Regardless of whether a country is developed or developing, the “rurality” factor permeates physician distribution. Left to choice, most doctors would rather practice in cities and towns than in villages or countrysides.

From the beginnings of our careers as family physician and internist, we have been involved in the challenges of placing physicians in rural areas. In our respective roles in academic medicine, we have tried to address that challenge through development of programs to encourage graduating doctors to practice in areas of need. In both Kansas and Iowa, Dr Cynda Ann Johnson helped to spearhead rural resident training tracks. While these tracks produce a greater percentage of graduates entering rural practice than traditional family medicine residencies, many of the programs have closed because of difficulty in attracting a pool of residents. At the undergraduate medical education level, Dr Bruce Johnson has directed medical student courses, with a focus on rural/community experience to encourage consideration of rural practice.

Our first in-depth exploration of this issue in another country came during a sabbatical year in England in 1988. The National Health Service in England rather effectively controlled the distribution of doctors. The government designated the practice positions or “posts” that were available. Even with this degree of control, and despite a relative excess of doctors seeking practice sites, rural posts would often go unfilled. Indeed, doctors would continue in a residency or “registrar” position for years until a post became available in a location where they wished to practice. We interviewed one doctor who had been a registrar for 14 years, waiting for a location she considered desirable.

Over the years, we have seen this pattern repeated in many countries. In each there have been repeated attempts to persuade, entice, woo, or force doctors to locate in rural areas. No matter if the country is primarily rural, some areas are more rural than others and these more-rural areas have more difficulty attracting doctors.

We have firsthand examples of how this problem has been addressed—successfully and unsuccessfully—in countries around the world. For example, through a partnership between the University of Kansas School of Medicine and the government of Kyrgyzstan, we visited that Central Asian republic several times in the mid-1990s as we assisted in health care system reform. In the case of Kyrgyzstan, an innovative system of “continuing medical education” brought doctors from rural areas back into the capital of Bishkek for 3 months every 3 years for additional training at no cost to the physician. This intensive retraining, along with a financial incentive, was part of a plan to encourage doctors to locate and remain in rural areas. While this plan may have helped support doctors already committed to rural practices, our observation was that there was little success in attracting new doctors to the countryside.

Japan also has a problem enticing doctors to the relatively rural parts of the country, and until recently, the training paradigm greatly emphasized specialties, effectively eliminating most graduates from even considering a rural setting. To remedy this problem, the government has recently required 2 years of generalist training for all graduating medical students, and family medicine residencies are increasing. It is still too early to know if this effort will provide a solution to rural recruitment. Thus, even countries that have changed training patterns and achieved increased numbers of generalist physicians still face the challenge of recruitment to rural settings.

In the small, poor country of Moldova, previously part of the Soviet Union, the government adopted several programs to entice physicians to practice in rural areas. For example, family physicians who practice in rural areas are paid as much as 80% more than their urban counterparts. They also receive financial support for the first 3 years after opening a rural practice.

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and free health insurance for 6 months. They pay reduced rates for utilities and are reimbursed for some travel expenses. These efforts are too new for results to be quantified at this time, but there is considerable optimism because financial incentives to encourage students to seek residency training and to practice in family medicine have been successful. In little more than a decade, enough family physicians have been trained to achieve the desired ratio of one family physician per 1,800 Moldovans.

By size alone, it stands to reason that China would have the greatest problem of any country in the world in locating doctors to rural areas. In 2002, Lexin Wang looked at the eventual practice location of doctors graduating from 10 rural and 12 metropolitan Chinese medical schools. Ten of the 12 metropolitan schools did not produce a single rural physician! Last year, faculty from the medical school in Ningxia, a newer school in an isolated area of north central China, approached us at East Carolina University (ECU). They worry that their graduates will not meet the rural needs of the region and are hoping to find some solutions from the West. Here at ECU, we have a strong record of graduating students who choose rural practice. We have shown our Chinese colleagues that the key for us is to select students for admission who are likely to locate in rural areas. The strongest predictors include interest in primary care and growing up in a rural community. One quarter of our graduates practice in Eastern North Carolina, an almost entirely rural region, with additional graduates in other rural areas.

As our travels continued over the years, we became increasingly conscious of this worldwide pattern of rural doctor shortage and governments’ need to address this maldistribution. Many approaches have been tried. In some settings, careful selection of medical school applicants along with inducements to locate in rural sites seem to work. We need to work collaboratively with our international colleagues to find models that effectively address this global problem of physician maldistribution.

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REFERENCES