Judging doctor supply—market or health criteria?

Claims that there are too many doctors in some developing countries fail to take account of distortions arising from the acceptance of market forces as determining factors in this field. There are concentrations of medical and nursing staff in congenial urban areas but elsewhere the numbers of these workers are often inadequate. The prime purpose of medical education should be to meet the health needs of the people, and doctors should be asked to serve the first 5–10 years of their careers where these needs are greatest—in the rural communities and urban slums.

The shortages of physicians and other health personnel in developing countries have long been recognized. Table 1 compares the situation in certain developing regions with that in North America and Western Europe in 1975 (1).

In almost all developing countries there are heavy concentrations of physicians, graduate nurses, and other trained health personnel in the main cities, whereas relatively few workers in these categories are available to serve the large rural populations. Thus, for example, of the 6600 physicians in Thailand in 1978, 73% were in the capital, Bangkok, containing only 9% of the population (2).

Countries have applied many strategies to improve the availability of health services for rural populations. Mexico was one of the first to require all new medical graduates to undertake periods of service in rural areas. Scores of other countries have now adopted a similar policy, but the periods of rural posting are typically for only a year or two. Some countries bar new medical graduates from settling in large cities until they have

<table>
<thead>
<tr>
<th>Region</th>
<th>Physicians</th>
<th>Nurses and midwives</th>
<th>Pharmacists</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>166</td>
<td>423</td>
<td>63</td>
</tr>
<tr>
<td>Western Europe</td>
<td>174</td>
<td>279</td>
<td>48</td>
</tr>
<tr>
<td>Tropical South America</td>
<td>60</td>
<td>29</td>
<td>16</td>
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<tr>
<td>South-east Asia</td>
<td>13</td>
<td>24</td>
<td>4</td>
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<tr>
<td>West Africa</td>
<td>6</td>
<td>46</td>
<td>2</td>
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</table>

The author is Emeritus Professor of Health Services, School of Public Health, University of California, Los Angeles, CA 90024, USA.
completed a certain number of years of work elsewhere. Another strategy is the use of mobile clinic teams from small towns to visit outlying villages on regular schedules.

The fundamental question to be asked about health policy in a developing country is this: what priority is assigned to health by the public authorities?

Air ambulances are used in certain countries to transport seriously ill persons from isolated places to hospitals in major cities.

Probably the most significant corrective strategy, adopted by many developing countries, has been the use of briefly trained community health workers to provide essential primary care for rural and low-income urban populations that lack access to modern physicians. Weak supervision has been a serious problem here. Community health workers in villages have frequently been shown to perform unsatisfactorily. The physicians who are expected to provide supervision are usually fully occupied with clinical work in district health facilities and lack the time, motivation and ability to supervise community health workers properly.

Despite great efforts in most developing countries to improve the availability of health services for rural and urban slum populations, the deficiencies remain serious. Even if bold steps were taken to achieve equitable distribution of all medical and allied personnel, supplies in nearly all developing countries would be far too low to match social needs as assessed on the basis of objective scientific standards.

Is health manpower out of balance?

In the light of these realities, it is more than a little surprising to learn from an international congress convened by the Council for International Organizations of the Medical Sciences that many countries are training too many doctors (3). According to an official press release, there are already 4000 unemployed doctors in Egypt and 6000 in Pakistan; within the next decade Mexico may have as many as 14 000 jobless physicians; and, in many countries, medical schools are turning out more medical graduates than the available health services can employ or afford.

In the principal working paper prepared for the congress, one learns that the Philippines, with a physician supply of 60 per 100 000 people in 1982, and Pakistan, with 27 doctors per 100 000 people in 1985, regard their physician resources as excessive. These ratios may be compared with Norway’s supply in 1981 of 172 physicians per 100 000 or Cuba’s in 1982 of 171 per 100 000, both of which countries regard their medical manpower resources as about adequate (4, 5). The paper explains that the “diagnosis” of a country’s doctor-supply situation depends not on a universal standard but on the job market’s capacity for absorption of personnel.

In other words, the evaluation of a nation’s health manpower should, it is claimed, be based on commercial criteria. If these were to guide policy determination in the world public health movement, one would never expect declarations, for example, like that made by the Pan American Health Organization in October 1980 (6). This body stated that by the year 2000:

— no country in the Americas should have an infant mortality rate of more than 30 deaths per 1000 live births;
— in no country of the region should the people’s life expectancy be less than 70 years;

— immunization should be provided to all children under one year of age against diphtheria, whooping cough, tetanus, tuberculosis, measles and poliomyelitis;

— safe water should be provided to approximately 100 million inhabitants of rural areas and 155 million city-dwellers;

— access to health services should be provided to everybody.

One could hardly expect that such lofty goals would be attainable under the countless constraints of free market dynamics, nor that “health for all by the year 2000” would come about in the countries on every continent where people remain engulfed in abject poverty.

Apparent “imbalances” in the supply of health manpower should not be accepted on the ground that market forces are responsible. Public health has made progress by analysing social needs and then designing strategies to meet them. Invariably, such strategies require a situational diagnosis, social planning, and political will for action.

**Political and economic realities**

The fundamental question to be asked about health policy in a developing country is this: what priority is assigned to health by the public authorities? Of all expenditure on health services, what proportion comes from government and what proportion comes from private families and individuals?

I should like to offer some answers for seven developing countries that reported a surplus of physicians in 1986. The actual ratios of physicians to population ranged from 166:100 000 in Argentina to 27:100 000 in Pakistan. The ratios were lower than those found in nearly all European countries.

The World Bank has published estimates of the percentages of health expenditure derived from governmental and private sources in certain countries (7). The seven developing countries reporting a surplus of doctors are listed in order of public expenditure for health purposes in Table 2, which also shows per capita government expenditure for health and military purposes in 1980. It is clear that only Mexico and Colombia have governmental health expenditure accounting for more than two-thirds of overall public and private expenditure on health. In the other five countries, 40% or less of overall health expenditure comes from government. It

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**Table 2. Health and military expenditure in selected countries, circa 1980**

<table>
<thead>
<tr>
<th>Country</th>
<th>Percentage of overall health expenditure coming from government</th>
<th>Government expenditure per capita (US $)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Health</td>
<td>Military</td>
</tr>
<tr>
<td>Mexico</td>
<td>69</td>
<td>11</td>
</tr>
<tr>
<td>Colombia</td>
<td>67</td>
<td>16</td>
</tr>
<tr>
<td>Egypt</td>
<td>40</td>
<td>7</td>
</tr>
<tr>
<td>Argentina</td>
<td>31</td>
<td>22</td>
</tr>
<tr>
<td>Pakistan</td>
<td>29</td>
<td>1</td>
</tr>
<tr>
<td>Philippines</td>
<td>25</td>
<td>4</td>
</tr>
<tr>
<td>India</td>
<td>16</td>
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</tbody>
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would seem to be no accident that only in Mexico and Colombia is public military expenditure not higher than expenditure on public health. In the other countries, per capita public military expenditure greatly exceeds public expenditure on health, the ratio varying from 2.6:1 in Argentina to 15:1 in Pakistan.

Do these facts not point clearly to the underlying imbalance in the social policies of many developing countries? It is not health manpower policies that are out of balance, but political policies on priorities in public spending. When military expenditure absorbs an inordinately high share of government funds, public support for health services is adversely affected. As a result, people have to depend predominantly on individual and family expenditure for obtaining health services.

Large proportions of the people in all seven countries undoubtedly need, but lack, the services of trained physicians. To speak of these countries as having “surplus physicians” is an assault on the basic principles of public health and on elementary concepts of social justice. If physicians in certain countries are not fully occupied or adequately remunerated, the solution lies not in their driving taxis but in shifting public priorities. What can be done to implement a health manpower policy that would be properly responsive to human need?

Meeting human need

Health services should be recognized as a basic human right and, therefore, as an obligation of society. To fulfil this obligation requires the expenditure of adequate funds. Inordinately high military expenditure, as we have seen, frequently prevents this from happening. The resultant heavy outlays from private sources mean that health services go principally to people with the money to pay for them rather than to those in greatest need. Expanding public support for health usually means not only increasing the health share of the general budget but also finding new sources of funds, such as social security and local community financing.

Most professional education in developing countries is state-supported. It follows that graduates have a profound obligation to society. This should warrant a period of social service, not for 1–2 years, but for 5–10 years. The prime purpose of medical education should be to serve the needs of the population.

Remuneration for doctors in public service should be adequate to support a decent standard of living. It should not be necessary for physicians to hasten from public posts to private clinics in order to supplement their incomes. Service in rural areas or urban slums should receive higher material and moral rewards than the average. Proper public salaries, of course, require adequately funded governmental health programmes.

Physicians should not have to do what properly trained community health workers can do, but they should be qualified to supervise and support them. Consequently, physicians should have some training in management and should have the time and motivation to exercise managerial functions.
Most importantly, health services and health manpower should be guided by the principles of social justice, not by those of commercial market dynamics. Health services should be regarded as a human right, not merely as a commodity. Where “jobless physicians” exist, public health leaders should demand greater public support for health systems, reduced military expenditure, and the acceptance of proper social obligations by all health personnel, not a reduction in professional education.

There is hardly any more important requirement for the effective development of health systems than the adequate supply, distribution, and functioning of their manpower. This is particularly so in an era of economic constraint.

Acknowledgements

This article is based on a paper given at the Fifth International Congress of the World Federation of Public Health Associations, held in Mexico City in March 1987.

References


Bui Dang Ha Doan

—in-depth study needed

The arguments advanced by Professor Roemer bear the hallmark of great humanity, which cannot but command our respect. However, governments are unlikely to accept homilies of the kind he offers. Furthermore, it is not the job of scientists to give lessons in matters of individual or collective behaviour but to seek out and study facts.

What do the facts teach us? The case of Pakistan, which Professor Roemer quotes, illustrates the complexity of the situation. The country’s excess of doctors is indeed a result of the low level of public expenditure on health, which in turn is attributable to the dedication of a large proportion of national resources to the army. But can Pakistan be blamed for its choice of priority? War has been raging on its borders for nine years and occasionally the country has been powerless to prevent its own territory from becoming the scene of battle. The geopolitical situation of some countries condemns them to high levels of armament and to impoverishment.

The case of Mexico is also instructive. Although its military spending is relatively low, Mexico also has a surplus of doctors, so great indeed that the government proposed that it should host the international conference to which Professor Roemer alludes, in the hope that remedies would be found for this difficult problem.

The examples of Pakistan and Mexico show that the realities are far more complex than logic would perhaps lead us to expect. Of

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course, there would be no more medical unemployment if the governments in question were to take on all the available doctors so that the entire populations could be served. This could be achieved through the familiar mechanism of redistribution, in which taxes gathered from the rich are used to provide health services for the poor. Unfortunately, governments have to redistribute wealth in many areas—education, housing, transport, communications, defence, and so on... not to mention investment needed for economic development. To say that health must take precedence over everything else is to confuse individual behaviour with collective action, each of which has its own inherent logic and even its own moral imperatives. Such confusion makes it possible to deny the existence of certain problems, which is futile, because they exist nevertheless.

The identification of problems requires in-depth study. When scientists have ascertained the existence of a problem, they can demonstrate to governments the inconsistencies or insufficiencies of their actions in terms of their own logic or morality. This obviously means that scientists should not start out by confusing individual behaviour and collective action.

The recruitment of large numbers of doctors by the public sector does not automatically mean improvement in health status. Over the last fifteen years or so, some countries have witnessed increases in mortality. These countries all have highly developed state health sectors in which there are large numbers of physicians. The governments concerned are aware of the gravity of the situation and are seeking remedies. Here again, the realities are extremely complex and require in-depth investigation.

Siraj ul Haq Mahmud

—Outside influences have a major impact on developing countries’ policies

Professor Roemer restricts himself to viewing his subject from the standpoint of individual countries. This approach is hardly suitable in the aftermath of Alma-Ata, given the shift to international and global strategies. The fundamental question about health policy in a developing country concerns not the priority assigned to health but the outside circumstances impinging on it.

The choices available to developing countries are often restricted by policies and actions over which each country has limited control. Conflict in many parts of the world is exacerbated by supplies of arms that, in general, are manufactured elsewhere. In the health sector we are concerned about over-the-counter sales of drugs without prescriptions but seem to have little interest in the arms trade, whereby developing countries are supplied with costly military equipment. Why cannot this trade be curtailed? It is clear from Professor Roemer’s Table 2 that per capita military spending in certain developing countries is so high that it is bound to have

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an adverse effect on the development of social services. In recent times, military conflict between developing countries has killed and injured far more people than disease would have done. And when a war ends, the priorities in the health sectors of the countries involved are inevitably different from what they would have been if no conflict had occurred.

Health manpower policies appear to be out of balance due to international influences, as some staff have been hired by developed and developing countries at much higher salaries than would have obtained in their home countries. Poor developing countries have suffered depletion of their limited human resources. Training facilities for health workers in demand outside their home countries have expanded. This has diminished the utilization of certain categories of staff in these countries, and consequently there now appear to be imbalances. Of course, Professor Roemer is absolutely right to say that trained health manpower should be produced in response to human need rather than market considerations.

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**Professor Roemer replies**

The comments by colleagues from France and Pakistan are appreciated. It is surely true that any country’s policies, especially those of a developing country, are influenced by outside pressures beyond the country’s control. It is also true that, in every country, many social sectors have greater political strength than the health sector.

Should these realities be silently accepted? The challenge to public health must now be, as it has always been, to try to change realities for the betterment of mankind. Cholera and plague and tuberculosis have not been conquered in most countries by ignoring slums, rats and polluted water. When Edwin Chadwick fought for regulation to improve the living conditions of the poor he was vilified by powerful property owners; eventually, however, the political will for effective public health action was developed.

Physicians, of course, are not the main determinant of a population’s health status, but it is important that their national distribution be satisfactory. The seven countries for which data are analysed were not selected by me. They were the only developing countries reporting “surplus physicians” among the 13 countries studied. Of the remaining six, two were not developing countries and four reported an “adequate” supply or a “shortage”.

Regarding the role of scientists in “matters of individual or collective behaviour”, should it only be to “seek out and study
facts”? Does this adequately describe the work of Johann Peter Frank in the development of sanitary housing, of Rudolf Virchow in Germany’s public health movement, of Louis Pasteur in the development of immunization, of Andrija Štampar, Karl Evang, and others in the establishment of the World Health Organization, and of Halfdan Mahler in the global movement for primary health care? Were these men lesser scientists because they promoted social actions? Society is complex and contains many conflicting political forces. For this very reason the health scientist has a social obligation to contribute to the shaping and understanding of health policies.

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