

Migration of surgeons (“brain drain”): the University of Cape Town experience

M Liu, J Williams, E Panieri, D Kahn

Department of Surgery, University of Cape Town, Cape Town, South Africa

Corresponding author: Delawir Kahn (delawir.kahn@uct.ac.za)

Background: The large-scale migration of doctors, including surgeons, from South Africa, has had a major impact on healthcare resources in this country. Although previous studies have suggested that the University of Cape Town (UCT) is of the main institution contributing to this “brain drain”, the extent of the problem has not been documented previously. The aim of this study was to investigate where UCT trained surgical registrars go after completing their training.

Method: General surgery registrars who trained at UCT and who wrote and passed the FCS final examination between 1992 and 2011 were included in the study. The data for this study were obtained from the examinations office of the Colleges of Medicine of South Africa. The number of registrars writing and passing the final examination, the number of registrars who went overseas, the number of registrars in private practice, and the number of registrars in subspecialist practice, were recorded.

Results: A total of 102 UCT-trained registrars wrote and passed the FCS final examination during the study period. Only 13% of the South African UCT-trained registrars left the country. Only 31% of the registrars who remained in South Africa went into private practice. A large proportion of the UCT-trained registrars (43%) elected to subspecialise.

Conclusion: “Brain drain” with respect to UCT-trained surgical registrars was not as extensive as anticipated.

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Surgical migration from developing countries, such as South Africa, to the UK, North America and Australia has been a major problem for many years.¹⁻⁶ This “brain drain” has had a major impact on the status of the health service in South Africa. Many factors drive this process, and which are usually related to remuneration or personal or family reasons.^{1,2}

“Brain drain”, in simple terms, is defined as the large-scale emigration of skilled individuals. Although this originally referred to technical workers leaving a country, the issue has been broadened to include the departure of educated individuals or professionals from a country, from an economic sector, or from one field to another. This could include surgeons going overseas, surgeons moving from the state sector into private practice, or surgeons moving from general surgery into subspecialist areas.

The University of Cape Town (UCT) is often accused of training doctors and surgeons for the overseas market.⁷ However, the problem has only been investigated to a limited extent. Therefore, the aim of this study was to investigate the career progress of UCT-trained general surgeons after completing their training and passing the FCS final examination of the College of Surgeons of South Africa.

Method

General surgical registrars who undertook their training at UCT and who wrote the final FCS examination of the CMSA between 1992 and 2011 were included in the study.

The training of registrars in General Surgery is the responsibility of universities in South Africa. At the end of their training period, registrars can either write the final fellowship examination of the CMSA, or the MMed examination of the individual universities. The Health Professions Council of South Africa (HPCSA) recently decided to implement a unitary exit examination, and made the CMSA responsible for that. The data for the study was obtained from the examinations office of the CMSA.

A trainee has one of several options after passing the FCS final examination. Firstly, the trainee can elect to enter private practice. This decision is often based on a combination of personal preference and the availability of posts in the state sector. Secondly, the trainee can elect to stay in the state sector, and either work in an academic (teaching hospital) environment or in a regional hospital, depending on the availability of posts. Thirdly, the trainee can elect to go overseas, either on a temporary basis to gain more experience, or on a permanent basis. Fourthly, the trainee can elect

to embark on a course of subspecialist training, either on a formal or an informal basis. Currently, four subspecialist areas are recognised by the HPCSA and by the College of Surgeons of South Africa, and include Surgical Gastroenterology (either Hepatobiliary Surgery or Colorectal Surgery), Vascular Surgery, Paediatric Surgery and Trauma Surgery. Some registrars undertake “subspecialist” training in Breast or Endocrine Surgery and Transplantation at UCT, which is not formally recognised by the HPCSA or CMSA.

We documented the number of registrars writing each FCS final examination, the examination success rate, the number of registrars who stayed in the state sector versus those who went into private practice after passing the examination, the number of registrars who went overseas, and the number of registrars who undertook subspecialist training. The names of the UCT registrars who wrote and passed the FCS final examination were obtained from the CMSA database. The whereabouts of the individuals, i.e. in South Africa versus overseas, in the state versus the private sector, and in subspecialist versus general training, was based on personal contacts.

Some of the registrars were foreign nationals occupying “paid” registrar posts in the early part of the study. However, because of their foreign status, they could not be employed after qualification, and were compelled to leave the country. Following a change in South African labour law, foreign nationals were no longer allowed to occupy “paid” registrar posts. Foreign doctors wishing to train in surgery could only do so as “supernumerary” registrars. The latter implied that they would receive the full training as a normal registrar, but would have to be self-funded.

Results

A total of 102 registrars undertook their general surgery training at UCT and wrote the FCS final examination of the College of Surgeons of South Africa between 1992 and 2011. Of the 102 registrars, 70 were South African citizens, 23 were foreign nationals in “paid” registrar posts, and nine were “supernumerary” registrars (Table 1). Nineteen (19%) of the 102 registrar left South Africa and were working overseas (Table 2). However, of the 19 registrars working overseas, only nine were South African citizens. Ten were either foreign nationals or “supernumerary” registrars, who were compelled to leave the country. Therefore, of the 70 South African registrars, only 9 (13%) were working overseas.

Of the 83 registrars who stayed in South Africa after passing the FCS final examination, 53 (64%) remained in the state sector, and 26 (31%) entered private practice (Table 3).

A total of 59 (58%) of the 102 registrars who trained in General Surgery and who wrote the FCS final examination have continued to work in General Surgery (Table 4). The remaining 43 registrars (42%) undertook subspecialist training and went into subspecialist practice.

Table 1. The nationality of the University of Cape Town registrars who wrote the FCS final examination

Nationality	n
South African	70
Foreign (salaried)	23
Foreign (supernumerary)	9

Table 2. University of Cape Town-trained registrars who wrote the FCS final examination between 1992 and 2011, and who were working overseas

University of Cape-Town trained registrars	n (%)
Total number of University of Cape Town registrars	102 (100.0)
Number working overseas	19 (18.6)
Total number of South African registrars	70 (100.0)
Number of South African registrars working overseas	9 (12.8)

Table 3. The number of University of Cape Town-trained registrars working in the state sector and in private practice

University of Cape Town-trained registrars	n (%)
Total number of University of Cape Town-trained registrars	102 (100)
Number still working in South Africa	83 (100)
Number in the state sector	53 (64)
Number in private practice	26 (31)
Lost to follow-up	5 (5)

Table 4. Number of University of Cape Town-trained registrars in subspecialist practice

University of Cape Town-trained registrars	n (%)
Total number of registrars	102 (100)
Registrars in General Surgery	59 (58)
Registrars in subspecialist practice	43 (42)

Discussion

It was concluded in a recent review of the state of General Surgery in South Africa that the specialty was in crisis.^{6,8,9} The study showed that there was a critical shortage of general surgeons, and several factors were implicated. Poor remuneration of surgeons was cited as one of the most important reasons for the crisis. The study concluded that

there was a desperate need to increase the number of registrars trained in surgery. However, the loss of qualified surgeons from South Africa after the completion of their training only serves to compound the problem.²

Although the term “brain drain” was originally defined as the emigration of skilled individuals from one particular geographical area to another, the definition has been expanded to include the movement of such labour to more favourable economic and professional environments. This would include surgeons going overseas, surgeons leaving the state sector for private practice, and general surgeons embarking on subspecialist training in surgery.

Although UCT is thought to be guilty of fuelling the “brain drain” from South Africa, the extent of the problem has not been studied previously.⁷ We investigated the migration of UCT registrars after completion of their training in the current study.

Only 19% of UCT-trained registrars who qualified in the 20-year study period left South Africa to work overseas. Roughly half of these registrars were foreign nationals or “supernumerary” registrars, who were compelled to leave the country, even though some of them would have preferred to stay. Only 13% of South African registrars elected to emigrate. This is not an unreasonable number of “skilled professionals” wishing to seek other opportunities.

Much has been said about the poor remuneration and working conditions in the state sector, which encourages newly qualified surgeons to enter private practice. The shortage of posts in the state sector further aggravates “brain drain” to the private sector. Surprisingly, less than one third of the 83 UCT-trained registrars who stayed in South Africa elected to enter private practice. This preference by UCT registrars to remain in the state sector could reflect better working conditions in the state sector in the Western Cape (compared to those in other provinces), or relative saturation of the private sector locally. It also suggests that poor remuneration was not seen as compelling reason to leave the state sector.

Another form of “brain drain” is the movement of individuals to a different professional environment. It could refer to general surgeons becoming subspecialists in this case. UCT might be viewed as fuelling this type of “brain drain” as 42% of the registrars ended up in subspecialist

practice. The reason for this is quite simple. Firstly, the Department of Surgery at UCT functions in a subspecialist manner, and comprises subspecialist units only. Secondly, the department is staffed only by subspecialists who act as role models for trainees, which could also serve as motivation for trainees to undertake subspecialist training. Thirdly, the ethos of the department is to encourage subspecialisation as it is believed that this is in the best interests of the trainees, and also facilitates the best quality of care being given to patients. Therefore, the high rate of subspecialisation in UCT postgraduate students is unsurprising.

Conclusion

This investigation into the “brain drain” from the Department of Surgery at UCT showed that both emigration overseas and migration to the private sector was low, while the high rate of subspecialisation was in line with the philosophy of the Department of Surgery, UCT.

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