Statutory determinants and curriculum development in chiropractic colleges in the absence of university affiliation

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Statutory and administrative rules continue to influence curriculum in chiropractic colleges. Pressure is frequently exerted by jurisdictions to add classes or hours, or conversely to delete subject matter and procedures not included in the scope of practice acts. Lack of government funding and university affiliation perpetuates the diversity of curriculum content which must satisfy licensing boards driven by the varied scope of practice of statutes rather than following research supported standards of care.

(JCCA 1992; 36(4):222-227)

KEY WORDS: chiropractic, manipulation, curriculum, statutes.

Les règlements administratifs et législatifs continuent à avoir un impact sur les programmes d'étude dans les collèges de chiropraxie. Les juridictions exercent fréquemment des pressions pour l'ajout de classes ou d'heures de cours ou au contraire pour qu'on élimine les sujets et les procédures qui ne sont pas inclus dans les lois régissant la portée de la pratique. Le manque de subventions gouvernementales et d'affiliations universitaires provoque une diversité du contenu des programmes d'étude qui doit satisfaire aux exigences des organismes délivrant les licenses. Ces organismes obéissent aux diverses lois régissant la portée de la pratique plutôt que de se conformer aux normes adoptées par la recherche dans le domaine des soins médicaux.

(JCCA 1992; 36(4):222–227)

MOTS-CLÉS: chiropratique, manipulation, programmes d'étude, lois.

Chiropractic Practice and Basic Science Acts in North America have served as a force for curriculum change in chiropractic colleges. The advancement and progress of chiropractic education has largely been driven by societal demand for responsible health care promoted by these chiropractic practice acts. The diversity of the legislative statutes from one jurisdiction to another¹ in addition to the Basic Science Acts has both strained the profession's educational programs and provided impetus for curricular development.

Vear² (1971), stated that there must be a reevaluation of requirements for chiropractic licensure in all jurisdictions, such that licensing boards do not establish criteria for curriculum development in the colleges. He noted that the weighted value given to many subjects by licensing bodies requires that the colleges spend valuable time preparing students for board certification. The objectives of chiropractic education, he felt should not be to meet dated needs of licensing boards but to meet the specialized needs of practice.

The statutory Doctor of Chiropractic

One by one, state and provincial jurisdictions have adopted practice laws whereby chiropractic and chiropractors were recognized and regulated. In effect these laws created a new kind of health practitioner, a statutory doctor. This "creature of statutes" is a professional person endowed with all the rights and privileges accorded a doctor and in turn burdened with the duties and responsibilities which must be assumed by such persons. The chiropractor has a legal as well as ethical responsibility as a primary health care provider to diagnose conditions correctly, provide appropriate treatment, and consult or refer the patient to another health care provider when necessary.

The chiropractor under these statutes is concerned with health matters as they affect the whole person and deals with an unlimited number of health conditions not restricted to particular areas of the body in terms of the conditions treated. Chiropractors are not limited by statute to the eye or the foot as are the optometrist or the podiatrist. Chiropractors are limited by scope of practice acts which generally address two different areas of

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practice; diagnosis and treatment. Inasmuch as there is great variance in practice acts from jurisdiction to jurisdiction, colleges have been influenced to adapt their curriculum to prepare the chiropractor for licensure according to variations in diagnosis and treatment. The broader statutes permit a chiropractor to use any method of diagnosis that is taught in the chiropractic colleges. This puts pressure on the colleges to broaden the curriculum by teaching sophisticated scientific diagnostic procedures. The more conservative statutes limit methods of diagnosis and may restrict a chiropractor's use of such procedures as blood and urine testing. In the area of treatment, the broader statutes permit a chiropractor to use any therapy taught in the chiropractic colleges, including such items as physical therapy and nutritional counselling. The more conservative scope of practice statutes may restrict the modes of therapy and limit the modalities that may be used in the practice of chiropractic.5

The Flexner report

Historically, the 1910 Flexner report6 not only heralded a program for medical education reform but also became a compelling force for chiropractic practice acts and inevitably, criteria for curriculum planning in chiropractic colleges. This was not an unfavourable development considering the abysmal level of chiropractic education at that time. Shortly after the turn of the century when chiropractic colleges were first forming, there was an overly enthusiastic rush of graduates who decided to open colleges of their own. Altogether there were 100 or more chiropractic colleges in North America.7 Flexner took a dim view of the chiropractors excluding them from the category of medical sects practising at that time in opposition to allopaths. He included in this group; the homeopathists, the eclectics, the physiomedicals, and the osteopaths. He noted that "the public prosecutor and the grand jury are the proper agencies for dealing with them".6 As a result many chiropractors spent time in jail for practising medicine without a license. This led chiropractors to demand that legislators pass practice acts not only to enforce standards of education and practice but to protect the chiropractic profession through self government. The majority of chiropractic practice acts in North America were passed between 1913 and 1940 with Newfoundland in 1990, the last jurisdiction in North America to pass a statute.8

Proprietary colleges

As with early medicine, chiropractic educational institutions were proprietary, with no form of control other than competition among schools. Chiropractic education in 1910 ranged from short correspondence courses, to short apprenticeship experiences, to short residence courses. From the beginning, colleges were separated by philosophical differences in scope of practice and treatment modalities. This split dominated both the educational offerings and practice acts with the resultant wide variation in scope of practice among North American jurisdictions.

The proprietary status of chiropractic colleges began to change in the early 1930's from individual or family owned businesses to private, independent, not for profit institutions.

In the absence of university affiliation this transition has not been complete however and chiropractic colleges remain proprietary today in the sense that they are primarily funded by the chiropractic profession.

In a number of cases control remains in the hands of families or individuals. Personal philosophies continue to influence curricular content as a result.

Basic Science Acts

A major statutory factor influencing the curriculum of chiropractic colleges was the Basic Science Acts. Although Nugent a chiropractor, contributed to the wording of the first Basic Science Act introduced in Connecticut in 1924, 11 the basic science examinations were considered unfair and detrimental to the chiropractic profession by many. By 1926 a Basic Science Bill was either introduced or enacted in almost every state in the United States. These bills required all students of the Healing Arts to be examined by a Basic Science Board of Examiners comprised of basic science instructors and/or medical practitioners.

The makeup of the board varied from state to state, for example in Oregon the examiners were professors of the subjects dealt with, selected from the faculties of the colleges and universities in the state. None of them could be associated with or interested in the practice of the healing arts. Candidates for the examination were not to disclose what they intended to practice or whether they had a degree in any of the healing arts. The examiners were forbidden to enquire of the candidates along these lines. This anonymity was not insured in all jurisdictions and accusations were made in some quarters that there was a medical bias both in the subjects tested and in the questions authored by "medical men". Budden viewed the Oregon statutes as an excuse for attempting the task of developing an intelligent opposition,12 contrary to those who viewed the statutes as "a species of treason" declaring such legislation to be undemocratic, unamerican, unpatriotic and unconstitutional.

Among the latter Ratledge13 argued that all the named subjects, (anatomy, bacteriology, chemistry, pathology, physiology and public health) are open to special interpretation according to the applicant's profession and that questions pertaining to chemistry for example were applicable only to the theory of medicine even though there are basic chemistry questions which accordingly could have been submitted. Budden12 agreed in part that especially in the area of public health the students had to make a compromise with themselves and their teachers if they were nonmedical students if they were to pass the examination. Then, as today, there are those who equate science with medicine rather than with critical thinking and the scientific method. Along with the voices of Nugent in Connecticut, Budden in Oregon, and Ratledge in California, the halls of state legislatures rang with denunications of the Basic Science Statutes by chiropractic educators and politicians. Although feared more than any other exam at the time, the combined unexpected failure of both medical and chiropractic students improved the

educational curriculum in both professions and eventually took the threat out of these bills. ¹⁴ In some states, the failure rate was such that few chiropractors were licensed for a decade or more. ⁴ Vear ⁴ notes, that while the basic science laws were a serious deterrent to the free movement of chiropractors in the United States, there were few chiropractic academics who not only supported the laws but also advocated them for the good of the profession. Budden was of the opinion that:

requirements of the basic science exams were not prejudicial to those wanting chiropractic to become one of the learned professions, with institutions of equivalent rating.

those opposing these laws were willing to let the profession degenerate into a trade with their teaching institutions equivalent to trade schools.

There is no doubt that the Basic Science Statutes improved the chiropractic curriculum and coupled with the accreditation process significantly raised the standards of chiropractic education.

State licensing boards and the accreditation process

In 1935 the National Council on Chiropractic Examining Boards was established. The council was an independent group of state and provincial representatives; its purpose was to study and recommend the changes it felt necessary to achieve uniformity in chiropractic education and licensing. Following the Flexner model, Nugent headed a task force to study the problem, visiting each of the 37 chiropractic colleges in existence at the time. ¹⁵

The merger in 1938 of the Council on State Chiropractic Examining Boards and the Committee on Educational Standards created by the National Chiropractic Association formed a new Committee on Educational Standards (CES) in response to the recognized need for quality education. According to the criteria established by the CES, 12 colleges received provisional approval in 1941. In the subsequent 20 years many of the weaker schools without status merged with other institutions to create stronger academic programs. The number of active colleges had been reduced to ten by 1961. 16

Initial contact with the United States Office of Education was made in 1952 with an official application for recognition filed in 1959. Suggestions for strengthening academics and procedures were made and implemented. In 1972 the Council on Chiropractic Education filed a formal application with the USDE which resulted in the CCE being recognized as a National Recognized Accrediting Agency by the U.S. Commissioner of Education. In 1982 the CCE (US) announced the establishment of a full reciprocal agreement with the Council on Chiropractic Education Canada. 17

After the Council on Chiropractic Education became the accrediting agency for chiropractic colleges, most basic science laws were removed. By 1970, only 22 states had Basic Science

laws, with Colorado the last state to rescind the basic science statute.

The accreditation process has worked to strengthen chiropractic education. The standard course has been lengthened to eight semesters/four years with two years of pre-chiropractic educational requirements. The clearly prescribed prerequisite science courses, and the heavy science curriculum taught primarily by biological scientists with advanced degrees makes the current emphasis on science in the first two years of chiropractic education equal to medical education. Standardization in the area of diagnosis has occurred much more readily than in the area of chiropractic treatment. The wide variation in licensure statutes continues to dictate variations in curriculum throughout chiropractic education.

University affiliation

The affiliation of medical schools with universities following the Flexner report provided the guidelines for a standard medical curriculum, based on the need for scientific medicine. The report was more than a public blast at educationally unsavoury medical schools operated by indifferent faculty proprietors for profit. It provided a model for a specific program for medical educational change based on inductive, scientific research and application to medical practice. As a result organized professional medicine got what it wanted: educationally prepared students, control over numbers, influence in licensure, and stablized income as well as heightened social status for physicians. ¹⁸ Responding to allegations by those representing the American Medical Association in opposition to support for chiropractic education that it was characterized by the "trade school level of their schools Nugent responded:

APPENDIX 1 LEGISLATION GOVERNING CHIROPRACTIC PRACTICE IN CANADA

Jurisdiction	Statute	Date Passed
Alberta	Chiropractic Profession Act	1923
Ontario	Drugless Practitioner's Act	1925
British Columbia	Chiropractic Act	1934
Saskatchewan	Chiropractic Act	1943
Manitoba	Chiropractic Act	1945
Yukon Territory	Chiropractic Ordinance	1955
New Brunswick	Chiropractic Act	1958
Prince Edward Island	Chiropractic Act	1968
Nova Scotia	Chiropractic Act	1972
Quebec	Loi Chiropractique	1973
Newfoundland	Chiropractic Act	1990

APPENDIX 2 DIAGNOSTIC PROCEDURES ALLOWED BY CHIROPRACTIC STATUTES*

Technical Diagnostic Procedures	ALASKA	ARIZONA	AHKAMSAS	CALIFORNIA	DELAWARE	FLUNDIA	IDAMO	KANSAS	LUUISIANA	MARYLAND	MASSACHUSETTS	MICHIGAN	MISSISSIPPI	MISSOURI	WERRACKA	NEW HAMPSHIRE	NEW JERSEY	NEW YORK	NORTH CAROLINA	NORTH DAKOTA	OMIO	DREGON	PENNSYLVANIA	SOUTH CAROLINA	SOUTH DAKOTA	TEYAS	UTAH	VERMONT	WASHINGTON	WEST VIRGINIA	WISCONSIN	AIRFRIA	BRITISH COLUMBIA	NEW BRUNSWICK	NOVA SCOTIA	OUEBEC	TOTAL RESPONSES	TOTAL III, III, III UINOLO	% YES	% NO	% QUALIFIED
1, X-ray procedures.																																									
a. full spine	*	*	+	*	+		+		+	+ +		+	*	+ •			*	*	+	*	+ +		-				+	+	+	+ -		+			*	+	- 41	1 1	0.00	0	0
b. skull	+	+	+	+	+	+	+			+ +	+	0	+	+ +	0	-	+	0	+	+	+ +		-	0	+ +		+	+	+	+ .	+ +	+	+	+	?	+ .	+ 41	1 1	87.8	9.8	24
c. soft tissue	+	-	+	+	@	+	+		+	+ +		0	0	+ •	. 0		0	0	+	+	+ +	+ +	-	0		0 +		+	0	+ -	+ -	+		+	+	+	0 39	9 7	74.4	23.1	2.5
d. barium studies	@	0	?	@	@	+	0	+ [0	0 +	+	0	0	+ +	- 0	0	0	0	-	+	0 -	+ +	-	0	0 0	0 0	+	+	0	+	0 -	0	0	0	?	0	0 39	9 :	30.8	56.4	12.8
e. tomography	@	+	+	@	@	+	0	+	+	0 (+	0				0	0	-	+ (@ .		-	-		0 -	+	+	+	0 .	+ -	. 0		0	?	0	0 38	8	52.6	342	132
f. cholecystography	@	0	0	@	@	+	0	0	+	0 0	0 (0	0		- 0	0	0	0	-		0.		-	0	0 0	0 0	0		0	-	0 -	. 0	0	0	?	0	0 38	8	21.1	68.4	105
2. Thermography	+	+	+	+	+	-	+	+	+	0 4	+	+	+	+ -			+	+	+	+		+ +	-		+ .	+ +	+	+	+	+		-	?	0	+		+ 4	0	92.5	5.0	25
3. EMG &/or nerve cond.	0	-	+	@	@	-	+	0	0	0 +	+	0	0	+ .			0		+	2 (@ -		-	+	+	0 +		+		0	0 +	. 0	?	0	+	+	0 40	0	55.0	32.5	125
4. Vasculizer (Doppler)	+	+	+	@	+	+	+	+	+	0 .		?	0	+ .			+	+	+	Z	+ -		-	+	+ .	+ +	. +	+	+	+	+ +	-	?	0	?	+	+ 4	0	80.0	7.5	125
5. Order CT scan	+		+	+		+	?	+	0	0 .		-	0	+	7		+	+	0	0			-	+				+	+	+	+ (0	0	0	0	+	0 4	0	67.5	27.5	5.0
6. Order MRI	+	+	+	+	+	+	0	0	0	0 -		-	0				+	+	-	0						+ .	+	+	+	+	+ (0	0	0	0	-	0 3	8	68.4	316	0
7. Clinical lab analyses:																																									
a. venipuncture (blood)	0	+	+	(a)	@	+	+	+	0	+ .		0	0	+	+ [0	+	-	+	4	+ .		+	+	0 -		+	0	+	+ +	. 0	0	0	?	0	+ 4	.0	62.5	27.5	10.0
b. urinalysis	+	+		@	(a)		+					0	0	+					+	+	+	+ -		+	+	0 -		+	+	+	+ -		. 0	0	7	_	+ 4	0	80.0	125	7.5
c. soutum analysis	+	+	+	@	@		+		+			0	0				(a)			+				+		0 .		+	2		+ .		. 0	0	2	_	- 3	19	74.4	128	12.8
d. fecal analysis	+	+	+	@	0	+	+	+	+	+	+ +	0	0	+	+ .	+ +	(a)	+	+	+	+	+		+	+	0 -	+ +	+	+	+	+ •		. 0	0	7	-	+ 3	9	76.9	128	10.3
e, semen analysis	+	+	+	0	0	+	-			+		0	0				(6)	0	0							0 .		+	0	+	+ .	+ -	. 0	0	2	_	+ 3		69.2	20.5	10.3
f. throat swab	0	+	+	@	0	+	+		+	+		0	0	+	+ .		- @	+	0	+	+	+	+ =	+	+	0 -		+	0	+	+ .		. 0	0	2	_	+ 3	19	69.2	20.5	10.3
g, skin scrape	0			@	@		+		_			0	0			0 .	. @	0	0				+ -		0				0	+	0		. 0	0	2	_			60.5	29.0	10.5
8. Hair analysis	+	+		+	+	+	+	+	+	+		_	0	+	2		- 0		+	+					+			+	0	+	+ .	+ +	. 0		2				82.5	125	5.0
Physical Diagnostic Procedures													100			20							2002		0						22	1		10				20		222	852
9. School physicals	+	+	*	+	-	+	+	*	+	+	+	0	0	+	+	0 -	+ 0	+	+	+	+	+	? 0	+	0	+	+ +	+	+	+	?	+ [0	-	*			72.5	20.0	7.5
Pre-employ. physicals	+	+	*	+	+	*	+	*	0	+	+ •	?	*	*		+ '	+ 0	+	+	+	+	*	+ :	+	+	+	: :	+	+	+	+	. (1 +	0	-	+			87.5	10.0	2.5
11. Premarital physicals	0		+	+	-	*	*	*	0	0	- '	. 0	-	+		0	+ 0			*	0	+	? (-	0	-	0 0		+	+	0	? (0			36.8	55.3	7.9
12. Sign birth cert.	0		?	0	0	0	0	0	0	0		0		0	+	0	+ 0		-	+	0	+	- (0 0	+	0	0	0	- 1	0 0		_	0			14.7	82.9	2.4
Sign death cert.	0	0	*	*	0	*	*	*	0	0	0 1	0	0	*	+	+	+ 0	0	0	+	0	+	+ [0	0	0	0 -	. +	+	+	0	+	0 0	0	0	0	-	42	40.5	59.5	0
14. EENT exams	+	+	+	+	*			*	*	*	*	. ?	0	+	*	*	٠.		*	*	*	+	+ .	. +	+	+	+ •		+	+	+	+	0 +	+	-	+		40	92.5	5.0	2.5
15. Abdominal exams	+	+	+	+	+	*	+	+	+	+	+	. ?	0	+	+	+				*	*	*	+ .		*	*	+ .	٠ ٠	*	*	+	*			-	+	+ 4	40	95.0	2.5	2.5
16. Extremity exams	*		+			+	*	+	+	*	+ .	+ 3	+	+	+	+	+ •			+	+	+	+ .	- +	+	+		+ +	+	+	+	+	٠.		-	*	* .	40	97.5	0	2.5
17. Stethoscopic exams	*	+	+	+	+	*	+	*	+	+		* 1		*	*	*		٠.	. +	*	+	+			+	+	+ :			+	+	+	٠.		-	*		40	97.5	0	2.5
18. Sphygmomanometry	4		+	*	+	-	+	+	+	+	+	+	U	+	*	-	• :		-	*		*	*					٠.		*		*	+ :		-	*		39	94.8	2.6	2.6
19. Electrocardiography	4	?		*	*	+	+	*	+	0	*	+ [0	*	+	+	+	0	0	2	+	-	+	- +	+		+	+ +	. 0	+	1	+	U	0 0	-	-	-	39	64.1	28.2	7.7
20. Applied kinesiology	*	+	+	+	+	+	+	+	+	+	+	+ :	+	+	*	+	+ .	• •		*	*	*		- *		*		* *	. +	*	*	*	*	٠ :	*	*			100.0	0	0
21. Impairment ratings	+	+	+	. *	٠	+	٠	*	*		*			*	?	*			+	+	+	+		- +	+	+		+ +	?	+	+	+	+	. (-	*	0	40	87.5	5.0	7.5
Specialty Diagnostic Procedures	_																																								
22. Female pelvic exams:																																									
a. bi-manual exams	1) -	. 7	+		+	+	+	+	0	+	0	0 0	+	+	+	+	0 0	0 0	1		+	+	0 0		0	0		0	+			-	0 0	-	0		40	525		-
b. speculum exams	1) -	. 7			+		+	0	0	+	0	0 0	+	+	+	+	0 0	0 0	1	+	+		0 0	+	0	+	+ +	- 0	+	+	+	0	0 (-	0		40	52.5		5.0
c. recto-vaginal exams	5 [) -	. 1					+	+	0	+	0	0 0	+	+	+	+	0 0	0 0	1	+	+	+	0 0	+	0	+		- 0	+	+	+	0	0 0	-	0	+	40	55.0	40.0	5.0
d. Pap smears		0 -	. 7				+		0	0	+	0	0 0		0	0		0 0	0 0	1		+	+	- 0	+	0	0	0 -	- 0	0	+	+	0	0 0	1 -	0		40	425	52.5	5.
23. Female breast exams		7 .						+	+	+	+	+	0 0	+	+	+	+	0 '	? 0	+				- 0		0			. ?	0	+	+	+	+ -		+	+	40	75.0	17.5	7.
		n .							+	+	+	0	0 0	+	+	+	+	0 (0 -		+	+		- 0	+	0	+		- 0	+			0	0 -	-	+	+	39	71.8	282	0
24. Rectal exams	- 1	U ·																																							
		? .						+	+	+	+	+	0 (+		+	0 .	+ -	. +	+		+	- 0	+	0	+		+ 0	+	+	+	0		-	*		39	79.5	17.9	2.5

Response Key: + = Yes: 0 = Mo: - = No response: ? = Qualified or questionable response: # = By certification: @ = Can order: z = If taught in a chiropractic college

^{*} From: Lamm LC, Wegner E: Chiropractic scope of practice: What the law allows. Am J Chiropractic Med 1989; 2:155–159. Reprinted with permission of American Journal of Chiropractic Medicine.

APPENDIX 3 TREATMENT PROCEDURES ALLOWED BY CHIROPRACTIC STATUTES*

on-Invasive eatment Procedures	ALASKA	ARKANSAS	CALIFORNIA	DELAWARE	FLORIDA	ЮАНО	KANSAS	LOUISIANA	MAINE	MARTICAND	MICHIGAN	MISSISSIPPI	MISSOURI	MONTANA	NEBRASKA	NEW HAMPSHIRE	MEW JERSET	NORTH CAROLINA	NORTH DAKOTA	OHIO	OKLAHOMA	PENNSYLVANIA	SOUTH CAROLINA	SOUTH DAKOTA	TEXAS.	UIAH	VERMONT	WASHINGTON	WISCONSIN	WYOMING	ALBERTA	BRITISH COLUMBIA	NEW BRUKSWICK	NUVA SCULIA	CACVATCUDIAN	TOTAL DESDONSES	TUTAL RESTURSES	% YES	% NO	% OUALIFIED
1. Physiotherapy.																																35								_
a. electrotherapy					+	+	+	*	+	*	+ [0 (•	*	*	+	*	+ +	+	+	+	+ -	+	+	+ +	+	+	0			*	0	*	+	+	+ 4	1	90.2	9.8	0
b. ultrasound	+	+				+	+	+	+	+	+ [0 (0 +		+	+	+		+					*			+	0	. 0	+		0				+ 4	1	87.8	122	0
c. hydrocolation		+			+	+				+		+	0 .				+	+ +	+		+	+ -		+	+ +		+	+			+	0	-	+	+	+ 4	10	95.0	5.0	0
d. TEMS therapy				+ +	+	+		+	0	+	+	0	0 +		+	+	+			*	*	٠.		*			*	0			*	0	+	*	+	. 4	1	87.8	122	0
e. ice therapy	+	+				+	*	+	*	+	+	+		+	+	+	+	+ •		+	+			*			*	*		+	*		*		+	+ 4	1 1	100.0	0	0
f. massage	*	•				+	+	*	*		*					*		٠ .			•	+ -		+	+ +	+	*	*	+ 0		+	+	*	+	+	+ 4	11	97.6	2.4	0
2. Extremity adjusting	+						+		+	+	+	0			+	+	0	+ •	+	*		٠.,			+ 4			0				+	*	+	+	+ 4	11	92.7	7.3	0
Soft tissue manipulation																																								
of abdominal viscera	*		+ -			+	+	+			+	0					+			+	+			+	0 .		+	0	٠.			*	0	-	+		40	90.0	10.0	0
4. Craniopathy	+	*	+ 1			*		*	*	*	*		0 .		0	+	+	+		+	*				0			+	0 .		0	+	0	-	+	+ ;	39	84.6	15.4	0
5. Nutrition therapy:																																								
a. vitamin supplement	+	+	+ .				*		*		Ŧ	*	0			+	0	+			*					٠ .		+			+	0	+	-	+	+ 1	40	92.5	7.5	0
b. glandular supplement	*					+	+	+	+	+	+	0	0				0	0	- +	+	+	+	. +	+	+		*	0				0	+	-	+		39	84.6	15.4	0
c. diet formulation		+				*		*	*		+	*	0			+	0	7		+	*		. +	*	+		+	+				+	*	-	*		40	92.5	5.0	2.
d. botanical therapy		*	+ .			+	+	+	+	-		0	0			+	0	0	- •	+	+	0	- +	*	*			0	0 .			0	•	-	+		37	78.4	21.6	0
e. homeopathic prep.		+			. #	+	0	*	+	-	+	0	0	+ +		+	0	0	- +	+	+	0	- +	+	0	+ +	*	0	0 .			0	*	-	٠		38	71.1	26.3	2
6. Orthotic supports		-	*				+		0		+	?	0			*	+	+			*			*			+	?	+		+	+	+	+	+	+	40	90.0	5.0	5.
7. Spinal supports		+	+							+	+		+		+	+	+	+			*	+	- +	+	+	+ +	+	+	+	+ -		+	0	+	+	+ .	41	97.6	2.4	0
8. Counseling	+	-	+	?				+			*	-	+			+	0	?				*		0	*		*	7		+	- 0	+	0	+	+	+	39	82.0	10.3	7.
9. Rehab. programming		-		+		+		+	+	+	+	?	-			*		*		. +		+	- +		+			?	-	+		0	-	-	+	0	36	88.8	5.6	5.
manipulation 1. Non-adjustive treatment	0	-	?	+					0	-	0	0	0		? 0		0	0	0 :		+	+	0 0		9	0 (+	0	0	•	. 0	0	0	-	0	+	39	41.0	51.3	
of female pelvic cond. 12. Intrarectal manipulation		-	7	*	0				0	*	0	0	0		7 0		0	0	0	2		+	0 0	7	U	U		U	U	7	• (0	U	-	U	U	40	300	22.0	13
of the coctyx		+	+	+	+						+	n						+	+									+		+		- 0	+	+	+	+	41	95.1	4.9	1
13. Ear irrigation	0	_			_					+	+	0	0	+			0	0					- 1) +	2	+		0	0	0	+ [0 0	0	0	0		39	61.5	35.9	
14. Colonic irrigation	2	0	7	+	0						0	0	0			0	0	0				+	- (0 0	0	0		0		0	+ [0 0	0	0	0	0	41	46.3	48.8	4
15. TMJ treatment			7	+								_	+					7		+ .	. +		_			+		?	-				+	+	+	+	39	923	0	1
16. Endonasal technique	+	_	?	+	+			. () +			0	0	+	+ +		0	?	-	1 .			- 1	0 +	0	*	+ +	0	-	+	+	0 +		-	-	0	36	66.7	25.0	1 8
17. Masal specifics		-	7	+	0	+	+ .			-	+	0	0	+	? .		0	?	-			+	-	0 .	0	0		0	-	0	+	0 0	0	-	-	0	35	54.3	37.1	1
18. Chelation therapy:																																								
a. oral	+		+	+	0	+			. 0		*	0	0			. 7	0	0	-	+		*	-	0 0	0	0	0	0	-	+		+ (+	-	-	+	37	62.2		
b. intravenous	0	0	0	0	0	ř	0	0 (0 0	0	0	0	0	0	0	0 0	0	0	0	0 1	0 0	0	0	0 0	0	0	0 1	0	-	0	0	0 0	0	-	0	0	40	0	97.5	
19. Vitamin injection		0	0	0	0	?	0	0 (0 0	0	0	0	0	0	0	0 0	19	0	0	0		0	0	0 0	0	0	0	0	0	0	0	0 0	0 0	-	0	0	41	24	95.1	1
20. Limited prescription																																								
writing privileges	(0	0	0	0	0	0	0	0 0	0	0	0	0	0	0	0 0	0 (0	0	0	0 0	?	0	0 0	0	0	0	0 0	0	0	0	0 (0 0	0	0	0	42	0	97.5	6
21. Recommendation of																																								
non-prescription items		+		+	*	ŧ	0	+	+		+	0	0	0	+	0 .	- 0	0	+	0	? (0	-	+) +	*	+	+ 0		+	+	+	0 +		+	+	41	61.0	34.	2
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Specialty Treatment Procedures 22. Minor surgery	- (0	0	0	0	0	0	0 0	0 0	0	0	0	0	0	0 0	0	0	0	+ .		· u	~	U U	U	0	+ [0	0		0	0 0	0	0	0		14.	85	
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(over the counter) Specialty Treatment Procedures 22. Minor surgery 23. Obstetrics 24. Extremity casting	- 0			0 0 ?	0 0 0 -	0 0 + +	0 0 + +	0 0 + +	0 0 - 0	0 0	0 0	0 0	0	0 0 2	+ + ?	0	0 0 + 0 + (0 0	0			?	0	0 0	0		+ [0 -	?	:	0 0	0 0	0 0	0 0		42 39	14. 48.	85	4
(over the counter) Specialty Treatment Procedures 22. Minor surgery 23. Obstetrics 24. Extremity casting 25. Hypnosis	- 0	0		0 0 ?	0 0 0 -	0 0 + +	0 0 + +	0 0 +	0 0 - 0	0 0	0 0	0 0	0	0 0 ?	+ + ?	0	4		0	0			?		0 0	0		- (0 -0	? ?		0 0	0 0	0 0	0 0	0	42 39	14: 48: 40:	3 85 7 38 5 46	14
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Response Key. + = Yes; 0 = No: - = No response; ? = Qualified or questionable response; # = By certification; @ = Can order; z = If taught in a chiropractic college

^{*} From: Lamm LC, Wegner E: Chiropractic scope of practice: What the law allows. Am J Chiropractic Med 1989; 2:155–159. Reprinted with permission of American Journal of Chiropractic Medicine.

"No profession, particularly medicine, which has needed and received so much help from outside sources in the form of educational direction, philanthropy and state aid can afford to forget its lowly educational origins . . . nor can it afford to criticize those who by honest self-criticism are making a painstaking effort to correct their deficiencies." ¹⁹

The luxury of university affiliation and government funding has been consistently denied the chiropractic profession in North America²⁰ resulting in a more varied curriculum among schools and an even wider variation in scope of practice among state and provincial jurisdictions. (Appendices 2 and 3)

Conclusion

Statutory and administrative rules continue to exert pressure to both add and delete chiropractic curricular material. Course material is often specified, the number of required hours in a subject designated, or pressure brought to bear to delete material not covered in a specific statute. The latter is more likely to occur at the Canadian Memorial Chiropractic College (CMCC) with loss of the right to perform pelvic and rectal examinations with assent of the 1991 Chiropractic Act in Ontario. 21 The loss of the right to perform these important diagnostic procedures is likely to bring pressure to bear on CMCC's Curriculum Development Group to delete them from the curriculum of the Canadian school. This has been the case with the prior loss of venipuncture and urinalysis.22 Elimination of these procedures from the CMCC curriculum may cause difficulties with respect to reciprocal accreditation with CCE (USA) and ACCE (Australasia CCE) as well as licensure in other Canadian provinces.

In Oregon, by contrast, Western States Chiropractic College is compelled to provide specialized courses in obstetrics, minor surgery and proctology to prepare candidates for the broadest chiropractic statute ²³ in North America. The over two hundred *hours of "chiropractic philosophy required by the Regulatory Board in the State of Washington also exerts pressure to include extra curricular content at the nearby Western States Chiropractic College. Many colleges must also include additional hours of physical therapy to satisfy those statutes that specify a greater number of hours than the average of this subject.

There is little doubt that government funding and university affiliation will have a stabilizing effect on the curriculum of chiropractic colleges as it did with medical schools. With a university research supported curriculum the wide variations in the chiropractic practice acts and their influence on the curriculum of chiropractic colleges will be diminished. Failure to promote academic freedom in curriculum planning by the colleges, is detrimental to the chiropractic profession, and will lead to further Balkanization of chiropractic practice.

References

- Lamm LC, Wegner E. Chiropractic scope of practice: What the law allows. Am J Chiropractic Med 1989; 2:155–159.1.1.
- 2 Vear HJ. Impressions concerning chiropractic education 1971; J Can Chiropr Assoc 15(1):12–14.
- 3 Bunker JE. Reflections on chiropractic and the law. The text of a speech before the annual convention of the Oregon Association of Chiropractic Physicians, Portland, Oregon, 1964.
- 4 Vear HJ. Chiropractic standards of practice and quality of care. Gaithersburg, Maryland, 1992: 60, 9.
- 5 Hirtle RL. Chiropractic jurisprudence and malpractice considerations. In: Vear HJ, ed. Chiropractic standards of practice and quality control. Gaithersburg, Maryland, 1992: 245.
- 6 Flexner A. Medical education in the United States and Canada: a report to the Carnegie Foundation for the advancement of teaching with an introduction by Henry Pritchett. Bulletin number 4, New York, 1910: 158.
- 7 Sutherland DC. Chiropractic in Canada 1974; 28(4):6–9.
- 8 The Chiropractors Act 1990 Newfoundland and Labrador.
- 9 Gatterman MI, Budden WA. The transition through proprietary education, 1924–1954. Chiropractic History 1982; 2:20–25.
- 10 Coulter ID. The chiropractic curriculum: a problem of integration. J Manip Physiol Therap 1991; 4:147–154.
- 11 Nugent J. Testimony before the House Judiciary Committee. March 22, 1964. (Reported in NCA J 1945; 16:6,18.)
- 12 Budden WA. Effects of the basic science law in Oregon, NCAJ, 1944, October 9–10; 54–55.
- 13 Keating JC, Brown RA, Smallie P. TF Ratledge, the missionary of straight chiropractic in California. Chiropractic History.
- 14 Weise G, Peterson D. An overview of chiropractic educational institutions, 1896 to the present. J Chiro Ed 1991; 4:104–114.
- 15 Gibbons R. Chiropractic's Abraham Flexner: the lonely journey of John J Nugent, 1935–1963. Chiropractic History 1985; 5:45–51.
- 16 The historical development of important aspects of chiropractic accreditation. The council on Chiropractic Education. Des Moines, Iowa, April 1984; 1.
- 17 Educational standards for chiropractic colleges. June 1985 CCE. Des Moines, Iowa: 1-3,1-4.
- 18 Vevier C. The Flexner report and change in medical education. In: Vevier C. Flexner: 75 years later: a current commentary of medical education. University Press of Am 1987; 3.
- 19 Nugent J. Testimony before the House Judiciary Committee. November 10, 1943. (Reported in NCA J January 1944; 14:1–18.)
- Brown DM. CMCC's persistent pursuit of university affiliation Part
 J Can Chiropr Assoc 1992; 36(1):33–37.
- 21 Chiropractic Act 1991, S.O. 1991, c.21
- 22 Minutes of the Curriculum Development Group CMCC, Toronto, 1991
- 23 Chiropractic Act O.R.S. 684.0