A survey of professional satisfaction among Canadian anesthesiologists

[Une enquête sur la satisfaction professionnelle des anesthésiologistes canadiens]

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Purpose: To assess overall job satisfaction among Canadian anesthesiologists and examine contributing factors.

Methods: A confidential postal survey of all active members of the Canadian Anesthesiologists Society was conducted in 1998. Demographics, anesthesia practice, overall job satisfaction, anesthetic assistance, and perceived surgeons' and public attitudes towards anesthesiologists were collected.

Results: Of 1659 surveys sent, 946 were returned (57% response rate). Seventy-five percent of the respondents were male and 25% female. Staff comprised 91%, residents 9%. The average working week was 59 ± 11.9 hr.

Seventy-five percent of respondents reported overall job satisfaction. Job satisfaction was associated with intellectual stimulation, good quality of care and interaction with patients. Dissatisfaction stemmed from treatment from the provincial government, hospital politics and long hours. Job satisfaction was associated with satisfaction with the level of operating room (OR) assistance, perceived high surgical regard and public image. Residents were more satisfied than staff anesthesiologists. Overall satisfaction was not affected by age, gender, region of practice, type of hospital or clinical work.

Conclusions: Job satisfaction among anesthesiologists is significantly associated with intellectual stimulation, quality of care, interaction with the patients, treatment from the provincial government, hospital politics, working hours, OR assistance and perceived attitude of surgeons. Improving these contributing factors may lead to higher job satisfaction.

Objectif : Évaluer la satisfaction professionnelle générale des anesthésiologistes canadiens et en vérifier les facteurs favorisants.

Méthode : En 1998, une enquête postale confidentielle a été menée auprès de tous les membres actifs de la Société canadienne des anesthésiologistes. On a recueilli les données démographiques, les renseignements sur l'exercice de l'anesthésie, la satisfaction professionnelle générale, l'assistance anesthésique et la perception des attitudes des chirurgiens et du public à l'égard des anesthésiologistes.

Résultats : Les réponses ont été de 946 sur 1659 exemplaires de l'enquête envoyés (57 % de réponses). De ces répondants, 75 % étaient des hommes et 25 %, des femmes. Les anesthésiologistes en titre comptaient pour 91 % et les résidents, pour 9 %. La durée moyenne d'une semaine de travail était de $59 \pm 11,9$ h.

Soixante-quinze pour cent des répondants se sont dits satisfaits de leur travail en général. La satisfaction professionnelle était associée à la stimulation intellectuelle, la qualité des soins et l'interaction avec les patients. Le mécontentement découlait de l'attitude du gouvernement provincial, la politique hospitalière et les longues heures de travail. La satisfaction professionnelle était liée à la qualité de l'assistance en salle d'opération et la perception d'une haute estime des chirurgiens et du public. Les résidents étaient plus satisfaits que les anesthésiologistes. La satisfaction générale n'était pas influencée par l'âge, le sexe, la province de travail, le type d'hôpital ou de travail clinique.

Conclusion : La satisfaction professionnelle des anesthésiologistes est associée de façon significative à la stimulation intellectuelle, la qualité des soins, l'interaction avec les patients, l'attitude du gouvernement provincial, la politique hospitalière, les heures de travail, l'assistance en salle d'opération et la perception de l'attitude des chirurgiens. L'amélioration de ces facteurs favorisants peut augmenter le niveau de satisfaction professionnelle.

THE speciality of anesthesia has undergone considerable development over the last 25 yr. Once a technical speciality confined primarily to the operating room (OR), the scope of anesthetic involvement in hospital practice has expanded considerably. Clinically, anesthesiologists are experts in fields as diverse as intensive care, obstetrics, trauma, cardiopulmonary and airway management, perioperative patient care and both acute and chronic pain management. In addition, many are involved in areas such as research, administration and teaching, both at undergraduate and postgraduate

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TABLE I Reasons for overall satisfaction and dissatisfaction

	<i>Overall %</i>	<i>Staff %</i>	<i>Resident %</i>	<i>P value chi-square staff vs res</i>
Job satisfaction	75	73	83	0.05
<i>Reasons for satisfaction</i>				
Good quality of patient care	95	96	89	0.003
Intellectually stimulating	55	52	77	0.001
Interaction with patients	52	53	48	NS
Interaction with colleagues	49	47	60	0.03
Interaction with surgeons	30	31	18	0.01
Financial	20	21	12	0.03
Good hr	20	18	33	0.001
<i>Reasons for dissatisfaction</i>				
Treatment by provincial government	59	60	51	0.09
Hospital politics	58	59	54	NS
Long hours	47	49	33	0.007
Financial	24	26	14	0.02
Lack of resources	24	25	17	NS
Perceived lack of recognition by patients	23	21	4	0.001
Perceived lack of recognition by surgeons	22	20	49	0.001
Boredom in the operating room	15	15	12	NS
Not able to upkeep knowledge/applications	11	12	5	0.04
Interaction with anesthesia colleagues	4	4	1	NS

NS= not significant

level. Yet all of these accomplishments have not necessarily resulted in improved recognition of the anesthesiologist's vital role.

Recognition of the extent of knowledge, skill and experience of the anesthesiologist remains a problem in North American medicine. Lack of recognition is apparent not only from the general public and the media, but also from surgical and nursing colleagues. Previous studies have shown that patient recognition of the anesthesiologist as a medical doctor varies from 65% to 82%¹⁻³ but few know of our precise roles in the hospital.

The current and projected future shortage of physicians identifies the speciality of anesthesia as a particular problem area. Anesthesia residency positions in Canada are not always fully subscribed which compounds this problem.⁴ Difficulties with recruitment may reflect dissatisfaction with the current status of the anesthesiologist in Canada. Therefore, an anonymous postal survey was designed to look at current job satisfaction among anesthesiologists in Canada.

The main objective of the study was to assess overall job satisfaction among Canadian anesthesiologists. Secondary objectives included examination of the factors relating to job satisfaction such as demographic variables, anesthesia practice, anesthetic assistance and perceived surgeons' and patients' attitudes towards anesthesiologists.

Methods

After approval from the Research Ethics Board, University Health Network and the Canadian Anesthesiologists' Society (CAS), a survey of satisfaction was sent to 1659 members of the CAS in June 1998 (see Appendix). All active and resident members of the CAS were included while retired, senior, honorary and associate members were not included. Confidentiality and anonymity were maintained but each questionnaire was number coded to identify non-responders. The agreed cut-off point for re-mailing was a response rate of less than 50%. A stamped, addressed envelope was included with each survey. Demographic data were collected including age, sex, staff or resident status, years of practice, hospital size and location, and average hours of work per week.

Overall job satisfaction, and satisfaction with OR assistance, was recorded on a five-point Likert scale. Anesthesiologists were asked to check any number of a list of 17 items that contributed most to their job satisfaction and dissatisfaction.

Further data analysis examined the effects of variables such as anesthesia experience, gender, age, region of practice, hours of work, type of hospital and clinical responsibilities on overall job satisfaction.

The breadth of clinical responsibilities were examined, looking at service commitments in the OR, intensive care unit (ICU), acute and chronic pain, consultation clinic and offsite work in private clinics,

radiology or other areas. Involvement in research, teaching and administration was also noted.

Whether assistance in the OR was offered, and by whom, was looked at in the following areas: transfer of patients, application of monitoring, insertion of venous and arterial catheters, at induction and emergence, and obtaining drugs and equipment.

Respondents were asked their perception of the surgeons' attitudes towards anesthesiologists. The public's attitude toward anesthesia, as perceived by the anesthesiologist, was also examined. Anesthesiologists were asked if they explained their intraoperative role to the patients preoperatively, if patients knew they were medical doctors and if they gave talks to the lay public about anesthesia.

Data were entered into Microsoft Access 97 (Redmond, WA, USA) and analysed using Statistical Package for Social Sciences (SPSS Version 10.0 for Windows, Chicago, IL, USA). Demographic data were categorized as follows: age – older (55+ yr) and younger (<55 yr); five regions – Western (British Columbia, Northwest territories), Prairie Provinces (Alberta, Saskatchewan, Manitoba), Ontario, Quebec and Atlantic provinces (New Brunswick, Nova Scotia and Prince Edward Island, Newfoundland); hours of work – higher (55+ hr per week) and lower (<55 hr per week); number of ORs – ten or more ORs and less than ten. These cutpoints were decided either arbitrarily or based on variation of the cutpoint until the most significant *P* value was obtained between the two groups. Interval data, e.g., hours of work, were expressed as mean hr $\pm$ standard deviation. A five-point scale was used for questions of satisfaction, dissatisfaction and perceived attitudes. All five-point scales were also re-categorized into binary variables where 1, 2, 3 represented one group and 4, 5 the other. Comparison of categoric variables among and between groups and sub-groups were performed using Chi squared analyses. A *P* value of <0.05 was considered statistically significant.

Results

Out of 1659 surveys sent, 945 were returned (57% response rate). Overall, 75% of respondents rated their job satisfaction highly (graded 4 and 5 on Likert scale). Ten percent of the anesthesiologists were totally satisfied (graded 5), whereas 1% of the sample were totally dissatisfied (graded 1).

Demographic data

The commonest age group of respondents was 35–44 yr old (38%; Figure). Seventy-five percent (709) of the respondents were male and 25% (227) female. Staff constituted 91% of the sample with the remainder

(9%) being residents. The majority of anesthesiologists (60%) worked in teaching hospitals with the rest based in the community. Respondents from Western, Prairie, Ontario, Quebec and Atlantic provinces accounted for 17.5%, 17%, 41%, 15% and 9.5% respectively. Average hours spent at work per week were 59 ± 12 hr.

Reasons for satisfaction and dissatisfaction

The three commonest reasons given for job satisfaction were good quality of patient care, intellectual stimulation and interaction with patients, while reasons for dissatisfaction were treatment by the provincial government, hospital politics and long hours (Table I).

Comparing staff anesthesiologists and residents, the residents were more satisfied overall. There were no significant differences in satisfaction between genders or between older and younger anesthesiologists. No significant difference was found between regions. Overall satisfaction ranged from 71% (Western region) to 80% (Quebec).

Looking at different aspects of clinical work (Table II), there were significant differences in responsibilities between the regions. Of note, anesthesiologists in the Prairies were less frequently involved in intensive care unit (ICU - attending 13 *vs* 28% overall; ventilation 17 *vs* 46% overall, *P* < 0.001) and chronic pain (16 *vs* 30% overall, *P* < 0.001), but worked more frequently in private clinics (70 *vs* 54% overall, *P* < 0.001). However, commitment to any sub-speciality of anesthesia e.g., chronic pain, ICU attending/ventilation etc., was not associated with a significant increase in overall job satisfaction.

The type of hospital, community or teaching, did not affect overall job satisfaction. Reasons for job satisfaction were similar, although the teaching hospital group reported significantly more intellectual stimulation and interaction with colleagues. Community physicians had a broader range of clinical responsibilities, with more commitments (attending or ventilation) in ICU (70 *vs* 28%, *P* = 0.001), acute and chronic pain clinics, and in private clinics. Their teaching hospital colleagues did significantly more research (58 *vs* 6%) and teaching (93 *vs* 41%).

The 25% of respondents who graded job satisfaction between 1 and 3 on the Likert scale (1% grade 1, 5% grade 2 and 19% grade 3) were demographically similar to the more satisfied anesthesiologists (65% grade 4, 10% grade 5). There were no significant differences in regions, working practices or clinical responsibilities between the more satisfied and less satisfied groups.

TABLE II Clinical responsibilities of anesthesiologists and hospital characteristics among five geographical locations

<i>Clinical work</i>	<i>Western</i> <i>n (%)</i>	<i>Prairie</i> <i>n (%)</i>	<i>Ontario</i> <i>n (%)</i>	<i>Quebec</i> <i>n (%)</i>	<i>Atlantic</i> <i>n (%)</i>	<i>Total</i> <i>n (%)</i>
Teaching hospital	69 (42)*	#112 (70)* #	226 (58)	97 (68)	49 (54)	553 (59)
ICU attending	43 (29)	18 (13)* #	102 (30)	47 (36)#	24 (30)	234 (28)
ICU ventilation	77 (50)	24 (17)* #	168 (49)	90 (66)* #	34 (42)	393 (46)
Acute pain team	126 (80)	104 (69)	257 (71)	110 (82)* #	51 (63)* #	648 (73)
Chronic pain clinic	34 (23)	22 (16)* #	92 (27)	71 (54)* #	28 (36)	247 (30)
Consult clinic	141 (88)	135 (88)	339 (91)#	84 (64)* #	78 (89)	777 (86)
Private clinic	57 (66)	65 (70)* #	87 (50)	17 (34)	8 (25)* #	234 (54)
Radiology	17 (20)#	19 (20)	54 (31)	25 (50)* #	10 (31)	125 (29)
Other offsite work	13 (15)	9 (10)* #	32 (19)	8 (16)	14 (44)* #	76 (18)
Research	33 (22)* #	55 (37)	131 (37)	63 (48)* #	33 (39)	315 (36)
Teaching role	95 (60)	131 (85)* #	259 (71)#	100 (75)	62 (72)	647 (72)
Administration	90 (58)	86 (57)	200 (56)	79 (59)	47 (57)	502 (57)
≥10 ORs	66 (40)	103 (64)* #	231 (60)	59 (42)* #	50 (56)	509 (55)

*Significant difference in group from total ($P < 0.05$); # significant difference between highest and lowest regions ($P < 0.05$).

ICU=intensive care unit; OR=operating room.

OR assistance

Only 55% of anesthesiologists were satisfied (grades 4 or 5) with their assistance in the OR. Routinely, ORs had a combination of nurses (in 80%), respiratory therapists (in 36%) and anesthesia assistants (in 22%). Only 30 anesthesiologists (3.2%) had no assistance at all. Of note, 19% of the respondents have no assistance with insertion of *iv* catheters while 25% have no assistance during patients' emergence from anesthesia. The specific roles of these staff in the OR are summarized in Table III. Satisfaction with OR assistance was associated with overall satisfaction i.e., the number satisfied with OR assistance and overall (84%) was significantly greater than those less satisfied with OR assistance but satisfied overall (64%, $P=0.001$).

The type of assistance received varied from region to region, with respiratory therapists predominant in Quebec (76%) compared to 28% elsewhere ($P=0.001$). Nurses accounted for over 90% of assistance in Ontario, Western regions and Prairie Provinces, 80% in Atlantic regions but only 10% in Quebec. No assistance in the OR was reported mostly from the Western provinces (6%) and least in Quebec (0.7%). Looking at regional satisfaction with OR assistance, 86% of those from Quebec were satisfied compared to 39% from the Western provinces ($P=0.001$).

Community hospital workers reported significantly greater satisfaction with OR assistance than their teaching hospital colleagues (58 *vs* 52%, $P=0.001$). The same was true in smaller *vs* larger hospitals (61 *vs* 49%, $P=0.001$). The older age group were significantly more satisfied with OR assistance (62 *vs* 53% $P=0.04$).

Anesthesiologists' perception of surgeons' attitudes

Anesthesiologists' perceptions of surgeons' attitudes varied with region and experience. Only 45% of respondents felt highly regarded by surgeons (graded 4 or 5 on the Likert scale). Forty-five percent responded that they were usually consulted for difficult medical problems. However, most surgeons accepted the anesthesiologists' choice of anesthetic technique (85%) and respected their decision to cancel cases (68%). Twenty-two percent of the anesthesiologists felt frequently pressurized for time in assessing patients and inducing anesthesia (21%). In the OR only half the surgeons ever asked to start a case or thanked their anesthetic colleagues at the end (49%).

Perceptions of surgical attitudes significantly affected overall job satisfaction. Those who felt highly regarded by their surgical colleagues reported 87% overall satisfaction compared to 65% of those who did not ($P=0.001$). Similar results were found for all other interactions with surgeons e.g., consulting about difficult cases, accepting anesthetic technique and cancellations etc.

There was considerable variation in perception of surgical attitudes between regions. Perceived high regard varied from 52% in Atlantic provinces, 51% in the Prairies, 46% in Quebec, 43% in Ontario to 36% in Western provinces ($P < 0.05$).

The older respondents found higher regard from the surgeons in comparison to younger respondents (55 *vs* 42%, $P=0.01$). Not only were they consulted more, their techniques and cancellations were accepted more readily than those of the younger anesthesiologist.

TABLE III Regional differences in OR assistance

	<i>Quebec %</i>		<i>Other regions (average %)</i>		<i>P value chi-squared test</i>
Overall OR assistance	RT	76	RT	28	0.001
	Nurse	10	Nurse	92	0.001
	AA	26	AA	5	NS
	None	0.7	None	7	NS
Transfer patients to OR	RT	32	RT	2	0.001
	Nurse	61	Nurse	88	0.001
	AA	13	AA	5	0.001
	None	11	None	7	NS
Apply standard monitoring	RT	73	RT	7	0.01
	Nurse	9	Nurse	91	0.001
	None	0.7	None	7	0.005
Assist with <i>iv</i>	RT	73	RT	7	0.001
	Nurse	11	Nurse	72	0.0011
	AA	26	AA	9	0.001
	None	2	None	22	0.001
Assist with arterial/CVP catheters	RT	73	RT	27	0.001
	Nurse	5	Nurse	57	0.001
	AA	6	AA	19	NS
	None	1	None	12	0.001
Assist at induction	RT	7	RT	10	0.01
	Nurse	8	Nurse	93	0.01
	AA	26	AA	11	0.001
	None	0.7	None	3	NS
Assist at emergence	RT	73	RT	21	0.001
	Nurse	6	Nurse	69	0.01
	AA	25	AA	4	0.001
	None	3	None	29	0.001
Obtain drugs/equipment	RT	70	RT	20	0.01
	Nurse	18	Nurse	79	0.001
	AA	25	AA	211	NS
	None	4	None	8	0.04

RT=respiratory therapist; AA=anesthesia assistant; NS=not significant; OR=operating room; CVP=central venous pressure.

Similarly, staff anesthesiologists felt more highly regarded than the residents (47 *vs* 17%, $P=0.001$).

Perceived public attitudes

Sixty-three percent of respondents believed patients recognized anesthesiologists as medical doctors. Thirty-five percent of anesthesiologists do not routinely explain their intraoperative role preoperatively to their patients. In addition, few anesthesiologists regularly gave talks to the lay public about anesthesia (4%). Older anesthesiologists felt they were more likely to be recognized as medical doctors (76 *vs* 61%, $P=0.001$). Again, perception of patient appreciation of the anesthesiologist's status as a medical doctor resulted in higher levels of overall job satisfaction (82 *vs* 63%, $P=0.001$).

The majority of anesthesiologists regarded their own role as a perioperative physician (66%) or as part of a multidisciplinary surgical team (32%). Few

believed "it was just a job" or that their role was purely to provide a service to the surgeon.

Discussion

Overall satisfaction

Three quarters of Canadian anesthesiologists in this survey reported high job satisfaction (grades 4 and 5). The main reasons for satisfaction were good quality of patient care, intellectual stimulation and interaction with the patients (Table I).

No differences were found in overall satisfaction with respect to gender, age, type of hospital, size of hospital or clinical responsibility. Residents were significantly more satisfied than the staff anesthesiologists. Specifically, more residents cited intellectual stimulation as a reason for satisfaction and they were less dissatisfied with the long hours compared to the staff.

Consistent with our findings of overall job satisfaction, a study of Canadian anesthesiologists in 1988

FIGURE

reported mean visual analogue satisfaction scores of 60.8 ± 22.7 on a 100 mm scale,⁵ and a recent Belgian study showed that more than 75% of anesthesiologists indicated a job satisfaction score of 7 on a scale of 0–10.⁶ A study of female physicians quoted a higher satisfaction of 84%.⁷ Most other studies of job satisfaction have highlighted the negative aspects of the profession, in particular long hours, poor pay, poor professional image, job stress, lack of control, production pressure and medico-legal problems.^{6,8–10}

The main reasons for dissatisfaction found in our survey were treatment by the provincial government, hospital politics and long hours. Dissatisfaction due to treatment by the government over the last decade is widespread. Sustainability of the current healthcare system is constantly being challenged in view of insufficient federal government funding, the expanding and aging population, increased consumer expectations and rapid technological development.¹¹ Access to healthcare is problematic due to bed and hospital closures, nursing and medical staff shortages and increased waiting times for consultation and surgery. Analysis of anesthesia physician resources predicts a continuing deficit of anesthesiologists in the future.⁴

Regarding hours worked, average hours per week varied in other studies from 52 ± 16 to 62 ± 17 hr,¹² similar to 59 ± 11.9 hr in this study. A survey from the USA correlated work stress in anesthesiologists with the number of hours spent in the OR.⁸ In this study, mean hours in the OR per week were 43 ± 17 hr. Results of the Canadian Medical Association Physician Resource Questionnaire show physicians are now

working longer hours (mean increase of 6.4 hr per week from 1993 to 1998),^a compared to the average 31.4-hr working week of the general population.^b

Residents were more satisfied overall than staff members. Intellectual stimulation (77 *vs* 52%), interaction with colleagues (60 *vs* 47%) and good hours (33 *vs* 18%) were stated more commonly as contributing factors to satisfaction by residents compared to staff.

Satisfaction with OR assistance

To our knowledge, this is the first survey to assess Canadian anesthesiologists' satisfaction with OR assistance. Only 55% of the respondents were satisfied with their current assistance, and this was found to be significantly associated with overall job satisfaction. The Australian Anesthetic Incident Monitoring Study (AIMS) has shown that quality of anesthetic assistance is associated with both the development and resolution of critical incidents.¹³ From 5837 reports, inadequate assistance contributed in 187 cases whilst skilled assistance in 808 cases minimized the incident. Adequately trained anesthesia assistants are considered essential for the safe conduct of anesthesia in Australia.

The type of assistance in this survey varied significantly between regions. Anesthesia assistants were not specifically defined in this study but presumed to be those providing assistance to the anesthesiologist without formal respiratory therapy or nursing training. Nationwide, the number of respiratory therapists has been quoted as 5588, with 2200 (39%) of these employed in Quebec.^c Comparing OR assistance in Quebec and other regions (Table III), of note there was significantly less assistance at emergence (none: 29 *vs* 3%) and with *iv* insertion (none: 22 *vs* 2%) in regions outside Quebec. Regional satisfaction with OR assistance also varied, from 86% in Quebec to 39% in British Columbia and the Northwest Territories.

Satisfaction with OR assistance was associated with the type of hospital and age of anesthesiologist. Those working in smaller community hospitals reported greater satisfaction. Presumably smaller non-teaching hospitals rely on OR assistance as there are no residents available to fulfil this role as in teaching establishments. Similarly, community hospitals are more likely to undertake

^a Canadian Medical Association Physician Resource Questionnaire, 1998. In: Physician Workforce, CMA website: www.cma.ca/inside/annmeet/132bg/bg-04.htm

^b Statistics Canada website: [www.statcan.ca / Labour , employment and unemployment - average weekly hours](http://www.statcan.ca/Labour_employment_and_unemployment_-_average_weekly_hours) (1999).

^c Website of respiratory therapy in Alberta: www.compumart.ab.ca/plitwin/rt.htm (1999).

numerous short cases which means increased pressure for rapid OR turnaround necessitating more assistance.

Older anesthesiologists were more satisfied with OR assistance than their younger colleagues. Several factors may contribute, including increased familiarity with working practices, nursing colleagues and those providing anesthesia assistance.

Perceived surgeons' attitudes

In this study, perception of surgical attitudes toward anesthesiologists significantly affected overall job satisfaction. Those who felt highly regarded expressed increased overall job satisfaction. Perceived surgical attitudes varied with age and experience.

A good relationship with the surgeon is of fundamental importance in the practice of anesthesia. Poor interpersonal relationships may lead to considerable stress in the OR where anesthesiologists may feel powerless to change or control situations in an environment where the surgeon is commonly perceived to be in charge.⁹ Despite the relatively low proportion of anesthesiologists who felt highly regarded by their surgical colleagues in our survey, most surgeons respected anesthetic decisions on case management and patient cancellation.

In a study of Californian anesthesiologists, 96% indicated they often or always had a good working relationship with the surgeons but slightly over half did not believe that surgeons understood the risks of anesthesia.¹² Nearly half of the respondents had witnessed production pressure resulting in unsafe actions by an anesthesiologist. Not only did they feel pressure within themselves to work agreeably with the surgeons, avoid delays and litigation, they experienced overt pressure from the surgeons to proceed with cases instead of cancelling them and to hasten anesthetic procedures.

The senior age group in this survey felt more highly regarded by surgeons, as did the staff anesthesiologists in comparison to the residents. These results are consistent with

Clarke's findings that self-esteem and emotional stability increases with age.⁵ Younger physicians tend to find interpersonal relationships more stressful than their older colleagues do.¹⁴

Perceived public's attitudes

Patients' perceived appreciation of the anesthesiologist's role led to higher overall satisfaction in this study. Only 63% of respondents perceived that they were recognized as medical doctors.

Other work has reported rates of patient recognition of the anesthesiologist as a physician between

65% and 82%,¹⁻³ although few could mention any anesthetic roles outside the OR. In North America, the media portrayal of the anesthesiologist's role is rarely accurate. Even among patients who recognize that anesthesiologists are physicians, few understand their role in the hospital. Explaining our intraoperative role to patients before surgery may raise awareness. In this survey, 35% of anesthesiologists did not routinely explain their role to the patients preoperatively. Patient education is an important method to raise the anesthesiologist's profile amongst the public. Only 4% of the respondents in this study had given talks to the lay public about anesthesia. Provision of an information sheet preoperatively to outpatients has previously been shown to improve patients' understanding of the role of the anesthesiologist.²

There are several limitations to this study. First, our survey response rate was 57%. The survey was sent to active and resident members of the Canadian Anesthesiologists' Society. We do not know if the respondents are representative of the overall membership of the Canadian Anesthesiologists' Society or of all anesthesiologists across the country. Secondly, regarding surgeons' attitude towards anesthesiologists, we are asking anesthesiologists' perception of how surgeons see them. We did not question the surgeons directly about their attitudes towards anesthesiologists. Thirdly, there may be factors not included in the survey that contribute to anesthesiologists' job satisfaction. We did not include open questions for respondents to write down such factors.

Conclusions

Overall, 75% of Canadian anesthesiologists were satisfied by their professional work. Yet, we believe these numbers may be increased by improving on factors, identified in the present study, that contribute to job satisfaction. Thus, according to the results of our survey, increasing intellectual stimulation, allowing better quality of care, improving interaction with patients and providing adequate OR assistance should enhance job satisfaction. Enhancing the way in which anesthesiologists are regarded by surgeons by improving communication, identifying areas of dissatisfaction and correcting them should also, in the long term, contribute to increase professional satisfaction among Canadian anesthesiologists.¹ Accordingly, raising the profile of anesthesia, both among the public and fellow health professionals, should be one of our priorities.

APPENDIX Anesthesia practice satisfaction survey

Demographics

1. Age 25–35 yr 35–44 yr 45–44 yr
 55–64 yr ≥65 yr
2. Gender M F
3. Years in practice
 0–9 yr 10–19 yr ≥20 yr
4. Average hours of work per week (incl. call) _____
5. Province of work _____
6. Type of hospital Teaching Community
7. Numbers of OR in your hospital
 1–4 5–9 10–14 ≥15

Clinical responsibilities

1. OR Yes No
2. ICU attending Yes No
3. ICU ventilation Yes No
4. Acute pain team Yes No
5. Chronic pain service Yes No
6. Consultations in consult clinic Yes No
7. Offsite service Private clinic Radiology
 Other:
8. Research Yes No
9. Teaching Yes No
10. Administration Yes No

OR assistance

1. How satisfied are you with the assistance in OR?
(circle approximate number)

Totally dissatisfied *Totally satisfied*
1 2 3 4 5

2. What assistance do you have in OR routinely?
(choose one or more)

OR nurses
Respiratory therapist
Anesthesia assistant
None

3. Which of your assistants usually: (choose one or more)

Nurses RT A. Assistant None

Help bring patients from holding area into OR

Help apply standard monitors

Assist with *iv*'s

Assist with arterial line/ CVP

Assist at induction

Assist at emergence

Assist with obtaining drugs/equipment

Surgeons' attitudes and perception

1. How would you rate the surgeons' attitude towards anesthesia?

No respect *Equal in status*
1 2 3 4 5

2. Do your surgical colleagues:

Never Sometimes Always
Rarely Frequently

- a) Consult you for medical problems ?
1 2 3 4 5
- b) Readily accept your decision in cancellation of cases
1 2 3 4 5
- c) Readily accept your choice of anesthetic technique?
1 2 3 4 5
- d) Pressurize you for time taken for assessment/induction
1 2 3 4 5
- e) Ask if they may start the case?
1 2 3 4 5
- f) Thank you at the end of the case?
1 2 3 4 5

Public perception

1. Do you explain to patients preop your role intraoperatively?
1 2 3 4 5
2. Do your patients know that you are an MD?
1 2 3 4 5
3. Do you give talks to lay public about anesthesia?
1 2 3 4 5

Self perception and job satisfaction

1. How would you rate your overall job satisfaction
Totally dissatisfied *Totally satisfied*

1 2 3 4 5

2. How would you describe the role of an anesthesiologist (choose one)

As a perioperative physician
Part of a multidisciplinary surgical team
Providing a service to the surgeon
Mainly as a technician
Just a job

3. What aspects of your practice bring you the most satisfaction (choose one or more)

Providing good quality of patient care
Intellectually stimulating
Interaction with anesthesia colleagues
Interaction with surgeons

Interaction with patients
 Good hours
 Financial

4. What aspects of your practice bring the most dissatisfaction (choose one or more)

Boredom in OR
 Not able to upkeep knowledge/applications
 Lack of resources/equipment
 Interaction with anesthesia colleagues
 Lack of recognition by surgeons
 Lack of recognition by patients
 Long/unpredictable hours
 Financial
 Treatment by the provincial government
 Hospital politics

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