Ontario Medical Association - Section of Neurology

Crisis in Neurology

Executive Summary

The best care for patients with a neurologic disease is by Neurologists. If patients with neurological disorders are to obtain good medical care, a way must be found to make the limited Ontario neurologist supply go further. Action must be taken immediately to stabilize the provision of care for patients with suspected or established neurologic disorders and increase access.

Background

Neurology has transformed over the past several decades from a largely diagnostic specialty to one with significant therapeutic involvement. There is an increasing need for neurological specialists to provide care for patients with acute and chronic neurological disorders because of increasingly complex treatment regimens and the increasing prevalence of neurologic disorders. Cognitive dysfunction, dementia, stroke, cerebrovascular disorders, and afflictions of the peripheral nervous system (ALS, peripheral neuropathies) preferentially affect an aging population. Simultaneously a more sophisticated public is demanding detailed evaluation of neurological symptoms including specialist consultation.

The role of neurology participating in the acute setting is well demonstrated in the emergency department of any general hospital. In one study neurological evaluation changed the diagnosis from that of the emergentologist in a major way in 52.5% of patients.[1] This study confirms the prevalence of neurological disorders in emergency departments with neurologists called to evaluate 14.7% of all patients admitted to the emergency department.

More recently Dr Matthew Giles and Professor Peter Rothwell of the Stroke Prevention Research Unit at the University of Oxford, UK, reviewed studies of the risk of stroke within seven days after a TIA to estimate overall stroke risk. The researchers looked at 18 studies that included 10,126 patients.[2] They found that one in 20 patients who have a TIA will go on to have a stroke within a week, a devastating event. The lowest risks of stroke were seen in those patients who had emergency treatment in specialist stroke units for their TIA. The highest risk was in those patients who didn't receive urgent treatment (11 per cent).

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[1] Moulin T, Sablot D, Vidry E, et al. Impact of emergency room neurologists on patient management and outcome; Eur Neurol 2003; 50:207-214

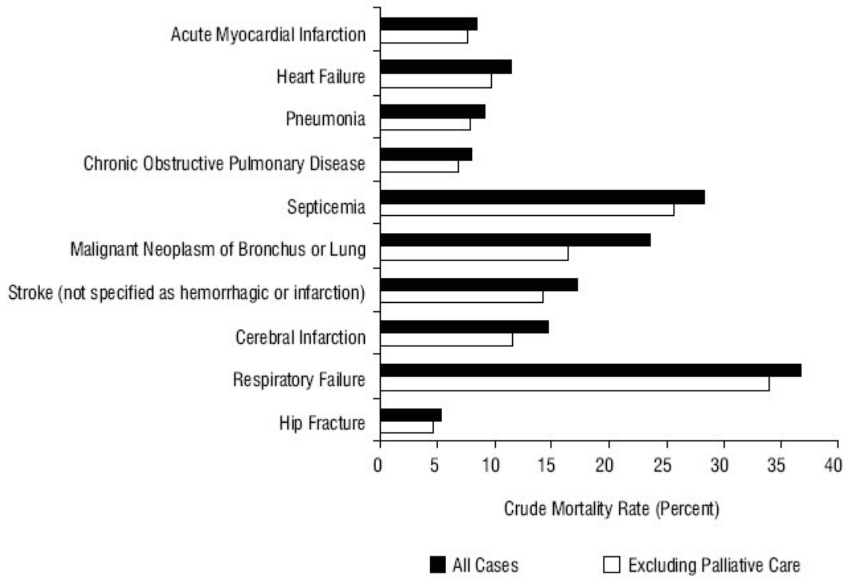
[2] Giles MF, Rothwell PM. Risk of stroke early after transient ischaemic attack: a systematic review and meta-analysis.Lancet Neurol. 2007 Nov 9

The consequences of neurological illness are devastating. The CHIH data for hospital mortality list neurologic disease as a leading cause of death.

Figure 1 [3]

4 Leading Diagnoses Among Patients Who Died in Acute Care Hopitals

The 10 conditions shown below collectively accounted for 44% of all hospital deaths (excluding patients that hospitals recorded as having received palliative care). This fact reflects both how often hospitalized patients have these diagnoses and their associated death rates. The graph below shows crude (unadjusted) in-hospital death rates in 2006–2007, ordered from top to bottom based on the number of deaths by condition.



3 http://secure.cihi.ca/cihiweb/products/HSMR_hospital_mortality_trends_in_canada.pdf accessed December 4, 2007

The most recent figures provided by the Economics Department of the Ontario Medical Association (see Table 1) indicate that the number of neurologic consultations (in-patient C185 and out-patient A185) has fallen in the last year, suggesting that this valuable resource is not being utilized. We attribute this to neurology manpower issues. This is, in part, because Ontario is not seen as an attractive location for practice, especially for community neurologists. Worrisomely the volume of inpatient services (C185) is unchanged compared to 2002-2003, the year after the largest increase in Neurology specialists (see below).

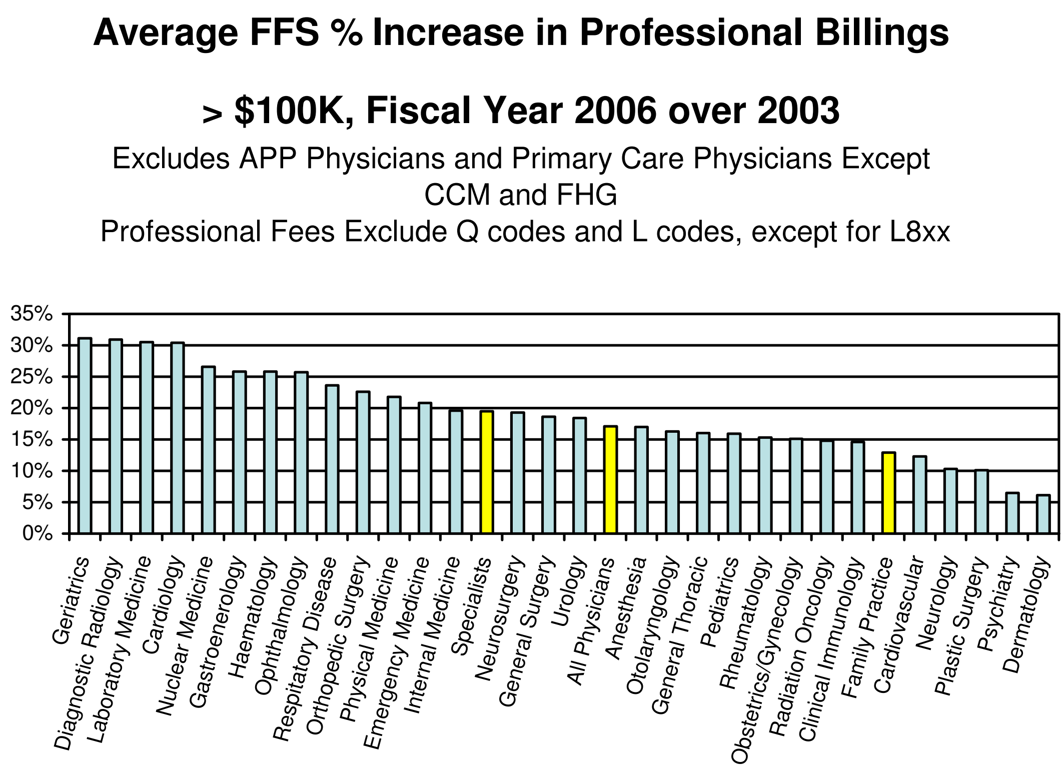
Table 1 - Neurology Top 25 Services 2002 to 2006

NEUROLOGY: Professional Top 25 Services
2002/03 to 2006/07

			Total Services				
2006 Rank	Fee Code	Description	2006/07	2005/06	2004/05	2003/04	2002/03
1	A185	CONSULT.-NEUROL.	199,792	200,191	189,985	185,565	192,269
2	G455	DXT.PHYS.MED-PROF.COMP. W.EMG. AND/OR PERF/SUPER/INTERP.	72,279	71,846	68,714	67,365	63,957
3	A183	GEN. ASSESS.-NEUROL.	43,317	40,659	37,165	38,585	43,554
4	A184	GEN. RE-ASSESS.-NEUROL.	50,024	49,108	45,977	43,783	46,829
5	A188	PARTIAL-ASSESS. -NEUROL.	69,842	74,064	76,551	76,715	80,633
6	A181	Complex medical specific re-assessment	33,571	30,069	23,202	16,480	5,865
7	C185	CONSULT.-NEUROL.-HOSP.	13,433	14,253	12,994	11,974	13,326
8	G418	EEG - PROFESS. COMP. (16-21 CHANNEL EEG)	39,575	30,452	29,547	29,533	31,712
9	C182	SUBSEQ.VISITS-UP TO 5 WEEKS-NEUROL.-HOSP.	43,838	46,383	46,406	43,851	49,698
10	E078	CHRONIC DISEASE ASSESSMENT PREMIUM	64,502	27,065	N/A	N/A	
11	A186	RE-CONSULT.-NEUROL.	7,967	8,323	6,620	6,391	7,514
12	G457	DXT.PHYS.MED-PROF.COMP. W.EMG.AND/OR PERF/SUPER/INTERP.	7,774	7,822	8,662	8,403	10,527
13	J890	LEVEL 1 OVERNIGHT SLEEP STUDY					
14	G545	NEUROLO.VIDEOTAPE RECORD.EEG PROF.TO G540	30,586	3,623	3,359	2,737	3,886
15	G138	D/T.PROC.NEUROLOG.EVOKED POTENT'L.TWO LIMBS PROF(P1)	4,662	5,602	5,489	5,726	6,218
16	C188	CONCURRENT CARE-NEUROL.-HOSPITAL	9,345	11,248	11,840	11,961	13,326
17	A385	LIMITED CONSULT.-NEUROL.	3,120	3,714	3,624	3,743	4,609
18	G250	D/T. PROC.-NERVE BLOCK-THER.-MAXILLARY/MANDIBULE-TRIGEMIN					
19	C994	SPECIAL VISIT HOSP.NIGHT-SAT-SUN-HOLS. 5-12PM 1ST PAT.SEEN	4,224	3,725	3,667	3,517	4,417
20	K013	COUNSELLING-ONE OR MORE PEOPLE-PER 1/2HR.	4,458	4,760	4,485	3,704	5,071
21	H123	EMERG.DEPT.PHYS.ON DUTY 12MN-8AM MULT.SYST.ASSESS.	3,866	4,380	4,016	3,459	3,008
22	J889	NUCLEAR MED.-NERV.SYST.HMPAO REGION'L BRAIN PERFUS.W.SPE					
23	J201	DIAG.ULTRASOUND-DUPLEX SCAN SIMULT.REAL TIME.B MODE VASC	4,277	4,333	3,270	2,441	2,309
24	K994	SPECIAL VIS TO EMERG/OPD NIGHT 5-12MN/SAT/SUN/HOLS 1ST PAT	3,256	2,760	2,572	2,444	2,824
25	R990	SURGICAL PROCEDURE-NOT SPECIFICALLY LISTED-I.C.	2,292	2,066	1,556	503	
	Subtotal Top 25 Professional Services		724,432	663,777	685,751	675,128	598,903
	Total Professional Services		848,319	760,242	697,861	874,518	710,896
	Total Professional Services Including Assistant/Anaesthetic units		848,874	763,415	700,908	876,627	712,108

Given the population of Ontario increased by 4.6% from 2002 to 2006 utilization from 2003-4 to 2006-7 the volume of services has not kept pace. Thus Ontario neurologists find themselves in the unenviable position of working long hours in order to service an expanding, ageing population with increasingly demanding and complex neurological problems. We believe this is reflected in Figure 2 that demonstrates an increase in fee for services attributable largely to the increase in volume of follow up patient encounters.

Figure 2[4]



We believe these data should cause great apprehension in the Ministry. We do not believe these data point to a decline in prevalence of neurologic illness, but rather to underutilization of the cost- and life-saving value of a neurological consultation and subsequent care.

[4] OMA Economics Department received November 26, 2007 per Dr. Kralj

Manpower

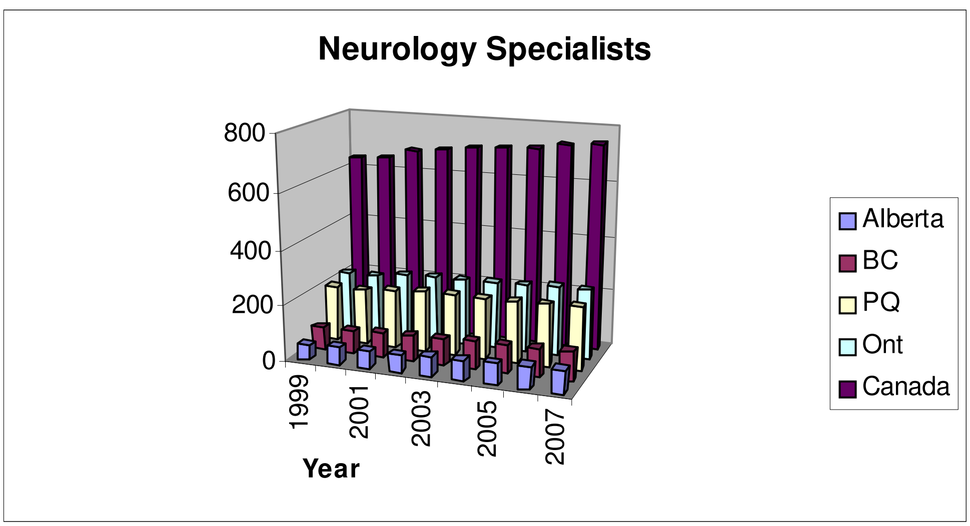
Current requirements for neurology specialty training involve a minimum prescribed 5 years of postgraduate training after medical school and successful examination in the specialty of Neurology as set by the Royal College of Physicians and Surgeons of Canada.[5] In any year there are less than 30 candidates who meet these requirements. This year, 2007, there were 29 non-visa trainees who may have successfully completed their Canadian training in Neurology. Some may go on to areas of endeavour other than clinical service. Some will have left the country since the training is recognized in other countries.

Table 2 Neurology Specialists by Province/Year[6]

	1999	2000	2001	2002	2003	2004	2005	2006	2007
Alberta	57	61	63	63	73	73	76	82	84
BC	83	85	90	93	96	102	103	105	106
PQ	202	203	213	220	223	221	220	225	226
Ont	224	224	239	242	242	246	247	255	254
Canada	636	644	678	689	703	712	715	735	743

The number of specialists in Neurology varies according to the source. According to the CMA, specialists in Neurology accredited in the treatment of neurologic disease have only increased across Canada by 107 in the intervening 8 years. If so, Canada is very likely to soon run seriously short of neurologists, and it may already be some distance down this road.

Figure 3 - Neurologists in Canada



[5] http://rcpsc.medical.org/residency/accreditation/ssas/neurol_e.html#content accessed November 17, 2007
[6] http://www.cma.ca/index.cfm/ci_id/16958/la_id/1.htm#spec-age
http://www.cma.ca/index.cfm/ci_id/16958/la_id/1.htm#prov-spec
accessed November 17, 2007

Ontario has a net increase of only 30 additional Neurologists over the last 8 years. Of these, one-half came in 2001. We believe this explains some of the recent OHIP utilization data.

Table 3 Number of physicians by specialty and age, Canada, 2007[7]

	<35	35-44	45-54	55-64	65+	unknown	Total
Family Physicians	2412	847	10593	7636	3041	632	32784
Medical Specialists	1346	5643	6962	5249	3180	362	22742
Surgical Specialists	452	2221	2258	1760	1443	126	8260
Neurology	38	192	212	164	133	4	743

We also draw the Ministry's attention to the effect of aging of the neurology workforce. (see Table 3) According to one survey of neurologists in adult neurology practice, 20% of neurologists are currently over age 60, and 20% of neurologists overall indicated an intention to retire in the next five years.[8] If these intentions are implemented, simple arithmetic reveals the already precarious situation will deteriorate further very quickly.

As surely as retirements outnumber new additions to the current neurologist workforce, the ability of the remaining Ontario neurologists to serve the public is diminishing. "Currently those leaving neurological practice outnumber new recruits year after year, the (743) neurologists currently in the (Canadian) system act as a buffer, but it will not take long for this imbalance to be felt."[9]

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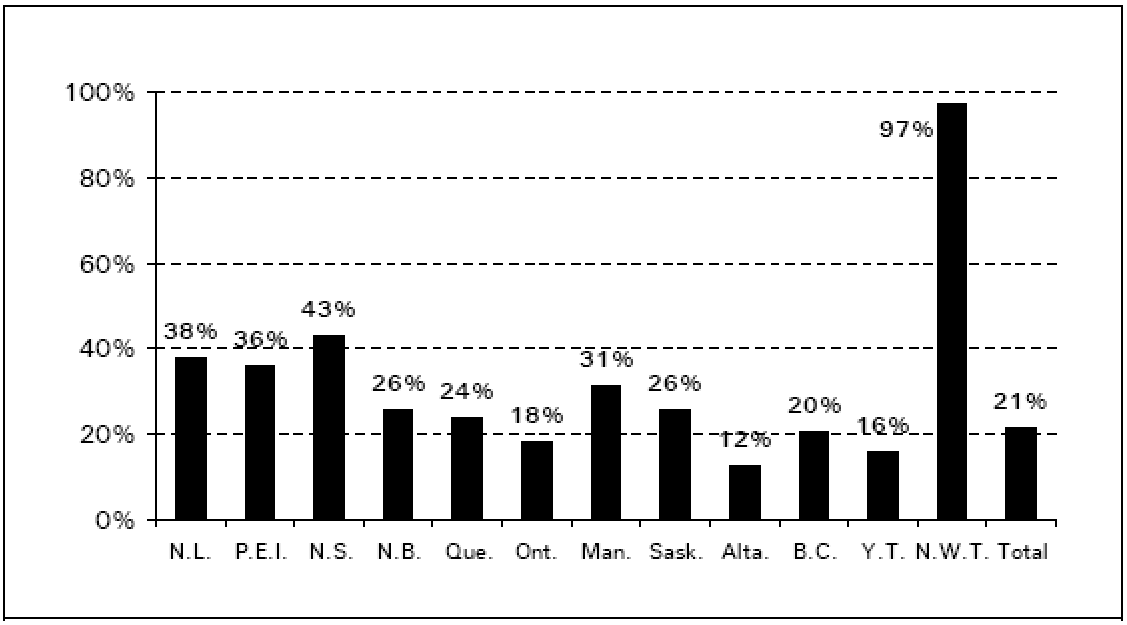
[7]http://www.cma.ca/multimedia/CMA/Content_Images/Inside_cma/Statistics/02SpecAge.pdf
[8] Bailey P, Warren S, Buske L. Highlights of the 2002 Canadian Neurological Society (CNS) Manpower Survey Can. J. Neurol. Sci. 2005; 32: 425-432
[9] Becker WJ. Neurologists and the Numbers (Editorial) Can. J. Neurol. Sci. 2005; 32: 399-400

Remuneration Fee For Service - Ontario versus Canada

The data in this report is limited to fee-for-service billing and payment information, which accounts for approximately 79% of total clinical payments to physicians in Canada in 2005–2006. All but Alberta and North West Territories have a greater percentage of physicians on alternative clinical payment schemes than Ontario, and Alberta is in the process of shifting many physicians, including neurology, to alternate payment systems.

Table 4 - % Physicians' Alternative Clinical Payments in Canada, Preliminary, 2005–2006[10]



[10] Canadian Institute for Health Information, Physicians in Canada: Average Gross Fee-for-Service Payments, 2005–2006 (Ottawa: CIHI, 2007). Figure 1 page 8

Neurology has a near flat or slightly bimodal distribution of overall income with a total of $52,738,896 in OHIP Billings attributed to Neurology in 2005-2006. The CIHI FFS average annual income for 2005-2006 is $30,000 higher than OMA derived data for the same period using a different methodology.

Table 5 - Neurology Distribution OHIP Professional Billings: 2005/06[11]

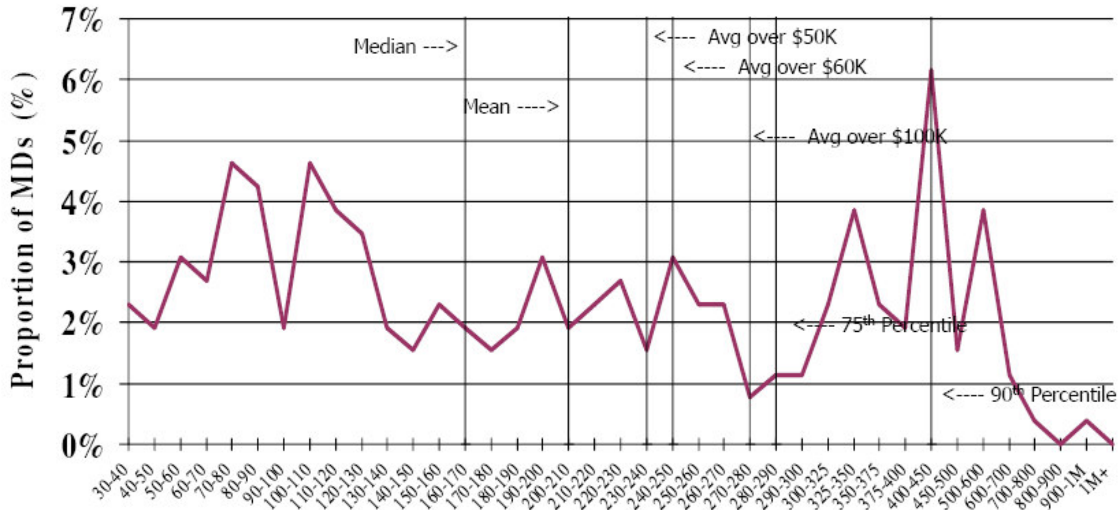


Table 6 - Ontario Neurology Net Income - 1995/96 to 2005/06[12]

	1995/96	1996/97	1997/98	1998/99	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06
OHIP FFS Physicians											
Gross Billings	232.5	223.1	223.6	216.8	219.6	219.5	221.2	220.9	210.7	213.0	228.7
Clawback	12.4	15.7	5.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OHIP Payments	220.1	207.4	217.6	216.8	219.6	219.5	221.2	220.9	210.7	213.0	228.7
WSIB	3.9	3.5	3.1	2.7	2.2	2.1	2.2	2.1	2.0	2.0	1.9
Total FFS	224.1	210.9	220.7	219.5	221.8	221.7	223.4	223.1	212.7	215.0	230.7
Expenses	86.7	84.3	77.8	75.4	76.4	76.4	77.0	76.9	73.3	74.1	79.6
Average Net	**137.3**	**126.5**	**142.9**	**144.0**	**145.4**	**145.3**	**146.4**	**146.2**	**139.4**	**140.9**	**151.1**
Revenue Canada: Self Employed Physicians											
Average Gross		305.2	306.5	297.2	301.1	300.9	303.2	302.9	288.9	292.0	313.6
Expenses		115.3	106.7	103.4	104.8	104.7	105.5	105.4	100.5	101.6	109.1
Average Net		189.9	199.8	193.8	196.3	196.2	197.7	197.5	188.4	190.4	204.5
Salary		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Net + Salary		**189.9**	**199.8**	**193.8**	**196.3**	**196.2**	**197.7**	**197.5**	**188.4**	**190.4**	**204.5**
Revenue Canada: All Physicians											
Average Gross		217.3	236.7	229.5	232.5	232.4	234.2	233.9	223.1	225.5	242.2
Expenses		79.4	78.2	75.7	76.7	76.7	77.3	77.2	73.6	74.4	79.9
Average Net		137.9	158.5	153.8	155.8	155.7	156.9	156.7	149.5	151.1	162.3
Salary		26.3	25.5	24.7	25.0	25.0	25.2	25.2	24.0	24.3	26.1
Average Net + Salary		**164.2**	**184.0**	**178.5**	**180.8**	**180.8**	**182.1**	**181.9**	**173.5**	**175.4**	**188.3**

[11] OMA Department of Economics, May 2007

[12] OMA Department of Economics, May 2007

Table 7 - Average Gross Fee-for-Service Payment per Physician Who Received at Least $60,000 in Payments by Type of Practice, 2005–2006[13]

	N.L.	P.E.I.	N.S.	N.B.	Que.	Ont.	Man.	Sask.	Alta.	B.C.	Total
Family Medicine	218,720	237,003	192,613	210,333	167,281	230,358	226,963	246,186	247,139	201,139	212,352
Medical Specialties	323,424	317,048	222,875	287,890	190,854	296,135	229,358	311,264	299,291	251,947	261,339
Internal Medicine	337,411	317,048	231,772	361,454	221,344	378,183	243,546	381,541	375,718	333,969	319,651
Neurology	244,232	n/a	424,046	312,634	207,202	260,859	229,230	276,164	234,032	260,397	245,070
Psychiatry	237,535	*	153,635	212,222	118,429	193,317	171,194	219,096	256,895	174,631	182,449
Pediatrics	318,476	*	211,259	224,727	167,828	252,278	215,233	249,912	229,642	202,303	220,118
Dermatology	360,603	*	307,914	324,019	246,855	322,655	293,776	375,803	637,723	322,180	320,844
Physical Medicine	n/a	n/a	193,821	*	174,093	221,060	192,065	*	170,395	183,882	199,292
Anesthesia	355,824	*	227,450	224,249	174,783	300,116	273,277	269,631	290,664	241,347	259,261

Table 8

Interprovincial Fee Comparison 2007
Neurology (Top 5 Services)

FSC	Description	ON	ON Adjusted*	B.C.	AB	SK Spec	MB	PQ Spec	NB	NS	P.E.I.	NL Spec
A185	CONSULT.-NEUROL.	$127.50	$127.78	$152.59	$163.98	$123.86	$134.00	$105.45	$122.82	$132.60	$120.00	$109.00
G456	D&T,PHYS.MED-PROF.COMP. W EMG. AND/OR PERF/SUPER/INTERP.	$99.35	$99.35	$123.52	$61.58		$83.55	$65.00	$110.40	$113.82	$74.55	
A183	GEN. ASSESS.-NEUROL.	$58.25	$66.07	$38.39	$83.30	$60.09	$67.10	$54.84	$68.13	$53.04	$54.00	$57.36
A184	GEN. RE-ASSESS.-NEUROL.	$45.90	$52.19	$38.39	$37.16	$60.10	$31.20	$58.15	$57.96	$26.52	$32.65	$49.17
A188	PARTIAL ASSESS. -NEUROL.	$30.10	$32.93	$38.39	$37.16	$60.03		$32.55	$36.68	$31.05	$28.00	$27.30

* Adjustment for premiums:
A185 0.2% age premium
G456 0.002% age premium
A183 0.07% for age premium and 13.4% for chronic disease premium
A184 0.0071% for age premium and 13.7% for chronic disease premium
A188 0.0002% age premium and 9.4% chronic disease premium

Recruitment and retention of neurologists in Ontario is significantly hampered by remuneration, as demonstrated in an interprovincial comparison in Table 7. Ontario's Neurologists ranked 5th in the country in Fee-for-service revenue in 2005-2006. (Table 8) As other provinces (namely Alberta) pursue alternate payment systems we understand this will significantly increase incomes for neurologists elsewhere (personal information – Nicolle). Thus, while the demand for expert neurological care increases, the attraction to practice in Ontario plummets relative to almost all other large jurisdictions in Canada. We suggest this is a priority to be immediately addressed independently during the upcoming 2008 OMA-MOHLTC negotiations.

Hospital expectations of service to acutely and seriously ill patients and on call responsibilities with inherent personal and professional opportunity costs have become major drawbacks to recruitment. Although the OMA is charged with distributing hospital on-call funding, it has been of limited benefit to neurologists covering large catchment areas. Only recently has some redress been offered to neurologists in large centres who for years, at personal cost, and despite repeated entreaties to the OMA, have been altruistically providing direct level II care while only recognized as level III on call responsibility. We ask this also be addressed independently during the upcoming 2008 OMA-MOHLTC negotiations.

[13] Canadian Institute for Health Information, Physicians in Canada: Average Gross Fee-for-Service Payments, 2005–2006 (Ottawa: CIHI, 2007).

Options

These data predict an impending and significant crisis in the ability of the Ontario health care system to efficiently and adequately manage patients with neurological disorders. We are about to encounter an aging patient population, an aging neurologist workforce, increasing therapeutic options for neurological disorders, which require specific neurological expertise, and a widening gap between the increasing attractiveness of practicing in jurisdictions other than Ontario.

Simply put, new trainees are not considering neurology as a lifetime career choice in Ontario. Steps must be undertaken to remedy this. The costs of this will be offset by improvements in efficiency of care for patients with neurological disorders. It is important the Ministry of Health and Long Term Care of Ontario act immediately and forcefully to ensure continued and improved access to neurological service. Multiple strategies are necessary, but emphasis must be on those likely to provide immediate relief and stabilization of this service.

In this proposal we recommend that the Ministry immediately implement additional efforts. Relief for widespread inadequacies in neurology manpower, especially in the community, as well as for specialty support for chronic neurodegenerative and acquired neurologic disorders must be funded without delay.

The Ministry must encourage and commit to developing the most efficient mechanisms for delivery of care by neurologists. We call for funding of individual and institutional fellowships for Neurologists to stabilize clinical availability and scientific expertise in neurological fields.

The Ministry must also enable Neurologists to participate within nonphysician health professional teams to leverage our expertise and extend our services in managing acute and chronic neurological disorders. Premiums for such collaboration must be put in place.

We urge the MOHLTC to investigate the feasibility of Telehealth for extending expert neurological care to patients in Ontario. In so doing, we ask the MOHLTC to adddress the potential for breaching medical privacy and confidentiality by Telehealth in enhancing the overall care of the provinces and ask the MOHLTC to ensure professional liability for breach of confidentiality through an electronic medium is mitigated by legislated immunity.

Yours truly
E. Klimek MD FRCPC
Chair, on behalf of the executive and members,
OMA - section of Neurology