Health Care Research

Does the method of payment affect anaesthetic practice? An evaluation of an Alternate Payment Plan

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Purpose: To test the null hypothesis that the method of physician payment does not influence the practice of anaesthesia.

Methods: Retrospective cohort study of anaesthetists before (Jan–June, 1994) and after (Jan–June, 1995) departure from fee-for-service practice into an alternate funding arrangement (AFP). Another group of physicians was studied as a concurrent control. Case numbers, induction times, cancellation rates, and operating hours for the department, recorded by third parties, were compared before and after AFP implementation. Using index procedures, details of individual patient decisions made by anaesthetists were compared for the two study periods, and between subscribing and non-subscribing physicians.

Results: Implementation of AFP resulted in a modest reduction in case numbers (7.2%) offset by an increase (5.7%) in the average case duration. Net change in time dedicated to clinical service (2% per physician) is inconsequential to the academic mission of the department. There was no change in cancellation rate and the use of invasive monitors was unchanged. An increase in the use of regional anaesthesia occurred but, since a similar increase occurred in the practice of those still on fee-for-service, it cannot be ascribed to the AFP. With respect to hip arthroplasty, the case was prolonged ($P=0.001$) if the surgeon was paid via the AFP.

Conclusion: Payment of physicians by non-fee-for-service techniques did not have a constructive influence on measures of anaesthetic practice. The goal of alternate payment arrangements, to liberate time for academic pursuits, could not be achieved in this experimental model.

Objectif : Vérifier l'hypothèse nulle selon laquelle le mode de rémunération n'influence pas l'exercice de l'anesthésie.

Méthodes : Étude rétrospective d'une cohorte d'anesthésistes avant (janvier à juin 1994) et après le changement de mode de rémunération à l'acte pour celui d'un mode différent (janvier à juin 1995). Un autre groupe de médecins avait été choisi comme groupe contrôle. Une tierce personne prenait note du nombre de cas, des durées d'induction, des taux d'annulation et du total des heures consacrées aux interventions. Les données recueillies pour chacune des deux périodes ont été comparées. À l'aide de l'inventaire des interventions, le détail des décisions prises par les anesthésistes dans des cas individuels a été comparé pour les deux périodes étudiées et entre ceux qui avaient adhéré au nouveau mode et les autres.

Résultats : L'implémentation du nouveau mode de rémunération produit une légère baisse du nombre de cas (7,2%) pondérée par une augmentation de leur durée moyenne (5,7%). Le changement net du temps consacré au service clinique (2% par médecin) n'a pas d'influence sur la vocation éducationnelle du département. Le taux d'annulation ne change pas ainsi que l'utilisation du monitoring invasif. L'anesthésie régionale est plus fréquente mais comme cette augmentation est la même chez ceux qui sont rémunérés à l'acte, on ne peut l'attribuer au mode de rémunération. Dans le cas particulier de l'arthroplastie, la durée se prolonge ($P = 0,001$) lorsque le sujet est rémunéré selon le nouveau mode.

Conclusion : La rémunération des médecins par un mode autre que la rémunération à l'acte n'a pas une influence positive sur l'exercice de l'anesthésie. Ce modèle expérimental ne démontre pas que la modification du mode de rémunération génère plus de temps pour l'enseignement.

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"HEALTH care reform" has changed the nature of medical practice throughout North America. Central to the fiscal control of the medical services budget are the physicians, both as those who direct the assignment of resources and services to individual patients, and as health care providers who must be paid. It has been suggested^{1,2} that the former (patient service costs) are dependent, at least in part, on the latter (system of physician compensation). This has led to a search for alternatives to the traditional fee-for-service model of physician compensation.

The practice of anaesthesia differs from that of most other medical specialties insofar as the physician members do not, for the most part, direct the consumption of medical services. Rather, it is a specialty which provides care and comfort to patients as they undergo procedures and treatments determined by others. Nevertheless, it has been argued² that it is inappropriate to keep hospital-based physicians such as anaesthetists on a fee-for-service system as there is no incentive for the control of hospital costs and, therefore, the potential for a conflict with the objectives of the hospital administration.

The recent implementation of a faculty-wide alternate funding plan (AFP) at Queen's University in Kingston, Ontario, allowed an unique opportunity to assess the impact of an alternate funding arrangement applied to medical practice. Using a cohort design, we examined the influence of the method of physician compensation on the practice of anaesthesia, as measured by case volumes, cancellations, and durations, and by anaesthetic techniques and invasive procedures. The null hypothesis for this study states that the method of payment does not influence anaesthetic practice indicators.

Evolution of the Queen's Alternate Funding Plan

Virtually all clinical faculty of Queen's University are Geographical Full-Time (GFT) physicians, and appointment to either of the two acute-care teaching hospitals requires a university appointment. There are no alternative non-university facilities in the community of approximately 350,000 patients, leaving the faculty responsible for all the secondary and tertiary care services. Patients are at liberty to seek medical care inside or outside of the geographical area of the university, but the favourable physician/patient ratio and the ready availability of specialist consultants at the university has maintained the loyalty of the community to Queen's health facilities.

The GFT agreement (1990) signed by each faculty member imposed a ceiling to income that was net of

practice expenses, but otherwise did little to restrict physician clinical activity. Each physician functioned as an independent provider of medical services, and was obligated only to submit an audited statement to Queen's of earnings at year's end, together with any money owing above the financial ceiling. Over time, Queen's could not continue such a system, and found itself increasingly dependent on the excess earnings of physicians to support the salary lines of tenured faculty, as well as other expenses. But, unfortunately, since OHIP fee schedules were also in decline, few physicians were able to generate sufficient funds in excess of their ceilings. Therefore, Queen's physicians felt it to be in their best interest to enter into negotiations with the provincial government to establish an alternate method of supporting their activity; the government agreed as this represented an unique opportunity for a sociologic experiment to test the various hypotheses about physician payment. The University agreed, reasoning that if physicians were liberated from fee-for-service activity there would be more time for academic deliverables.

The faculty of medicine embarked upon their model of alternate physician payment in July, 1994.³ This was to be a three year experiment. In essence, the physicians on clinical faculty would be compensated from a single source for all services provided to patients in their referral community, as well as for teaching, research, and administrative functions inherent to the mission of their academic health sciences centre. The agreement consolidated resources formerly provided through 50 different budget lines from the provincial Ministries of Health and Education. All revenue was administered via the Medical Faculty Office of the university. Policy and procedural decisions were directed by a central committee composed of representatives of the university, the two teaching hospitals, and the clinical teachers' association.

The physicians who agreed to be part of the plan simply "parked" their billing number for the three years of the arrangement, and charged fee-for-service only for procedures that were either: (1) uninsured by the provincial medicare plan, or (2) arising from programmes implemented after the base year. That particular year, (1992-3), formed the basis upon which the size of the funding "envelope" was established. Those who chose not to be part of the AFP plan could continue to bill the provincial medicare scheme, but the amount of such billings would be removed from the envelope distributed to that member's department. The total amount allocated to each department was equal to the billings of the base year, as well as any faculty support derived from the university base budget.

Each department was allowed to set its own system of payment for individual faculty members, subject only to the "envelope constraint." In the specialty of Anaesthesia it was elected to pay each individual for each ½ day of work contributed to the department "deliverables"; the dollar amount would vary with the total volume of services required by the hospital, together with the amount of support for non-clinical activity provided. In essence, all anaesthetists would be paid the same for a day's work, and there would be no differential between clinical and academic duties, nor between the various types of clinical duties. Given the fixed envelope of funds, if the department required fewer faculty, each member would receive more money; if more faculty were required to meet increasing demands, then per capita income must drop.

Methods

All evaluations for this study were done with consent of the institutional ethics review boards, and the Committee on Evaluation of the Alternate Funding Plan.

To evaluate the effect of the AFP on the volume of anaesthetic services provided to the two teaching hospitals, operating room data were obtained. Two time periods were chosen: the six months prior to the AFP (January–June, 1994), and the corresponding six months after the AFP had been initiated (January–June, 1995). Hospital statistics were obtained for the number of cases done in the operating rooms, the number of hours of anaesthetic service, and their distribution into elective and emergency periods. Unfortunately, case mix distributions by surgical procedure were not available in the data set.

At only one of the two hospitals were data concerning the number of cases canceled after slating, and the generic cause for cancellation, available. These statistics were maintained by the OR nursing manager.

The study required a sampling of anaesthetic records that avoided the interdependence of anaesthetic practice with fixed structures of the hospitals. Thus, practices and procedures that were determined by fixed protocols (for example: cardiac and vascular surgery, obstetrical care) were not included. Instead, to reflect discretionary decisions of the anaesthetist the procedures chosen had to occur in a high-risk group, and with a frequency sufficient to allow meaningful comparisons. Therefore, charts of all patients who, during the specified time periods, underwent: (1) hip arthroplasty, (2) radical prostatectomy, or (3) large bowel resection were selected. Abstracted variables included: patient demographics (age, ASA physical status score), the presence of a resident, the type of anaesthetic used, the use of invasive monitors or

pain therapy, the duration of the induction period, and the duration of the total procedure (case time). The latter information on case duration was obtained from the circulating nurse's records; the duration used by the anaesthetist for billing purposes was not recorded.

Comparison of the influence of the AFP required that each individual anaesthetist's practice with respect to the index surgical procedures be assessed before and after the implementation of the plan. To control for the effect of time on the standards of practice, the group of anaesthetists who either chose not to be part of the plan or who were not allowed to participate (non-GFT faculty) was similarly assessed. While the same individuals made up both pre and post-AFP cohorts, those who did not subscribe to the AFP ("concurrent controls") were identically qualified and experienced to those constituted the "study" group of anaesthetists.

The statistical analysis controlled for timing (before and after the AFP), and participation (participating and non-participating anaesthetists). The chi-squared test was used for comparing proportions. The unpaired t test and ANOVA were used for continuous variables for comparisons between groups. Statistical significance was set at $P \leq 0.05$. The Pearson correlation coefficient was used to assess linear associations between variables.

Results

1. Departmental data

The introduction of the AFP was associated with a reduction in the mean monthly number of cases served ($P = 0.042$). However, there was no change in the average number of hours of anaesthetic service (total case hours) provided to the operating theatres (Table I). The reduction in case volumes occurred largely with elective work, with the reduced numbers partially offset by a 5.7% increase in the average time to complete a case. There were no changes in the emergency procedure volume, nor in average case duration before or after the AFP.

Analysis of the number of cases canceled from the established OR slate (i.e., within 24 hr of scheduled surgery) showed no increase either in total, or in those canceled for discretionary reasons (Table II).

2. Index procedure data

The patient case mix of the study cohorts served by physicians, before and after the AFP implementation, is given in Table III. Apart from an increase in the mean ASA physical status score of patients served by anaesthetists working within the AFP ($P = 0.04$), there

TABLE I Combined hospital statistics with the onset of the AFP for the six-month periods before (Jan-June, 1994) and after (Jan-June, 1995) the implementation of the Alternate Funding Plan (AFP).

	<i>Pre-AFP</i>	<i>Post-AFP</i>	<i>% change</i>	<i>P</i>
Case Numbers				
Total	9,440	8,858	-7.2	
Monthly mean $\pm$ SD	1,578.4 $\pm$ 58.2	1,476 $\pm$ 99.5	-7.2	0.042*
Elective (%)	8012 (85%)	7445 (84%)	-1.1	0.063
Emergency (%)	1,428 (15%)	1,413 (16%)	-1.0	0.66
Case Hours				
Total	14,226	13,924	-2.0	
Monthly mean $\pm$ SD	2,369 $\pm$ 93.9	2,321 $\pm$ 150	-2.1	0.52
Mean elective time $\pm$ SD	1.47 $\pm$ 0.02	1.56 $\pm$ 0.02	5.7	0.002*
Mean emergency time $\pm$ SD	1.69 $\pm$ 0.10	1.65 $\pm$ 0.06	-0.6	0.86

Total case time (in hours) is defined as the difference between the patient entering and the patient leaving the operating room, as recorded by the circulating nurse.

TABLE II Cancellations of elective surgery at the largest Queen's teaching hospital in the six-month periods before (Jan-June, 1994) and after (Jan-June, 1995) the introduction of the AFP.

	<i>Pre-AFP</i>	<i>Post-AFP</i>	<i>% change</i>	<i>P</i>
Patient Initiated				
In-patient	24	11	-54	0.07
Out-patient	84	69	-18	0.15
Same Day admit	4	3	-25	0.77
Patient deemed unfit	63	74	18	0.28
Facilities Unavailable				
Room running late	25	17	-32	0.39
No ICU bed	23	43	86	0.39
No anaesthetist available	2	1	-50	0.67
No surgeon available	21	9	-57	0.19
Discretionary Cancellations				
Total	143	152	6.3	0.71
% booked cases	5.3	5.4	0.1	
Total Cancellations	322	340	5.6	0.67

TABLE III Demographics of the patient case mix provided index services before and after the implementation of the AFP, according to whether or not the assigned anaesthetist was a signatory to the Alternate Funding Arrangement.

	<i>Pre-AFP</i>	<i>Post-AFP</i>	<i>% change</i>	<i>P</i>
AFP Faculty				
Patient age (mean $\pm$ SD)	66.7 $\pm$ 17	68.0 $\pm$ 16	1.9%	0.91
Patient ASA (mean $\pm$ SD)	2.2 $\pm$ 0.7	2.5 $\pm$ 0.7	12.0%	0.04*
"n" (%) arthroplasty	35 (64%)	51 (63%)	-1.0%	$\chi^2=0.006$, $P=0.93$
"n" (%) prostatectomy	11 (20%)	7 (9%)	-11.0%	$\chi^2=3.14$, $P=0.08$
Colectomy	9 (16%)	23 (28%)	12.0%	$\chi^2=3.14$, $P=0.08$
Case Total	55	81		
Non-AFP Faculty				
Patient age (mean $\pm$ SD)	67 $\pm$ 13	68 $\pm$ 15	1.0%	0.92
Patient ASA (mean $\pm$ SD)	2.3 $\pm$ 0.7	2.3 $\pm$ 0.7	0%	0.93
"n" (%) arthroplasty	57 (66%)	36 (53%)	-13.0%	$\chi^2=2.82$, $P=0.09$
"n" (%) prostatectomy	9 (11%)	12 (18%)	7.0%	$\chi^2=0.71$, $P=0.28$
"n" colectomy	20 (23%)	20 (29%)	6.0%	$\chi^2=1.65$, $P=0.20$
Case Total	86	68		
Total index cases	141	149		

TABLE IV Characteristics of the anaesthetics administered to the index cases by faculty inside and outside the Alternate Funding Plan, before and after the implementation of the latter arrangement. "Induction time" is that from patient entry to the OR to start of positioning for surgery; "total case time" is from entry to departure from the OR. All times given in minutes.

	<i>Pre-AFP</i>	<i>Post-AFP</i>	<i>% change</i>	<i>P</i>
AFP Faculty				
"n" (%) general anaesth	49 (89%)	57 (70%)	-19%	0.009*
"n" (%) regional/combined	6 (11%)	24 (30%)	19%	0.009*
"n" (%) resident present	27 (49%)	22 (27%)	-22%	0.008*
Induction time mean $\pm$ SD	22.9 $\pm$ 12.4	26.8 $\pm$ 15.6	14%	0.11
Total case time	146 $\pm$ 37	152 $\pm$ 40	4.0 %	0.37
"n" (%) invasive CVP	5 (9.1%)	10 (12.3%)	3.2%	0.45
"n" (%) arterial line	5 (9.1%)	8 (9.8%)	0.7%	0.85
Non-AFP Faculty				
"n" (%) general anaesth	84 (98%)	53 (78%)	-20%	0.001*
"n" (%) regional/combined	2 (2%)	15 (220%)	20%	0.001*
"n" (%) resident present	14 (16%)	10 (15%)	-1%	0.07
Induction time min mean $\pm$ SD	19.3 $\pm$ 9.7	25.1 $\pm$ 16.1	23.1%	0.01*
Total case time, min mean $\pm$ SD	146 $\pm$ 39	168 $\pm$ 78	13.1 %	0.04*
"n" (%) invasive CVP	3 (3.5%)	5 (7.4%)	3.9%	0.25
"n" (%) arterial line	6 (7%)	10 (14.7%)	7.7%	0.15

TABLE V Univariate analyses of the factors that influenced the total case time in patients undergoing total hip arthroplasties.

<i>Factor</i>	<i>Comparison</i>	<i>Time - minutes mean $\pm$ SD</i>	<i>P</i>
Year of operation	94/95	142 $\pm$ 35/143 $\pm$ 36	0.89
Patient age	increasing age vs increasing time		r= 0.128
Patient ASA score	1	139 $\pm$ 34	0.23
	2	138 $\pm$ 33	0.23
	3	149 $\pm$ 38	0.23
	4	149 $\pm$ 8	0.23
Anaesthetist AFP status	yes/no	145 $\pm$ 37/141 $\pm$ 34	0.55
Surgeon AFP status	yes/no	159 $\pm$ 57/137 $\pm$ 24	0.001*
Anaesthetic type	general/regional	141 $\pm$ 35/155 $\pm$ 34	0.05*
Resident present	yes/no	144 $\pm$ 38/143 $\pm$ 34	0.84
CVP monitoring	yes/no	208 $\pm$ 25/141 $\pm$ 34	0.001*
Arterial line	yes/no	134 $\pm$ 28/142 $\pm$ 35	0.091

were no differences in the patient case mix of either physician group before and after the AFP began. The physicians who subscribed to the new plan did more hip arthroplasties and colectomies after the AFP began, while the non-AFP faculty did fewer hip arthroplasties post-AFP than pre-AFP.

With the introduction of an alternate funding system, there was an increase in the total case time. This was due, in part, to an increase in the "induction time," defined as the time between patient entry to the OR and the beginning of patient positioning for surgery (Table IV). However, this increase was statistically significant only for patients anaesthetized by fee-for-service physicians ($P = .01$).

With respect to the type of anaesthetic provided, there was an increase in the use of regional anaesthetic tech-

niques, or regional techniques combined with general anaesthetics. However, since this occurred in both AFP and non-AFP practices, this change cannot be ascribed to the initiation of the alternate funding arrangement. In a similar vein, there was also an increase in the use of invasive monitors by anaesthetists in the new funding period that occurred in both physician groups.

Since the consumption of operating room resources (case duration) was one of the few outcomes that seemed to be influenced by the funding system, the factors that affected the case duration (patient entry to patient discharge from the OR) were independently analyzed in the cases of total hip arthroplasty (Table V). The only two factors that were associated with increased time were: the use of central venous pressure monitoring during the procedure, and whether the surgeon

participated in the AFP program. The method of payment of the anaesthetist was not a factor in the overall operative time.

Case numbers were insufficient for the other two procedures to perform an extensive analysis and provide reliable results.

Discussion

Many university faculties of medicine are struggling with their financial futures, for their dependence on clinical earnings of faculty⁴ fails with the restructuring of North American medical care. This has raised serious doubts about the viability of university medical centres and the specialty practices they support.⁵⁻⁷ Under the "single payer system" of medical care in Canada the source of anxiety may differ somewhat from that of managed care in the USA,^{8,9} but revised methods of remuneration of physicians¹⁰ and revised roles for the academic medical centres¹¹ have led to calls for greater alliances between academia and the government funding agencies.¹² In the eyes of some, the concept of the integrated academic medical centre may represent a viable option for the future.^{13,14}

The basis for alternate funding of physicians rests on the economic premise that, if physicians were liberated from the task of generating fees, they would do only those things that are medically necessary. It is estimated that many medical procedures are unnecessary and others may be frankly harmful;¹⁰ elimination of this inducement to service would help to control costs of the health care system, and improve patient care. With respect to the academic medical centres, a system in which physicians don't have to worry about fees could result in greater time spent in the pursuit of academics, including teaching and research.^{15,16}

Unfortunately, these theoretical benefits have seldom been proved. One model of AFP between the Government of Ontario and the Department of Paediatrics of Toronto's Hospital for Sick Children¹⁷ has provided five years of stability and maintenance of academic programmes. However, the loss of physician autonomy and the slowness of the governmental bureaucracy to discuss changes in a "locked-in" system have been frustrating.¹⁸ In another study, in the specialty of Family Medicine, 39 physicians who changed to a capitation system of funding were compared with a group of colleagues who maintained a fee-for-service practice: there was no influence by the system of physician payment on utilization of hospital resources.¹⁹ An accompanying editorial suggested that these findings may be due to the increasing domination of hospital resources by specialists rather than primary care physi-

cians, and called for flexibility in structuring the reimbursement system for various specialties.²⁰

In the present study, we were able to observe, using both historical and concurrent controls, the effect of alternate funding methods on the practice of anesthesia in an academic medical centre. We found that, from a departmental perspective, departure from fee-for-service *did* reduce the number of anaesthetics provided by the department. However, this was partially offset by a longer duration for individual operative procedures. Unfortunately, it was not possible to measure the precise mix of surgical procedures and, therefore, we cannot differentiate between similar case types taking longer, or substitution of alternative procedures, as explanations for this phenomenon. We hypothesize that, even if unnecessary procedures ceased to be performed under an AFP, there will always be someone to fill the void in the operative list in a medical system with queues to obtain elective therapy. Furthermore, case loads will be reinforced by continued funding of hospitals on some form of case-number system, a scenario incompatible with physicians being paid without service volume indexation. In short, while the profile of activity may change for the anaesthetists, their time demands will not be reduced by an alternate funding system. The net benefit to the practicing anaesthetist of our 2% reduction in the length of a surgical list amounted to approximately 10 liberated minutes per eight hour day!

While the present study did not attempt to measure scholarly activity, academic production by anaesthetic departments is a direct function of the non-clinical time available to the faculty.²⁵ Given the insignificant increase in time available to each individual, it is doubtful that improvement in academic performance can be expected to follow the implementation of an alternate funding system.

To make matters worse, the implementation of the AFP coincided with the introduction of several new programmes (preadmission assessment clinics and accelerated discharges using improved acute pain management services) that placed fresh demands on the human resources and fixed funding of the Department of Anaesthesia.

With respect to the practice of the individual anaesthetists, we were able to demonstrate an increased use of regional anaesthesia by those physicians in the period of implementation of the AFP. The price paid for this change appeared to be a modest increase in the time of induction, but was without consequence to the total duration of the procedure since regional techniques save waiting for extubation or recovery at the end of the case. That a similar shift in practice also

occurred in those who remained on a fee-for-service basis suggests the change occurred independent of the method of funding. Since there is no incentive within the OHIP fee schedule to provide one type of anaesthetic over another, the increased time required to establish and maintain an effective regional technique appeared more acceptable to both the anaesthetist and the surgeons under the reduced pressure of an AFP.

In contradistinction to the hypothesis that fee-for-service acts as a procedural inducement, we found a trend to increased use of invasive monitoring *after* institution of the AFP. In addition, we saw a tendency to fewer cancellations of patients scheduled for elective surgery after the new funding system began. These results suggest that discretionary decisions are made in anaesthetic practice without regard to financial gain, since fee generation under the previous system would have predicted the opposite tendency.

Cohort studies have limitations that must be recognized. First, we were confined to historical data that had been recorded by third parties without the possibility of verification. Though the system of recording times did not change in the study periods, the possibility of recording errors must be acknowledged. Second, we were confined to considering only the period when the patient was in the room; the time between cases is, in part, under the control of the anaesthetic staff and can influence OR efficiency.²¹ Third, we confined our study to a short period of time; the six months that were studied were relatively free of influence from vacation schedules and similar nuances affecting utilization, but the possibility of an uneven number of days for elective surgery cannot be excluded. Fourth, we studied only procedures expected to demonstrate discretionary actions by the faculty; the possibility of change in the care of other patients is always possible. Indeed, the presence of the AFP probably facilitated recent revisions of some protocols of care (reduced use of pulmonary artery catheters in vascular surgery, the use of alternative care providers in place of physician-directed Monitored Anaesthetic Care²² for cataract surgery). Finally, we did not attempt to measure the impact of the AFP on the non-OR activities of the department of anaesthesia, many of which have grown considerably with the evolution of medical care reform.^{27,28}

This experiment brings several items into focus for hospital-based practices such as anaesthesia, radiology, pathology and emergency medicine. Most importantly, it is recognized that the demands upon their resources are not established by these specialties, but are determined by the programmes, institutions, and

decisions of other health care professionals. As such, it is important to include the element of service volume (or time) in any discussion of how services should be funded.^{23,24} In Canada, where there is no alternative to physician-provided anaesthetic care, it is not possible to off-load clinical services to alternative care providers as exist in the USA.²⁶ If hospital departments such as anaesthesia are to meet the future challenges to their specialty,²⁷ such as those arising from anaesthesia's expanded role in perioperative medicine,²⁸ they cannot be confined within the fixed budget of an AFP. Without the ability (as is possible in primary medical specialties) to delete activities or programmes when new demands are introduced, or to raise funds for new faculty by submission of fees, hospital-based physicians will be frustrated by alternate funding arrangements.

In conclusion, the experience at Queen's has demonstrated that the practice of anaesthesia experiences little change under an alternate funding arrangement. While the more relaxed environment may lead to improved patient care by an increased use of regional techniques, the overall effect on the specialty is a restriction of the opportunity for growth and development in response to changing external demands. Therefore, for those in non-primary care specialties seeking to secure stable financing through an arrangement such as an AFP, two things should be considered: there is no liberation of time for increased academic endeavors, and there may be a loss of autonomy as a hospital/university department. The clinical work will still have to be done!

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