



THE ROLE OF THE COLLEGE OF MEDICINE OF SOUTH AFRICA DIPLOMA IN ANAESTHESIA IN SOUTHERN AFRICA

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Objective. To determine the role that the College of Medicine Diploma in Anaesthesia (DA) plays in health services in southern Africa.

Design. A postal questionnaire.

Main information sought. Reasons for doing the DA, percentage of diplomates still actively involved in anaesthesia, career pathways of diplomates, perceived value of the DA, geography and type of anaesthetic practice of diplomates, and participation in continuing medical education.

Subjects. The 1 096 candidates who passed the DA between 1974 and 1993.

Methods. Questionnaires were sent to all 861 diplomates with known addresses.

Results. The response rate was 62.1% (535/861). Over 70% of diplomates are still actively involved in anaesthesia. Approximately one-third of all diplomates specialise in anaesthesia. The majority of GP anaesthetists with the DA have trained in anaesthesia for more than 1 year. Thirty-three per cent of GP anaesthetists work in small towns or rural areas. Nearly 20% of GP anaesthetists spend more than 75% of their time in anaesthetic practice. Twenty-eight diplomates are working in southern African countries outside South Africa. The DA is perceived to have been of value by the majority of specialist and non-specialist diplomates.

Conclusions. Diplomates are playing a valuable role in anaesthesia throughout the southern African region.

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The College of Medicine Diploma in Anaesthesia (DA) was instituted in September 1974 and was registered with the South African Medical and Dental Council (SAMDC) as a non-specialist qualification, with the aim of improving the standard of anaesthesia administered by general practitioners (GPs). The number of successful candidates per annum has increased

steadily from 2 in 1974 to 132 in 1997. The DA examination may be written after a minimum of 6 months' post-internship training in anaesthesia in an approved training hospital. The need for such training is highlighted by a survey of 17 randomly chosen rural hospitals in KwaZulu-Natal reported on at the 1998 South African Society of Anaesthesiologists Congress, in which it is stated that 'the average rural doctor in KwaZulu-Natal is a foreign-qualified graduate unlikely to have had any anaesthetic experience beyond internship'.¹ In that survey Reid reported that > 50% of operations in these hospitals were performed by a single surgeon/anaesthetist.

METHODS

One thousand and ninety-six diplomates graduated with a DA over a 20-year period between October 1974 and 1993. Details of further specialisation as well as addresses were obtained from the 1997 SAMDC register. A postal questionnaire was sent out to the 861 diplomates with known addresses.

RESULTS

Replies were received from 535/861 diplomates (62.1%). It is probable that the majority of the 235 diplomates no longer registered with the Interim Medical and Dental Council (IMDC) have emigrated overseas. Three are known to have died.

Career path of diplomates

According to the SAMDC register, 297 of 861 diplomates specialised in anaesthesia (32.4%), while a further 83 (9.64%) specialised in another field. The career paths of the 535 respondents are shown in Fig. 1. GPs constitute 188/535, with 133 (70.7%) administering anaesthetics. A further 29 respondents (8%) are working as medical officers in anaesthesia. Seventy-three per cent of respondents are still actively involved in anaesthesia.

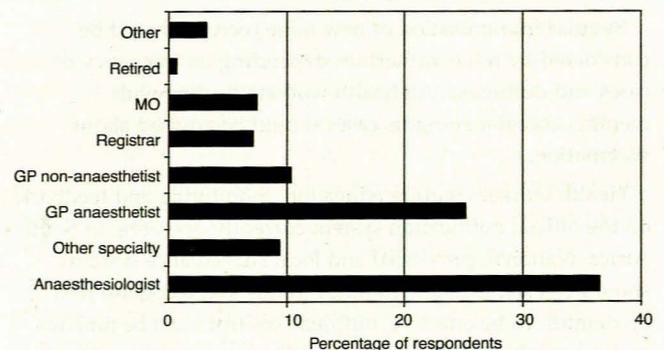


Fig. 1. Career pathways of the 535 diplomates in anaesthesia who responded to the questionnaire.

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Diplomates in southern African countries outside South Africa

Twenty-nine diplomates live in countries surrounding South Africa, with 5 of this number working as anaesthesiologists. The majority work in Namibia (18) or Zimbabwe (8).

Value of DA

Eighty-nine per cent of respondents felt that the DA had been useful to them in their medical careers. Of the 160 respondents who have worked overseas, 106 (66%) stated that the DA had helped them find employment overseas. Eighty per cent of specialist anaesthesiologists who responded felt that the DA had been of benefit to them, as did two-thirds of diplomates who had specialised in fields other than anaesthesia.

Reasons for doing the DA

Half the diplomates stated that the reason they had done the DA was to improve their skills. Nearly a quarter wrote the DA to facilitate entrance into training as a specialist anaesthetist. Nineteen per cent wrote it as preparation for general practice and 5% to improve their curriculum vitae.

GP anaesthetists

Of the 133 GP anaesthetists who responded, 59% live in cities or large towns, whereas 32% work in small towns or rural areas (Fig. 2). The distribution of GP anaesthetists who had emigrated was not considered. Fifty-six per cent of GP anaesthetist respondents spent less than 25% of their practice time in anaesthesia, whereas 18.6% devoted more than 75% of their practice time to anaesthesia (Fig. 3). The percentage of GP anaesthetists who felt competent to handle various types of anaesthesia was as follows: fit adults for major abdominal surgery 88.7%; healthy babies 74.4%; geriatric patients 79.7%; most obstetric procedures 93.2%; patients with ischaemic heart disease 50.3%; major trauma 60.9%; epidural anaesthesia 62.4%; spinal anaesthesia 84.2%; and a cardiac arrest during

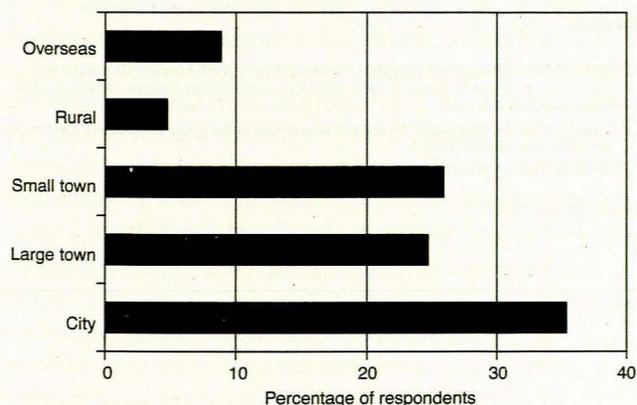


Fig. 2. Practice distribution of the 134 GP anaesthetists with the DA who responded to the questionnaire. The distribution data from diplomates working overseas were excluded from the analysis.

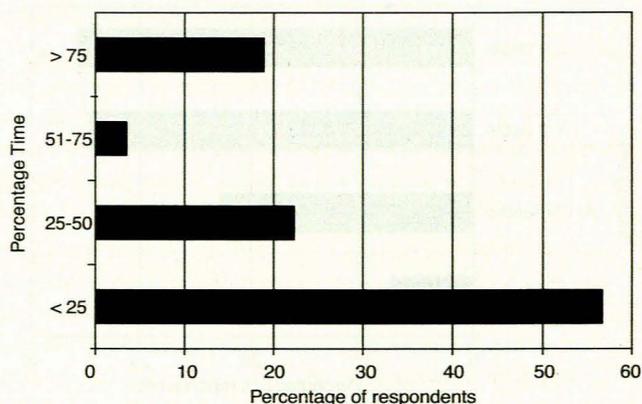


Fig. 3. Estimated percentage of time that the 130 GP anaesthetist respondents spend administering anaesthesia per month.

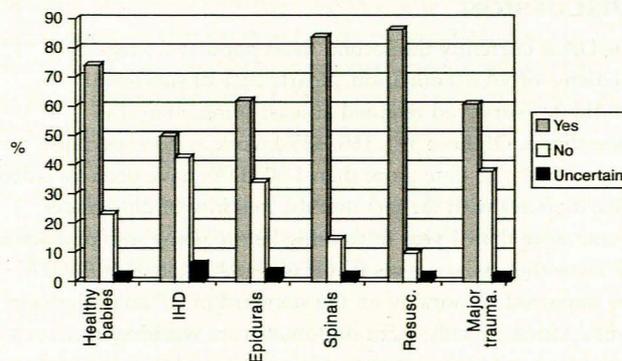


Fig. 4. Summary of the responses of 134 GP anaesthetist diplomates who were asked whether they felt competent to manage different aspects of anaesthetic practice. Practitioners who left the question unanswered or who gave a qualified answer are incorporated in the uncertain group. (IHD = patients with ischaemic heart disease; Resusc = ability to resuscitate after a cardiac arrest in theatre.)

anaesthesia 87.2%. These data are shown graphically in Fig. 4. Specialist help was available to 73 of the 127 GP anaesthetists who filled in this section of the questionnaire, and 38% of these practitioners had utilised such help.

Training and continuing medical education of GP anaesthetists

The amount of time respondents had spent in anaesthesia before becoming a GP anaesthetist was as follows: 6 months (6/130); 6 - 12 months (30/130); 1 - 2 years (46/130) and > 2 years (48/130). These data are shown in Fig. 5. Fifty-two per cent of GP anaesthetists had attended a CME refresher course in the past 3 years.

Medical officers

Of the 530 respondents still active in anaesthesia, 29 are medical officers working in the public sector.

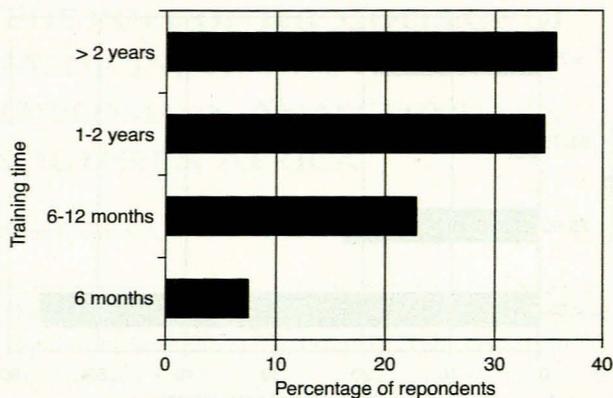


Fig. 5. Time that the 134 GP anaesthetist respondents spent in anaesthesia training before commencing GP practice. Over 70% spent more than 1 year in training.

DISCUSSION

The DA is currently the second most popular College of Medicine of SA examination. Nearly 75% of successful candidates surveyed retained at least some interest in anaesthesia. Of these 390, 166 (43%) work as non-specialist anaesthetists. To date more than 1 500 DAs have been awarded. This, together with the fact that the majority of diplomates spend more than 1 year in training before going into practice as GP anaesthetists, suggests that it is highly likely that the DA has impacted favourably on the standard of GP anaesthesia in South Africa. Twenty-eight diplomates are working in countries bordering on South Africa and the DA is therefore also benefiting the southern African region as a whole. The DA therefore appears to be fulfilling the original reason for its establishment, viz. the improvement of GP anaesthesia.

The DA is also fulfilling another role for which it was not originally intended in that it is frequently used as a filter by academic anaesthetic departments when choosing registrars. Over 20% of diplomates wrote the DA for this purpose.

The DA was perceived to have been of value to both specialists and non-specialists alike. The fact that two-thirds of the 10% of respondents who specialised in areas other than anaesthesia benefited from learning for the DA suggests that skills acquired in anaesthesia are useful in other disciplines.

An in-depth analysis of data obtained from GP anaesthetists holding the DA was made because this was the group for whom the DA was initially introduced. Over thirty per cent of such GP anaesthetists work in small towns or rural areas. A further 23% work in cities, possibly in competition with better-qualified anaesthesiologists. Neither the number of GPs who perform anaesthesia but do not hold the DA, nor the number of anaesthetics administered by non-specialist anaesthetists relative to anaesthesiologists in South Africa, is known. The best estimate of the latter was from a survey carried out by Jones² in 1957 in which he loosely estimated that 70% of

anaesthetics administered in South Africa and South West Africa were given by non-specialist anaesthetists. The problem of inadequate anaesthetic training and cover in rural areas is not unique to Third-World countries. In a recent editorial discussing the problem, data are presented from the USA showing that in 1994 anaesthesiologists were only available in 24 out of 62 rural hospitals in Montana and Washington states.³

Assessment by GP anaesthetists of their own abilities to manage problem areas and techniques was interesting (Fig. 4). A high percentage felt competent to anaesthetise geriatric patients and manage obstetric anaesthesia or a cardiac arrest in theatre. Over eighty per cent felt competent with spinal anaesthesia compared with only 40% for epidural anaesthesia. Sixty per cent of GP anaesthetists felt competent to handle major trauma, and over 70% felt competent to anaesthetise healthy babies. It is of concern that 45% of GP anaesthetists have not attended CME in anaesthesia in the past 3 years. With the imminent introduction of continual professional development (CPD) into South Africa it is hoped that this figure will be reduced and that non-specialist anaesthetists administering anaesthesia will be required to obtain CPD points in this field.

The 29 medical officers working in anaesthesia at public sector hospitals are playing an important role in maintaining standards in these hospitals, many of which are unable to attract specialist anaesthesiologists. A further 6 diplomates involved primarily in medical administration are still helping with the anaesthetic services in their hospitals when required.

Holders of the College of Medicine DA are playing a valuable role in anaesthesia throughout the southern African region, both in the private and public sector.

We would like to pay a tribute to all teachers of DA candidates, particularly those from non-academic hospitals, many of whom perform this task after hours. This study was supported by a grant from the Jan Pretorius Fund of the South African Society of Anaesthesiologists.

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