

## Doctor-population ratios

*Sri Lanka has invested disproportionately on the training of doctors when compared to training of other key health care workers such as nurses, pharmacists, physiotherapists etc.*

*Ceylon Medical Journal, 2000; 45: 9-11*

Doctor-population ratios became topical after the Minister of Health indicated, in early 1999, that the cadre of the Ministry was getting filled and that all doctors who complete internship may not be absorbed for employment in the state sector.

In 1995, in my Presidential Address to the Sri Lanka Medical Association (SLMA), I predicted that this would happen soon (1), and pleaded that no new medical schools should be opened. At that time there was a move to open a medical faculty at the Rajarata University. At present, the move is to open a medical faculty at the Eastern University.

During the last decade the SLMA has been concerned with the quality of medical education, and regularly made representations to relevant authorities. The SLMA's argument was that the facilities available in every medical faculty and affiliated teaching hospitals were not adequate for satisfactory training of medical students. These pleas of the SLMA have gone unheard. The number of medical students taken in each year has been gradually increased. Today, the six faculties of medicine take in a total of 900 medical students each year.

The government is not obliged to employ all doctors who complete internship. However, for at least the last 50 years, these doctors were all able to join the Ministry of Health (MoH). The exception was in 1970, when the MoH cadre was full. But the problem was solved soon. Doctors found employment abroad, mainly in the USA.

In 1999, when the Minister of Health announced that there were no more vacancies for doctors in the Ministry, there was agitation by interns, medical students and their parents. The cabinet appointed a committee to report on employment opportunities for doctors. The committee recommended the expansion of the cadre of doctors of the MoH by about 8000 in the next 10 years. This would enable all doctors who complete internship in the next 10 years to join the MoH if they so wish. It also recommended that the government should officially announce that it will not guarantee employment to doctors who complete internship after the year 2010. The government announced that it has accepted the recommendations of the committee. The cadre

was expanded to take the doctors who completed internship in 1999. However, the second recommendation has not been announced. Even though the crisis has been averted it is good to discuss the issue of doctor-population ratios.

The Sri Lanka Medical Council does not undertake annual registration of doctors. So it is necessary to count the numbers available. The total number of doctors, excluding interns, employed by the MoH, as at January 2000 was 6825. The number of doctors in the private sector is about 800. There are about 300 doctors in the six medical faculties, and about 100 in the armed forces. Hence the total number of doctors (graduates in western medicine) now in Sri Lanka is about 8000. Each year about 800 medical graduates qualify from the universities in Sri Lanka. This will increase to 900 from about the year 2005, as 900 medical students will be taken in from 1998-1999. An unknown number of students are studying medicine abroad. However, to undertake internship in Sri Lanka they have to pass the so-called Act 16 examination. In the 2-year period ending August 1999 about 100 foreign qualified medical graduates have passed this examination.

In general, a doctor works till he or she is about 70 years old. Doctors who leave government service at the age of 60 years, serve in the private sector till about 70. For estimating the total number of doctors in the country for the next 10 years, we can disregard the attrition of government doctors to the private sector and regard the number in the private sector as constant at 800. The attrition of doctors by emigration and age, may be considered to be equal to the number of foreign qualified medical graduates passing the Act 16 examination, although this may give a lower than actual number of doctors. With the above assumptions, it is possible to make a projection of doctor-population ratios for the next ten years (Table 1). It is seen that the number of doctors in Sri Lanka will more than double in 10 years, while the population will increase by only 9.7%. The population per doctor will fall from 2397 to 1267 during this period. Yet, the general belief is that we do not have enough doctors. Comparisons with other countries are available. Table 2 gives the latest figures (2).



**Table 1. Projections of population per doctor in Sri Lanka**

Year	Population (millions)	Doctors	Population per doctor
2000	19.177	8 000	2397
2001	19.370	8 800	2201
2002	19.564	9 600	2038
2003	19.759	10 400	1900
2004	19.954	11 200	1782
2005	20.151	12 100	1665
2006	20.317	13 000	1563
2007	20.487	13 900	1474
2008	20.663	14 800	1396
2009	20.844	15 700	1328
2010	21.028	16 600	1267

**Table 2. Population per doctor in selected countries in 1993**

Country	Population per doctor
High human development (average)	410
Singapore	680
UK	610
Japan	565
Canada	452
USA	408
Spain	250
Israel	218
Medium human development (average)	926
Philippines	9091
Indonesia	8333
Sri Lanka	4348
Thailand	4167
Malaysia	2326
India	2083
Pakistan	1923
Russian Federation	263
Cuba	193
Low human development (average)	7 692
Nepal	20 000
Bangladesh	5 556
Bhutan	5 000

Source: Human Development Report, 1999 (2).

Among countries with medium human development, the socialist countries have lower population-doctor ratios. Cuba has the lowest for any country, with one doctor for 193 persons. In Cuba a doctor is the first contact for primary health care. In Sri Lanka the first contacts for primary health care for most people are the family health workers and assistant or registered medical officers.

India and Pakistan had lower population-doctor ratios than Sri Lanka, but they have poorer health indices. There is no direct correlation between health indices and population-doctor ratios. The health of a people depends on many factors. Health services is one of them. Doctors are an important part of any health service. However, their availability to the public and their work ethic are more important than numbers. Sri Lanka has done well because we have a health service dominated by the public sector with wide coverage even in the rural areas.

There is a misconception that the World Health Organization (WHO) has recommended a norm of one doctor for 800 people. The WHO does not recommend any ideal or standard doctor-population ratio (P Abeykoon, personal communication). What it recommends is that an adequate portion of the GDP of a country should be allocated for health: that human resources for health should be developed in a balanced manner so that there is no excess or deficiency of any category of health workers; that the facilities necessary to use the human resources optimally, such as buildings, equipment and drugs, should be developed in parallel with human resources development.

In Sri Lanka there are about 450 retired registered medical officers (non-graduates) working in the private sector and 1362 registered or assistant medical officers in government service. They are practising western medicine legally. If they are also counted the number of doctors now in Sri Lanka will be about 9800. In addition there are about 15 000 registered indigenous medical practitioners (3). Some of them practise western medicine, although illegally.

Sri Lanka has invested too much on training doctors compared to the training of other categories of health care workers such as nurses, pharmacists and professionals supplementary to medicine. This is illustrated by Table 3. This imbalance has to be rectified. To do this we have to stop further expansion of training of doctors, and expand the training of other essential categories of health care workers.

**Table 3. Numbers of some health care workers in the Ministry of Health, 1999**

Doctors	6052
Assistant/registered medical officers	1355
Nurses	14671
Midwives	7193
Pharmacists	838
Medical laboratory technologists	729
Radiographers	269
Physiotherapists	189

# Acknowledgements

I thank Dr A T P L Abeykoon, Director Population and Dr Sunil Senanayake, Director Information of the Department of Health, for the population projections and numbers of health care staff.

# References

1. Country on the threshold of excess of doctors. Daily News 1 February 1995.
2. Human Development Report 1999. United Nations Development Programme. New York: Oxford University Press; 1999.
3. Sri Lanka socio-economic data 1998. Central Bank of Sri Lanka, Colombo.

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## Work, play and keep your mouth shut

Dear Annie: I just graduated from Yale and am about to start my first real job, and I'm curious about something. If you had to pass along just one piece of advice on which to build a career, what would it be? - Elizabeth

Dear Elizabeth: I've always liked Albert Einstein's dictum: "If A equals success, then the formula is  $A = X + Y + Z$ . X is work. Y is play. And Z is, Keep your mouth shut." Or as my dad used to say, Nobody ever learns anything while they're talking. If you make it a habit to listen more than you speak, you can't go too far wrong.

*Fortune* 1999, July 19, p 83. Ask Annie for Career Advice.