The distribution of Medical Manpower

Better selection and training of doctors are proposed as solutions to the maldistribution of Medical Manpower in this country.

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The literature on the subject is notably wanting in thorough scientific experiments and full of ideas and good intentions. Many of the relevant studies come from the U.S.A. In spite of their affluent circumstances, principles defined in these studies seem to have a general application.

In the 1950's, US training programmes were expanded as a result of a shortage of doctors. They now face an oversupply of doctors and escalating medical procedures and costs. Since the 1970's, it was realized that the problem was maldistribution of medical manpower and not a scarcity of doctors. Studies began to concentrate on the quality and locality of training as well as selection. This new approach seems to have been more successful.

Solutions

Solutions to the problem of maldistribution will be discussed under the headings of the old concepts of "nature and nurture", and the newer concept of "structure".

Nature

The nature of the student **selected** for training is becoming increasingly seen as a factor in the eventual outcome of training.

Kunitz[1] says that "entrants to medical training came largely from middle- and upper class homes of people living in an urban environment. This was so for surveys done in the USA, USSR, the Peoples' Republic of China and Yugoslavia.

In general, urban schools are more competitive and prepare students to attain higher pass marks than their rural brothers and sisters. Selection on the basis of school performance thus, results in urban based students preferring urban practices, to rural practices, *(Stefanu et al).*[2]

Conversely, rural-reared doctors are most likely to locate their practices in rural areas, *(Steinwald & Steinwald*[3]*).*

Brearley et al found that in the USA, for those students selecting rural practice, an association with a family practitioner before or during medical school, was of beneficial influence.

Another very important point - not quite in the nature of the person being trained - is the nature of spouse he or she has married. **Diseker and Chappell**[5] found that the acceptability of the location of practice to the spouse was ranked second of all factors in the final decision for practice location.

For those who despair in their ability to **select** the right kind of applicant a random sample taken from all applicants, seems to be better than just selecting on highest school-leaving achievements.

Today, however, it would be responsible in the light of the above-quoted and other studies, to choose the trainees entering medical school and post-graduate programmes from the countries and areas where one would ultimately like them to practice, as well as those who already have an interest in rural or other areas of need.

Selection is only one factor in solving our problems. Steps should be taken to ensure that the medical school candidate does not become stunted in his development towards becoming a competent and needed doctor in the right place.

Nurture

As the emphasis shifted from increasing numbers of doctors to their distribution in locality and in different specialities, attention moved more to what effect type of training or nurture had on the end result. The poorest served areas generally concerned Primary Care practice in the more remote regions as well as poor inner city and slum areas.

Large scale programmes in the US are showing that the kind and locality of training are important.

The clearest message comes from North Carolina[6], where the proportion of doctors in the previously underserved areas have much improved due to two factors.

Firstly, the training was peripheralised by creating opportunities in rural and other underserved areas for undergraduate- and post-graduate training periods. Improved links were simultaneously brought about between these places and the medical faculties, resulting in mutual benefits. The periphery is encouraged by greater support and recognition, and the centre learns a lot about what is relevant outside of tertiary care.

The second approach concerned an increase of posts for Primary Care and Family Practice trainees.

Steinwald & Steinwald[7] showed in a nationwide study in the USA that participants in rural training programmes were more likely to choose rural practice settings than non-participants - 27,7% as against 16,3%. This association was weakest with rural-reared and strongest with urban-reared physicians.

The principle in operation indicates that if a person is trained to be competent with

a certain task in mind, he is more likely to end up doing it. This has been borne out in practice, *(Jacoby[8])* in the U.S.A., Canada, Australia and the UK, amongst others.

A Canadian study[9] has also shown that Family Practice residency training has helped to reduce medical costs substantially. Thus appropriate training not only influences choice of locality but can also positively modify medical practice.

Personally, I think that much of what influences people in the training process, is due to the hidden curriculum. A good example arises from an account of a habit which had been passed on across three generations of doctors without them being conscious of it, *(Paul Brand[10])* the experience occurred in India, where Brand remarked to a student displaying a characteristic facial expression while presenting a patient on a ward round, that it was the same expression that his own chief had had while he was in training. The doctor accompanying them laughed and said that Brand also possessed the same mannerism. As in this instance, much learning takes place by example at a subconscious level. In this way both the good and the bad is passed on to third and fourth generations[11].

Graduates who have not experienced comprehensive health services in the community during training, will be unable to make a rational choice concerned with this kind of work if they have no conception of it. Respect and appreciation for and of the people practising and teaching this type of medicine through the process of role modelling gives the student a head start in making an objective decision. The standard of service and its quality, respect for people, a sense of awe and wonder in Gods's creation, the enthusiasm, dedication and caring, and the commitment of the teachers to people and communities, are all aspects of the hidden curriculum. They probably speak louder than the overt curriculum in motivating prospective doctors to choose a particular career.

It is therefore necessary that training should be firstly **relevant** and **appropriate** to the desired end result. We must decide what the needs are and train students to meet them and not the needs of professionalism.

Secondly, training should be done as much as possible, **in the locality** where the graduate is expected to end up working.

Thirdly, especially for the hidden curriculum, the **health service** must be obviously fulfilling the needs of the people and communities being served to further motivate trainees to make appropriate choices.

Man's insistence on being treated as a person means that the emphasis on technology alone is being rejected. This lies at the basis of the development of Family Medicine across the world.[12] The pendulum is swinging away from the narrow emphasis that developed in an earlier era where man became a biochemical and biomechanical machine. Today he is asking again to be released from this underestimation and estrangement and to be treated as a feeling, thinking, human being.

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Community health treatment in clinics today is often reminiscent of a factory assembly line. One only has to picture the process at an antenatal, underfives or minor ailments clinic in a busy area to appreciate this. Some doctors and health assistants regularly spend literally two to three minutes per patient. "Next, next, next!" is all one hears. This dehumanizing form of practice may be low in technology, but it functions with the organisational methods developed for technology. The faster and more efficient it becomes, the more mechanical and organic its orientation becomes.

The truly human aspects of medicine are lost and the people turn to traditional practitioners and fringe medicine. Here they feel whole and human again, as their problems are listened to and dealt with, in a more relaxed and caring manner. In rural Transkei healers are available on a 1 : 300 basis.

In Johannesburg, where scientific Western medicine and high technology is within everyone's reach, traditional healers also flourish. If the aim of health care for all by the year 2 000 is achieved by assembly line medicine, it will boomerang and be rejected.

It is therefore essential to achieve a balanced distribution of medical manpower both by discipline and geographically. This can be brought about through assiduous selection and training.

At MEDUNSA we are attempting to translate this into practical terms, as described in the following paragraphs. Our students are given a **reasonable exposure to all disciplines.** It is important for role modelling and future career choices for students to have teachers from all disciplines. Thus the departments of Community Health, Psychiatry and Family Medicine are given ample opportunity to convey their ethos and career opportunities to students in addition to those of the main specialities.

The Department of Family Practice has opted to take the Primary Care responsibility for a large, established urban, squatter and also rural area, with a population of between ½ to ⅜ million. In this area there are 16 clinics staffed by resident nurses and visited weekly by a doctor from our department. The department provides a working ratio of approximately one Primary Care doctor : 20 000, and one trained nurse : 6 000 people.

It seems, however, necessary that the full weight of the workload in an underdoctored area (and the expertise and dedication that this requires) be present in the teaching environment. Students exposed to this environment are helped to acclimatize to this kind of work when they have completed their training. In addition, it helps staff remain sensitive to real needs while keeping priorities in mind.

Simultaneously, the department follows a problem-orientated, person-centred approach. By scaling down the size of each health worker's responsibility and bringing the same patients back to the same staff, we are attempting to reintroduce the vision of the patients' personal needs and problems into a medical system dominated by technique, organic illness and anonymity. Relationship is presented as a full and necessary partner of technology.

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Peripheral areas which do not enjoy the support of high technology, are the areas needing the most competent clinicians. Training should purposefully develop this competence. In the hidden curriculum, students and graduate trainees should see the senior staff rendering service in the periphery. It should not be perceived as a place to which unwanted and incompetent or junior staff are banished.

With the help of Department of Com-

munity Health, students are taught something of the **ecology of medical systems.** The following was said of England recently[13]: *"The quantity of medical education can now be related only to the number of doctors we can afford to produce and maintain."*

Each country has its own level of health service that the nation and the local community can afford. Graduates should understand this and the smaller the doctor/patient ratio, the more important this understanding becomes. The doctors' skills should be more broad-based in the clinical, epidemiological and administrative fields.

> Maldistribution of manpower in a geographic sense and in terms of discipline is a major problem.

The challenge of **relevance** to local possibilities should be inculcated rather than the myth of some international standard of super medicine or excellence. **Michael Church**[14] gives some sound advice that applies to all communities, but is absolutely critical in the poorest communities.

Ordinary people, he says, have a great capacity for keeping themselves healthy. Villagers actually survive as they have resources of wisdom and experience to draw on.

We should begin with the greatest respect for the family and learn to understand the concepts which have guided generations of parents in bringing up their children.

We must teach our students this and help them to build upon family and community resources, and not to replace and usurp their positions as so clearly put by **Ivan Illich**[15].

For this purpose, we allocate students to families to study and assist them for a two-and-a-half-year period.

In regular report-back seminars, these principles are imprinted. One of our slogans in Health Education is: *Move Health Care into the Home.* As much responsibility for and expertise in health care should be transferred into the home and community as possible.

We believe we need **competent, mature and dedicated** doctors for the task of primary, comprehensive care in the community as the task is so demanding.

It is therefore very important that undergraduate students have prolonged contact with Primary Care principles and treatment. This allows sufficient time for role modelling and for developing the correct frames of reference or mind-set necessary in Primary Care. Senior students must be significantly involved as well. It is easy to feel that one has graduated to a higher level of medicine, needing more knowledge and mental discipline, if the juniors go out into the community and the seniors graduate to the sub-specialities with their high technology.

The task expected in the periphery, if well done, is so demanding that a considerable amount of graduate training is needed to render a person competent in this field. Most medical schools worldwide do not devote enough time to Primary Care training to achieve this in the undergraduate training period.

Any person who has considered a day in the life of a comprehensive community doctor in an underserved area, will know that to survive, very special talents and broad-based training are essential.

Structure

Structural changes help to engender a redistribution of manpower. Some of these changes could take the form of:

- Increases in numbers of Primary Care training posts leading to an increase of Primary Care practitioners.
- Creating job opportunities in the periphery and limiting the number of posts in the well-served areas. This is attempted in many Marxist and Socialist systems, and is partially successful. **(Kunitz[16]).**
- Allotment of differential state subsidies for the teaching and infrastructure of primary and rural care as occurs in the U.S.A.
- Salary incentives at best bring short-term inexperienced workers.
- Compulsory national service or service related to study loan commitments, also bring largely short-term workers to the periphery - some of whom stay or return.

Conclusion

It is an accepted fact that maldistribution in the geographic sense and amongst disciplines is a major problem. It has also been demonstrated that this can be partially solved by improving selection and training methods. We need not resort to coercion which is neither desirable nor effective. Let us therefore continue to address ourselves to improving our educational system in order to get the right doctors in the right place, doing the right thing.

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