of physicians among large cities, but might very well result in a more uneven distribution between large cities and smaller communities. Whether either redistribution would be desirable in terms of improving the relative availability of medical services depends, of course, on the structure of the demand for services.

B. Demand for Physician Services

The demand for physician services is relevant both as a factor affecting the distribution of physicians and as a measure of the utilization of physician services. Under perfectly competitive conditions, assuming that doctors are of equal ability and wish to maximize income, there would be regional differences in physician-population ratios so long as there are regional differences in demand for services. Under these conditions, however, differences in ratios would correspond exactly to differences in use of services. In equilibrium physicians everywhere would have the same income and provide the same amount of services. No region would suffer from a relative shortage of physician services, if use of services could be taken as an index of need. On the other hand, if there are substantial regional differences in use of services per physician, without corresponding differences in physician income, we may have an indication of maldistribution of physicians.

We shall examine first the factors determining the use of physician services and then the regional use of services in relation to regional physician-population ratios.

The major determinants of the use of physician services are income, age, sex, race, education, place of residence, and possession of health insurance. We need not bother with the use of services as related to sex in a

regional analysis. All the other factors tend to be correlated with income. The effect of a person's family income on the number of physician visits per year is an increase of 24 per cent from families with annual incomes under \$2,000 to families with incomes of \$7,000 and over.¹⁴ In both the "under \$2,000" and the "\$2,000-\$3,999" income groups, the number of visits per person per year is the same, namely 4.6; in the "\$4,000-\$6,999" income group it is 5.1, and in the "\$7,000 and over" group, 5.7. These are averages for entire income groups; the differences are greatest if only children and young persons in different income groups are compared, and smallest in comparisons of only middle-aged persons.

The tendency toward larger number of visits as income rises was detected also in a comparison of cities with different levels of per capita income. The relationship between annual per capita physician visits and per capita effective buying income was studied for eight standard metropolitan areas. The coefficient of correlation was found to be .619 and the coefficient of determination .383. This correlation is significant at the .1 level.

The reasons why persons with high incomes visit physicians more frequently than those with low incomes are no doubt more complex than merely greater ability to pay. The visit differentials should be related to the economic value of good health, perception of illness, and easy access to physicians. These factors are in turn correlated with economic opportunity, education, and place of residence. In 1958-59, whites visited their physicians 35 per cent more often than non-whites. For families whose head had a college education, the number of visits per person per year was 56 per cent higher than for families whose head had under five years of education and 42 per cent higher than for families whose head had five to eight years of education.¹⁵ For the country as a whole

¹⁴ *Health Statistics*, Series B, No. 19, p. 20.

¹⁵ *Ibid.*, p. 13.