The Impending Crisis of Anesthesiology in Israel

Zeev Goldik MD[1] and Azriel Perel MD[2]

[1] Post-Anesthesia Care Unit, Department of Anesthesia and Intensive Care, Carmel Medical Center, Haifa, Israel
Affiliated to Rappoport Faculty of Medicine, Technion, Haifa, Israel
[2] Department of Anesthesiology and Intensive Care, Sheba Medical Center, Tel Hashomer, Israel
Affiliated to Sackler Faculty of Medicine, Tel Aviv University, Ramat Aviv, Israel

[Z.G. is a former president and A.P. is the current president of the Israel Society of Anesthesiologists]

Key words: anesthesiology, workforce, healthcare systems, Israel

IMAJ 2006;8:280–282

Since its inception as a profession, Anesthesiology has been widening the spectrum of its practice. This occurred as the result of the growing complexity of surgical procedures, the aging and increasing co-morbidities of the patient population, the improvements in our understanding of physiology, pathophysiology and pharmacology, and the incorporation of advanced technology into routine anesthesiology practice. In addition to their classic role of providing the best and safest conditions for the performance of surgery, anesthesiologists took charge of preoperative assessment clinics, postoperative care in recovery rooms (post-anesthesia care units), obstetric analgesia in delivery rooms, and the administration of anesthesia or sedation in remote locations within the hospital (i.e., diagnostic procedures for pediatric, radiology, gastroenterology and pulmonology patients, lithotripsy, dental surgery, etc.) [1,2]. In Israel, the anesthesiologists run most of the general intensive care units, pain clinics and acute pain services, and are involved in trauma treatment, resuscitation, emergency medicine, and transport of critically ill patients. All these developments have made Anesthesiology an extraordinary exciting, dynamic and challenging discipline.

With such diversity of fields and duties it is understandable why the anesthesiology department has become the largest in terms of physician manpower in the vast majority of hospitals. It is also understandable that a shortage of anesthesiologists may significantly affect the output and performance of many of the other services within the hospital. However, according to the article by Weissman et al. [3] that appears in the current issue of IMAJ, an imminent crisis of a shortage of anesthesiologists, which would severely affect Israel's healthcare system, is expected to occur within the next few years.

In their study, which was supported by the Israel National Institute for Health Policy and Health Service Research, Weissman and team found that 64.6% of Israeli anesthesiologists graduated from medical schools in the former Soviet Union and only 12.2% from local medical schools. Among anesthesiology residents under the age of 40, the percentage of Israeli graduates is even smaller and reaches only 8.4%. These proportions are strikingly different from those of the general physician population in Israel, which is composed of 30% Israeli graduates and 48% of former Soviet Union graduates.

A major finding of this study is that only 1% of medical school graduates in Israel select anesthesiology as their career, in contrast to 6% in the United States [4]. The reluctance of Israeli medical graduates to choose anesthesiology as their profession, combined with the dramatic decline in the number of immigrants to Israel, lead to the obvious conclusion that "the Israeli anesthesiology workforce is currently not a locally sustainable resource." This conclusion is further supported by recent data provided to the Israel Society of Anesthesiologists by the Scientific Council of the Israel Medical Association, that there is a very significant decline in the number of physicians entering anesthesiology residency programs, and of those who do, the majority graduated outside Israel and finished their studies more than 10 years before starting their residency.

These alarming findings should make us consider why anesthesiology is not a popular profession among Israeli graduates. We need to explore how we can ameliorate the situation and prevent the coming crisis. We do not know of any study that has examined the factors influencing the choice of career by Israeli medical students upon graduation from medical school. It is quite safe to assume that future income, status and lifestyle play an important role in this choice. Let us consider these three possible motivations in relation to the practice of anesthesia in Israel.

Anesthesiologists in Israel, as a rule, have very few opportunities for private practice outside of the public healthcare system and, thus, rely solely on their salary from their principal employer. Since the salaries of most physicians who work in the public healthcare system in Israel are extremely low by local standards, only those – indeed, rare individuals – who have no strong financial motivation will consider anesthesiology as a career. The fact that better remuneration of anesthesiologists may attract more people to the profession is indicated by another finding of Weissman's study; namely, that the improvements in remuneration that anesthesiologists achieved following their strike in 1987 were followed by a significant increase in the number of Israeli graduates who chose anesthesiology [see mid-forties group in the figure, page 236].

Another factor that determines the choice of a career within medicine is professional status. Unfortunately, anesthesiologists

suffer from a long-standing image as secondary service providers who often remain faceless in the patient's memory following his or her successful discharge from the hospital. According to the results of a previous study, conducted by the Israel Society of Anesthesiologists and the Statistics Consulting Unit of Haifa University, nearly 30% of 556 Israeli citizens who were randomly selected and interviewed by phone did not know that the anesthesiologist is a physician, while 85% erroneously believed that it is the surgeon and nurses' responsibility to care for the patients' vital functions during surgery. Moreover, 53.8% of the interviewees did not think that the anesthesiologist is present throughout the surgery!!

Public ignorance regarding the tasks, responsibilities and challenges that anesthesiologists face daily is not limited to Israel. In his *Textbook of Anesthesia* [5], Prof. Peter Hutton from the United Kingdom writes: "Not long ago a colleague of mine had his pride dented when a patient remarked: 'you seem to know quite a lot, you should have gone in for being a doctor!'" In a recent article titled "Hey Anesthesia!" the Editor of the Newsletter of the American Society of Anesthesiologists asks whether we are thought of as a nameless entity within the operating room itself [6].

Thus it seems that anesthesiologists have generally failed in shedding light on the scope of their duties and responsibilities, on the vast medical knowledge that is required, and on the fact that as a profession anesthesiology is a leading vocation in improving patient safety and reducing morbidity and mortality (from one death for every 5000 cases to about 1:250,000 over the past 20 years). Although in recent years the situation is improving and more people realize that the successful results of surgery depend on the safety and quality of the anesthesia provided, this lingering image problem reduces the incentive to choose this profession.

Last but not least is the lifestyle issue. Admittedly the main priority of the anesthesiology department is keeping the operating rooms running. The pressure applied by surgeons and patients on the operating room is coupled with additional pressure on the part of the hospital administration – for which the operating room serves as a major source of income. Therefore, anesthesiologists spend their lives in a continuous "bottleneck" condition, in which any inability to 'take on a case' due to emergencies and/or sheer lack of personnel may be encountered by resistance, suspicion, anger and often frank animosity. In addition to frequent and intense night-shifts, the constant tension created by the practice of a profession that leaves little room for error causes chronic fatigue and accelerated burnout. These bottleneck conditions prevent capable anesthesiologists from engaging themselves in serious research and teaching, making academic appointments a relative rarity. The medical student who sees the constantly harassed anesthesiologists would naturally not consider this profession an option.

The rapidly dwindling number of anesthesiologists in Israel forces us to consider the steps that can and should be taken to prevent a shortage that will have grave consequences for public health. Attracting medical school graduates to anesthesiology should become a national priority. This can be done by increasing the exposure of medical students to the field during their years in medical school and getting anesthesiologists themselves to invest more in teaching and education both within and outside academia. We could indeed learn from a recent Israeli study, which showed that an intensive dedicated clerkship in Oncology led to 25% of the participating medical students positively considering this profession as a future career [7].

In addition, the Israel Society of Anesthesiologists believes that a standing loan, part of which would eventually become a grant following the successful completion of residency training, which will be given to any physician who starts a residency in anesthesia, will attract medical graduates to choose the profession or at least to contemplate the possibility more seriously. Such initiative, combined with better remuneration and better working conditions ('widening the bottleneck'), may be successful in changing the current attitude of young graduates. In addition, both the public and the anesthesiologists should strive for a long-awaited change in the policy of insurance companies that currently do not provide their clients with the right to choose an individual anesthesiologist, in contrast to other medical specialists. Last but not least, hospital administrators should open any available position to those physicians who will eventually choose to join anesthesiology departments. It is a sad fact that some hospital administrators are deliberately decreasing the number of anesthesiology residents and are looking for specialists or physicians with partial training in their stead. This approach is due to the opinion that the 18 months of mandatory rotations that an anesthesiology resident has to do outside of the operating rooms (intensive care, basic sciences, cardiology, pediatrics, etc.) and the study periods before the written and oral Board examinations are 'unproductive'. In view of the developing shortage of anesthesiologists, this approach would further contribute to the extinction of Anesthesiology in Israel, and should be replaced by looking at new anesthesiology residents as one of the best investments a hospital can make.

In a few countries, most notably the USA, the profession of nurse-anesthetist was introduced many years ago. This, some may claim, is the way to go in Israel as well. However, with the increased public awareness and expectations regarding the quality of medical care, we suspect that this step, which in the U.S. developed mainly as a means to increase the physicians' income, would not be well received by the public today. The Israel Medical Association and the Israel Society of Anesthesiologists strongly believe that replacing physicians with technicians or nurses is a dangerous step that may cause deterioration in the level of practice and patient safety. The medical errors that will inevitably occur during the long years of the necessary training (the 'learning curve') will not be tolerated by either the public or the physicians themselves. Moreover, anesthesiologists are considered by many to be the physicians of choice at the hospital ("hospitalist"), namely, those who should care for the sick patients in the critical care-oriented hospitals of the future [8-10].

We should be grateful to Weissman and colleagues [3] for

their in-depth analysis of the status of the anesthesia workforce in Israel. Their alarming results should make the Ministry of Health, major employers, hospital administrators, medical schools, and the Israel Medical Association, examine how they can, individually and in collaboration, prevent the grim consequences of the developing shortage of anesthesiologists in Israel. The possible implications of this article may also be relevant to other medical professions that may want to consider similar in-depth analysis in order to define and discuss the problems that they may face in the future.

References

1. McGlennan A, Gold S, Cooper G. Anaesthesia. B*r Med J Careers* 2005;311:83–7.
2. Gozal D, Drenger B, Levin PD, Kadari A, Gozal Y. A pediatric sedation/anesthesia program with dedicated care by anesthesiologists and nurses to procedures outside the operating room. J *Pediatr* 2004;145:47–52.
3. Weissman C, Eidelman LA, Pizov R, Matot I. Klein N, Cohn R. The Israeli anesthesiology physician workforce. IMAJ 2006;8:255–60.
4. Dorsey ER, Jarjoura D, Rutecki GW. Influence of controllable lifestyle on recent trends in specialty choice by US medical students. *JAMA* 2003;290:1173–8.
5. Hutton P, Cooper GM, James III FM, Butterworth IV. Fundamental principles and practice of anaesthesia. In: Textbook of Anesthesia. London: Martin Dunitz Ltd., 2002:3.
6. Bacon DR. "Hey Anesthesia!" ASA N*ewsletter* 2005;69(11):1–2.
7. Notzer N, Tur-Kaspa R. Medical students' reactions to their experience in oncology and its contribution to their training. H*arefuah* 2006;145:32–5 (Hebrew).
8. Silber JH, Kennedy SK, Even-Shoshan O, et al. Anesthesiologist direction and patient outcomes. A*nesthesiology* 2000;93(1):152–63.
9. Silber JH, Kennedy SK, Even-Shoshan O, et al. Anesthesiologist board certification and patient outcomes. A*nesthesiology* 2002; 96(5):1044–52.
10. Miller RD. Future paradigms of anesthesia practice. A*merican Society of Anesthesiologists Newsletter* 2005;69(10):20–3.

Correspondence: Dr. A. Perel, Chairman, Dept, of Anesthesiology and Intensive Care, Sheba Medical Centre, Tel Hashomer 52651, Israel.

email: perelao@shani.net