meetings. He reported that increasing clinical productivity was a strong predictor of decreasing publication rate.[8]

One general perception about modern medical schools is that, as clinical workload increases, time for teaching decreases.[5–7] Berger *et al*. found no statistically significant relationship between clinical productivity and teaching quality.[9] On the other hand, Johnson *et al*. found that clinical productivity significantly decreased with responsibility for teaching residents, although the effect varied across resident training years. First-year residents were associated with the largest decrease in the clinical productivity of supervising physicians, whereas third-year residents were associated with the smallest decrease. This decrease in productivity equated to a loss of US$ 164 000 in yearly revenues, or US$ 49 per resident per session.[10,11] Similarly, Vinson and Carrie reported that most physicians experienced an increase in time spent at work (mean±standard deviation, 46±32 additional minutes per day) when a resident student was part of their practice.[12]

Flexner could not have fully anticipated the complicated, push-and-pull relationship between teaching, research and clinical responsibilities that would result from the growth of academic medical centres and the expansion of biomedical research. As Flexner recognized, novice physicians require time and space under the guidance of experienced physician-investigators to acquire skills and attain a high level of proficiency. Investigations by several authors indicate that physician faculty often find that the demand of increasing clinical productivity limits their research and teaching activities and jeopardizes their ability to achieve the traditional faculty goal of 'See one, do one, teach one'—concerns Flexner highlighted in his report.

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Letter from Chennai

THE ADYAR CANCER INSTITUTE

Dr Muthulakshmi Reddy was unique in many respects. She had a head start when she was born in 1886 to an educationist with progressive ideas, who was keen on her having a complete education, not the tradition for women in those days. She graduated in 1912 from the Madras Medical College, and was one of the first women doctors in India. In 1914, she married Dr Sundara Reddy and thus acquired the name by which she became famous in the years to come. After some years in the practice of medicine, she took to politics and became a member of the Madras Legislative Council in 1926. She started the Avvai Home for orphans, pressed the government to open a paediatric section in the hospital for women, pushed through a bill for the suppression of immoral traffic in women, and started the Cancer Relief Fund. Her achievements and initiatives are too numerous for me to cover here, so I shall focus on her interest in cancer relief, which led her to establish the Adyar Cancer Institute in 1954.

The institute has just started celebrating its Diamond Jubilee year. By now, it has 423 beds, of which 297 are free, and it is served by 78 doctors and 150 nurses. It was not an easy journey. The Women's India Association was the institution's first sponsor and continues to run it. Dr Muthulakshmi Reddy struggled to obtain a patch of land for the institute from the government, and was finally granted a strip along the Buckingham Canal in the Gandhinagar area of Madras (presently Chennai). A residential area that was just being developed in the early 1950s, this was a most unsuitable location. However, the then health secretary wrote that the government could not afford a separate institute for cancer, that in any case this was not a priority area, and that land was all they could spare. The first two medical officers of the institute were Dr S. Krishnamurthy, the son of Dr Muthulakshmi Reddy, and Dr V. Shanta. Dr Krishnamurthy was the Director till 1979 and on his retirement, Dr Shanta took over and continues to remain in charge.

Dr Shanta is an institution in herself. She has lived for the institute and has devoted herself to it throughout her medical career. When she started working for it in 1954, she was one of its first employees. At the time, she was a raw graduate and worked without a salary for the first 3 years, before she was granted the princely sum of ₹200 a month. Dr Krishnamurthy and she were the only two staff members and had to do everything, with the aid of an honorary anaesthetist who came in only in the late evening. She

would assist Dr Krishnamurthy in the operation theatre and then sit with the patient through the night till she was relieved by Dr Krishnamurthy at 8 a.m. Funds were obtained only from donations. Recognition came gradually. The institute obtained a cobalt teletherapy unit in 1957, a mammography unit in 1965 and a linear accelerator in 1976. It also designed and fabricated an indigenous brachytherapy unit in 1995.

It took 10 years for the institute to persuade the Medical Council of India (MCI) to recognize oncology as a superspecialty, and at one stage when the institution applied to the Rockefeller Foundation for a grant to develop a library, the Director of Medical Education asked why it needed a library. The institute faced the usual bureaucratic obstacles in the realization of funds sanctioned by the government. However, in the person of Dr Shanta, the institution battled on and today, it is one of the country's leading centres not just for the treatment of malignancies, but also in the areas of prevention programmes, research and postgraduate education. The institute runs with financial support from individuals, philanthropic organizations and corporations, besides some financial support from the government. For a non-governmental organization, the achievements of the Adyar Cancer Institute have been tremendous. And what can one say about Dr Shanta? She is 86 years old, but still works full-time at the institute. She is the granddaughter of the Nobel Laureate, Dr C.V. Raman, and deserves a Nobel herself for a lifetime of service, dedication and achievement.

INTERNSHIP

In 1952, the University of Madras introduced the New Regulations MBBS course, in which there were four-and-a-half years of college studies and a year of internship. I belonged to the second batch of the New Regulations. When I entered my internship in 1958, neither the university, nor the college had a clear idea of what to do with the interns. I presume we were supposed to be taught the practical aspects of the practice of medicine. No one quite knew how this should be done. Some of our teachers continued to deliver lectures, while others treated us just like the housemen. Fifty-five years later, the teachers still do not know what to do with interns. Interns and housemen have protested over the years, but mostly about their remuneration and living conditions. Lately, at last, they protested about the actual work they are asked to do and demanded a clear definition of what they should be doing during the year. On 16 July 2013, they wore black badges, and then met the health minister and health secretary, who sent them back to the deans of their colleges. They have now taken their protest to the Director of Medical Education. They say that they are taught nothing about healthcare work, but are instead asked to collect blood samples for tests, administer injections and transport blood for transfusion from the blood bank to their patients. Once a week, on the admission day of the unit and the day after, they work 36 hours at a stretch. They have no regular day off every week. They are not given any training on the approach to or the management of their patients. I remember my own days as an intern and can well sympathize with these interns. Nothing had changed so far, but this time it was different. First, the authorities met the interns and housemen without delay and second, they realized the justice of the cause. Early in August 2013, they declared that interns would no longer be given routine paramedical tasks and would hereafter be assigned only medical work. With regard to the 36-hour duties, they said they would approach the MCI to work out the matter. I am not sure whether the MCI has anything to do with working hours, but let us see what ensues.

THE CONSTITUTION? WHAT IS THAT?

Article 47 of the Constitution of India reads as follows:

47. Duty of the State to raise the level of nutrition and the standard of living and to improve public health.—The State shall regard the raising of the level of nutrition and the standard of living of its people and the improvement of public health as among its primary duties and, in particular, the State shall endeavour to bring about prohibition of the consumption except for medicinal purposes of intoxicating drinks and of drugs which are injurious to health. (This information is downloaded from the website of the Ministry of Law and Justice [Legislative Department]. Incidentally, the website demands that people who quote from it should publish this statement.)

The Tamil Nadu State Marketing Corporation (TASMAC) is a company wholly owned by the state government. Established in 1983, it was in charge of the wholesale liquor trade in the state. In 2003, Dr Jayalalithaa, the then Chief Minister, went a step further and made it the sole retail vendor of liquor in the state, and soon shut down all private liquor stores. Though the usual practice is that the next Chief Minister reverses all the major initiatives taken by his or her predecessor, this was one that Dr M. Karunanidhi chose to retain when he became the Chief Minister. Since then, chief ministers may come and go, but TASMAC goes on forever. So, far from prohibiting the consumption of intoxicating drinks, our government will now provide us with our choice of liquor, and with enthusiasm. Liquor sales rose by around 20% in the year 2012–13. The government's business is doing well, and reportedly gave us (for is this not a government of, for and by us?) ₹21 680 crore in revenue during that period.

In the first two weeks of May 2013, members of the Pattali Makkal Katchi (PMK), one of our political parties, organized a state-wide bandh to protest against the arrest of the party's leader, Dr P. Ramadass, and other leading functionaries of the party. Also attempting to raise a protest against the death in a traffic accident of three PMK workers returning home after a conference of the youth wing of the party, they were defying prohibitory orders. The bandh was successful in 12 districts of the state and led to considerable disruption in public life. The government found that TASMAC's income fell drastically during the bandh and has, therefore, filed a claim with the Commissioner of Revenue Administration to recover ₹20 crore from the PMK, under the provision of a state law that allows recovery of compensation for any damage or loss during an agitation led by any political party. The senior regional manager of TASMAC in the district of Salem was quoted in *The Hindu* of 31 July 2013 as having said, 'Transport was affected and people did not come out of their house to buy essential commodities … This reduced customers at TASMAC shops.' Alcohol is apparently one of these essential commodities. So much for Article 47 of the Constitution.

THE MBBS CHANGES

The reign of Dr Mylvahanan Natarajan as the Vice Chancellor of the Tamil Nadu Dr MGR Medical University was marked by some notable changes. For one, being of the view that the medical profession needed more visible recognition, he introduced a number of awards for the best doctor, for being a distinguished teacher and for a lifetime of achievement. So many of the doctors qualified for one award or the other that by the time Dr Natarajan's term ended, there was hardly any doctor in the state who had not received an honour!

Dr Natarajan made a sincere effort to improve the quality of undergraduate education. According to the MCI requirements, for students to pass a subject, they must secure 50% of marks in theory (all papers in the subject and the viva voce examination in aggregate) and 50% in the clinical examination. Towards the end of Dr Natarajan's tenure, the governing council of the university modified the system of marking, so that it became essential for students to secure 50% in each of the papers and the viva voce individually, besides 50% in the clinical examination. The requirement of attendance was raised to 90% of the classes, though the MCI requirement was 75%. A number of students filed writ petitions regarding the pass marks in the Madras High Court and the court reversed the decision of the university's governing council, restoring the earlier marking system. The students had not raised the question of attendance.

Dr D. Shantaram took over as Vice Chancellor on 13 December 2012, and set about making life easier for medical students. He reduced the attendance requirement to 85%, still above the MCI's limit. This was obviously a popular move, but I wonder whether the court will allow it to stand if the students take issue with the university. Perhaps the court will again stand by the MCI's norms. I personally think there should be no mandatory minimum attendance at lectures. Teachers should be able to draw students by the quality of their teaching, and if they are not good enough and the students think they can benefit more by spending the time allotted for the lecture with some other teacher or in the library, or even if they prefer to spend the time gossiping in the canteen, they should be free to do so. Medical students are old enough to decide what to do with their time.

Till as far back as I can remember—certainly from long before I enrolled as a medical student—failure in the First MBBS examination meant that the student had to attend classes in those subjects again, till he or she cleared the examination. Examinations were held once in 6 months and, therefore, the student lost 6 months, or longer, in the quest for a medical degree. The University approached the MCI to do away with this 'break system' (I had not heard this term earlier, but it is commonly used nowadays), but the MCI refused. The University decided to get around this by holding the supplementary examination within 15 days of the announcement of the results, so that if the student passed on the second attempt, he or she (women tend to pass examinations more consistently than their male counterparts) could proceed to the next year's course without the break. The Tamil Nadu Medical Students' Association welcomed this move.

I am not convinced of the wisdom of this step. The original system was based on the assumption that students who failed surely did not know the subject well enough, and the reason why they were made to go over the course again was to improve their knowledge. The implications of holding another examination within a fortnight, which is too short a span of time for anyone to brush up his knowledge, are that either the examiners have not made an honest effort to judge the students, or that students with inadequate knowledge might get through if luck favours them the second time around. Either way, this move suggests that the university does not think that a sound knowledge of anatomy, physiology and biochemistry is very important for the study of medicine.

M.K. MANI

Letter from Mumbai

AN UNUSUAL MEETING ON EPILEPSY IN MUMBAI

Most meetings on subjects such as epilepsy feature medical doctors as the star performers. These experts describe the causes of epilepsy, tests to clarify the type of epilepsy and outline treatments. They also exhort law-makers, employers and the public at large on the need to treat patients with epilepsy kindly and to eschew outmoded and irrational fears and views on this ailment.

The meeting organized by the Bombay Chapter of the Indian Epilepsy Association and Samman Association (Empowers people with epilepsy) was refreshingly different. Individuals with epilepsy and their families were the focus of attention. The primary purpose of the meeting was to release their book *Conquering epilepsy*.[1] They spoke of their experiences and, as they did so, doctors and others listened with rapt attention and admiration. A few doctors did address the audience but they did so to talk of how the book affected them and, in some ways, altered their attitudes.

The speakers were from varied walks of life. Some found it more convenient to talk in Marathi or Hindi but their messages were nonetheless effective. Most spoke with confidence and were forthright in their justified criticism of societal and medical attitudes towards them. Their suggestions for improvement were born of suffering and practical experiences.

Let me turn to the book itself. It is dedicated to 'all those living courageously with epilepsy' and is edited by Ms Carol D'Souza. In her preface, she points out that this is the second edition of the book (first edition: 2001), featuring many more personal accounts and a section that pays tribute to persons who were instrumental in the growth of Samman but have shuffled off their mortal coils. Ms D'Souza's essay on her own experiences with epilepsy appears as Chapter 27 on page 82. It describes her birth in Malawi, her father's death when she was a year old and her fits that started at the age of 11. This essay mirrors the poignancy evoked by all the other essays. The photographs on page 86 showing Ms D'Souza with Dr Gro Brundtland, then Director-General of the WHO and Dr Peter Wolf, President of the International League Against Epilepsy are evidence of the blossoming of her second career under the guidance of Drs Pravina Shah and Padmaja Pai Shenoy. Ms D'Souza also deserves applause for the excellent quality of the book, in which, as Dr M.L. Kothari pointed out, even fine-combing fails to reveal a misprint or faulty grammar.

Common themes in the first-person essays by individuals with