

# Survey of students' perception of the jurisprudence, ethics and business management course at the Canadian Memorial Chiropractic College

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*Introduction: The objective of this study was to survey 2018-2019 Year III students at the Canadian Memorial Chiropractic College in order to explore their perceptions of the components of the revised Jurisprudence, Ethics and Business Management course.*

*Methods: This study was approved by the Research Ethics Board. A paper survey was distributed to all enrolled students. Using a five-point Likert scale, students were asked if they perceived the course material as (i) well-presented and (ii) important for them to know as future chiropractors. Students were required to sign a consent form to participate.*

*Results: Survey response rate was 94%. Over 90% of respondents 'strongly agreed'/'agreed' lectures, small group session and course assignments were well*

*Sondage auprès des étudiants du Canadian Memorial Chiropractic College pour connaître leur opinion sur le cours de jurisprudence, d'éthique et de gestion des affaires*

*Introduction : La présente étude visait à sonder des étudiants de 3<sup>e</sup> année au programme du Canadian Memorial Chiropractic College en 2018-2019 pour connaître leurs opinions sur la nouvelle version du cours de jurisprudence, d'éthique et de gestion d'un cabinet chiropratique.*

*Méthodologie : La présente étude a été approuvée par le comité d'éthique de la recherche. On a mené un sondage auprès de tous les étudiants inscrits. À l'aide d'une échelle de Likert de cinq points, on a demandé aux étudiants si la matière du cours était i) bien présentée et ii) importante pour eux comme futurs chiropraticiens. On a demandé aux étudiants de signer un consentement à la participation à l'étude.*

*Résultats : Le taux de participation au sondage a été de 94 %. Plus de 90 % des répondants étaient « tout fait d'accord » ou « d'accord » que le cours, les séances*

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presented and important for them to know as future chiropractors. Respondents were more critical of the online business modules (on average, 50% 'strongly agreed/agreed').

Conclusions: *The information from this survey will enable refinement of future versions of this course.*

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KEY WORDS: chiropractic business management, ethics, jurisprudence, student perceptions, survey

## Introduction

The course that teaches students jurisprudence at the Canadian Memorial Chiropractic College (CMCC) was reconstructed in 2007 from its original format - a format that had not tangibly changed since its inception in the late 1970s.<sup>1</sup> Following a series of intradepartmental meetings in 2016, the course was completely redesigned. Specifically, the course changed from an only lecture-based format to a format that included lectures, small group sessions facilitated by faculty members (all practicing chiropractors) and an online business management program called Lean Canvas<sup>2</sup>, developed in cooperation with Centennial College in Ontario, Canada. The course was retitled Jurisprudence, Ethics and Business Management (JEB) and launched during the 2017-18 academic year. The course description and its learning objectives as per the academic calendar are presented in Table 1.

The primary purpose of this study was to survey 2018-2019 Year III students at CMCC in order to explore their perceptions of modified teaching methods and content of a revised JEB course. This paper also describes changes made to this course as a result of the student survey results.

## Methods

The Research Ethics Board of CMCC approved this project (Certificate #1904X01). In order to explore students' perception of the new course format, a unique 56-item paper survey was administered during their final open book multiple-choice question (MCQ) examination,

en petits groupes et les devoirs étaient bien présentés et avaient de l'importance pour eux comme futurs chiropraticiens. Les répondants se sont montrés plus critiques en ce qui concerne sur les modules en ligne sur la gestion d'un cabinet chiropratique (en moyenne, 50 % étaient tout à fait d'accord ou d'accord).

Conclusions : *Les résultats du présent sondage serviront à perfectionner ce cours.*

(JACC. 2021;65(1):105-120)

MOTS CLÉS : gestion d'un cabinet de chiropraticien, éthique, jurisprudence, opinion de l'étudiant, sondage

scheduled at the end of Year III. Since all over assignments for the course had already been submitted and graded, and since the final examination consisted of only MCQs (there were no essay questions that could be graded subjectively), it was thought this was the most appropriate time to distribute the survey because, not only was it anonymous (defined below), students knew there was no opportunity for the course coordinator (the Principle In-

Table 1.

### *JEB course description and learning objectives.*

#### *Course Description:*

The modern principles of patient-centered chiropractic care in the evolving healthcare environment are examined. Relevant topics pertaining to professional identity, jurisprudence and ethics are explored. Learning will be applied within the context of social theory, social contract and social closure. The concepts of entrepreneurship are applied through E-learning modules utilizing Lean Canvas.

#### *Learning Objectives:*

1. Demonstrate professionalism as it relates to ethical issues, ethical dilemmas and grey zones.
2. Explain the progress in developing cultural authority within the chiropractic profession.
3. Discuss the importance of professional boundaries, how to establish boundaries in different situations and environments, and how to resolve conflict.
4. Explain regulations, acts, codes, standards of practice, guidelines, policies and consequences in a pan-Canadian perspective pertaining to the practice of chiropractic.
5. Apply leadership strategies within the context of social closure and social contract for professional challenge resolution.
6. Apply an entrepreneurial framework to the development of a chiropractic career.

investigator (PI)) to (theoretically) enact any form of retribution if the feedback was negative. Moreover, this was the last opportunity for Year III students and the course coordinator to interact, since students were transitioning to their internship and the course coordinator only teaches in the undergraduate program. Because of these circumstances, it was theorized students could answer questions on the survey candidly and honestly.

Prior to the final examination, the PI (who is also the course coordinator) emailed students with instructions with respect to what they could bring in with them to the lecture hall where the exam was being administered, since the examination was open-book: In that same email, the PI informed students they would have an opportunity to complete a survey of the course as well. At the beginning of the exam, the author went over some administrative details (e.g., what to do if they did not understand a question) and reminded the students the survey which was on their desks and was available for them to complete if they chose to do so.

The cover sheet of the survey consisted of a consent form which explained the purpose of the survey. Participation in the survey was voluntary and no form of compensation was offered. Although students who wished to respond to the survey signed and dated the consent form it was separated by the examination invigilators (not the PI) and placed in a separate box from the survey itself. The survey had no identifiable marks on it, thus assuring respondent anonymity. Prior to data extraction, a manual count was made to ensure there were the same number of surveys as there were consent forms. Responses were extracted onto an Excel sheet for review.

In the survey, students were asked to comment on their perception of the lectures, facilitated small group sessions, online business modules and the four assignments in the course. The survey questions were the same ones used successfully in a previous study that assessed students' perception after the jurisprudence course was restructured in 2007.<sup>1</sup> Prior to distribution the survey was reviewed by the Vice-President Academic, two Education Directors (both chiropractors) and the Research Administrator, offering a degree of face validity.

With respect to the lectures, students were asked (i) if they perceived the content was 'well presented' and (ii) if they thought the topic was important for them to know as future chiropractors. Respondents were informed

'well presented' meant the lectures were 'well-organized, well-paced and understandable'. Using a five-point Likert scale, students could respond 'Strongly Agree' (5), "Agree" (4), "Undecided" (3), "Disagree" (2) or "Strongly Disagree" (1) to each question. Similarly, students were asked if they thought each of the four Lean Canvass online modules were (i) well-presented and (ii) important for them to know as future chiropractors.

Using the same Likert scale, students were asked (i) if they were actively engaged in the small group sessions and (ii) if they thought the topic was important for them to know as a chiropractor. It was theorized their level of engagement would reflect their interest in the topic.

Lastly, students were asked if they perceived the four assignments in the course were important for them to know as a future chiropractor. Students were able to provide written comments at the end of the survey.

## Results

Of a class of 186 students, 175 completed surveys were submitted, representing a response rate of 94.1%. The same number of consent forms were also returned. The number of responses and corresponding percentages to each survey question are presented in Table 2.

Table 2.  
JEB course survey results.

Topic #1: Who's Who and What's What, Tribalism and the Social Contract				Topic #5: Advertising, Marketing and Internal Office Promotion			
Q1: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=176)	Q9: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)
	Strongly Agree	45	<b>25.6</b>		Strongly Agree	55	<b>31.4</b>
	Agree	109	<b>61.9</b>		Agree	100	<b>57.1</b>
	Undecided	19	10.8		Undecided	14	8.0
	Disagree	3	1.7		Disagree	6	3.4
	Strongly Disagree	0	0		Strongly Disagree	0	0
Q2: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=177)	Q10: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	89	<b>50.3</b>		Strongly Agree	121	<b>69.1</b>
	Agree	80	<b>45.2</b>		Agree	51	<b>29.1</b>
	Undecided	8	4.5		Undecided	3	1.7
	Disagree	0	0		Disagree	0	0
	Strongly Disagree	0	0		Strongly Disagree	0	0
Topic #2: Professionalism, Ethics and Codes of Conduct				Topic #6: Scope of Chiropractic Practice			
Q3: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=172)	Q11: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)
	Strongly Agree	74	<b>43.0</b>		Strongly Agree	84	<b>48.0</b>
	Agree	86	<b>50.0</b>		Agree	80	<b>45.7</b>
	Undecided	11	6.3		Undecided	9	5.1
	Disagree	1	0.6		Disagree	2	1.1
	Strongly Disagree	0	0		Strongly Disagree	0	0
Q4: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=177)	Q12: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=176)
	Strongly Agree	128	<b>72.3</b>		Strongly Agree	140	<b>80.0</b>
	Agree	49	<b>27.7</b>		Agree	35	<b>19.4</b>
	Undecided	0	0		Undecided	1	0.6
	Disagree	0	0		Disagree	0	0
	Strongly Disagree	0	0		Strongly Disagree	0	0
Topic #3: Professional Misconduct Regulations				Topic #7: Prohibition Against Having Sex with a Patient			
Q5: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)	Q13: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)
	Strongly Agree	79	<b>45.1</b>		Strongly Agree	101	<b>57.7</b>
	Agree	78	<b>44.6</b>		Agree	56	<b>32.0</b>
	Undecided	15	8.6		Undecided	12	6.9
	Disagree	3	1.7		Disagree	6	3.4
	Strongly Disagree	0	0		Strongly Disagree	0	0
Q6: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=174)	Q14: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	128	<b>72.3</b>		Strongly Agree	127	<b>72.3</b>
	Agree	49	<b>27.7</b>		Agree	43	<b>24.6</b>
	Undecided	0	0		Undecided	4	2.3
	Disagree	0	0		Disagree	1	0.6
	Strongly Disagree	0	0		Strongly Disagree	0	0
Topic #4: Panel Discussion: What Should the Proposition Statement of the Chiropractic Profession Be?				Topic #8: Record Keeping, Special Reports			
Q7: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)	Q15: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=174)
	Strongly Agree	40	<b>22.9</b>		Strongly Agree	75	<b>42.9</b>
	Agree	81	<b>46.3</b>		Agree	73	<b>41.7</b>
	Undecided	46	26.3		Undecided	20	11.4
	Disagree	8	4.6		Disagree	5	2.9
	Strongly Disagree	0	0		Strongly Disagree	1	0.6
Q8: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)	Q16: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	64	<b>36.6</b>		Strongly Agree	134	<b>76.6</b>
	Agree	67	<b>38.3</b>		Agree	37	<b>21.1</b>
	Undecided	34	19.4		Undecided	3	1.7
	Disagree	10	5.7		Disagree	1	0.6
	Strongly Disagree	0	0		Strongly Disagree	0	0

Table 2.  
JEB course survey results (continued)

<i>Topic #9: Career Options, Contracts, Banking and Dealing with the Media</i>			
Q17: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=174)
	Strongly Agree	43	<b>24.7</b>
	Agree	75	<b>43.1</b>
	Undecided	37	21.3
	Disagree	19	10.9
Strongly Disagree	0	0	
Q18: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	117	<b>66.9</b>
	Agree	50	<b>28.6</b>
	Undecided	6	3.4
	Disagree	2	1.1
Strongly Disagree	0	0	
<i>Topic #10: Complaints and Discipline</i>			
Q19: This topic was well presented (i.e. lectures were well organized, well-paced and presented in an understandable manner)	Response Option	Score	Percent (n=175)
	Strongly Agree	79	<b>45.1</b>
	Agree	82	<b>46.9</b>
	Undecided	12	6.9
	Disagree	2	1.1
Strongly Disagree	0	0	
Q20: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	122	<b>69.7</b>
	Agree	47	<b>26.9</b>
	Undecided	5	2.6
	Disagree	0	0
Strongly Disagree	1	0.6	
<i>Topic #11: Small Group Sessions – Rewriting the Chiropractic Oath</i>			
Q21: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	62	<b>35.4</b>
	Agree	65	<b>37.1</b>
	Undecided	28	16.0
	Disagree	14	8.0
Strongly Disagree	6	3.4	
Q22: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	33	18.9
	Agree	47	<b>25.7</b>
	Undecided	44	<b>25.1</b>
	Disagree	41	<b>23.4</b>
Strongly Disagree	10	5.7	
<i>Topic #12: Small Group Session – Resolving Ethical Dilemmas</i>			
Q23: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	81	<b>46.3</b>
	Agree	80	<b>45.7</b>
	Undecided	10	5.7
	Disagree	4	2.3
Strongly Disagree	0	0	
Q24: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	86	<b>49.1</b>
	Agree	72	<b>41.1</b>
	Undecided	14	8.0
	Disagree	2	1.1
Strongly Disagree	1	0.6	
<i>Topic #13: Small Group Session – Chiropractic Industry</i>			
Q25: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	63	<b>36.0</b>
	Agree	84	<b>48.0</b>
	Undecided	19	10.9
	Disagree	9	5.1
Strongly Disagree	0	0	
Q26: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	71	<b>40.6</b>
	Agree	78	<b>44.6</b>
	Undecided	21	12.0
	Disagree	5	2.9
Strongly Disagree	0	0	
<i>Topic #14: Small Group Session – Creating a Proposition Statement for the Chiropractic Profession</i>			
Q27: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	44	<b>25.1</b>
	Agree	78	<b>44.6</b>
	Undecided	31	17.7
	Disagree	18	10.3
Strongly Disagree	4	2.3	
Q28: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=174)
	Strongly Agree	37	<b>21.1</b>
	Agree	72	<b>41.1</b>
	Undecided	40	22.9
	Disagree	23	13.1
Strongly Disagree	2	1.1	
<i>Topic #15: Advertising non-NMSK conditions by individual chiropractors and/or professional organizations</i>			
Q29: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	96	<b>54.9</b>
	Agree	71	<b>40.6</b>
	Undecided	5	2.9
	Disagree	2	1.1
Strongly Disagree	1	0.6	
Q30: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	98	<b>56.0</b>
	Agree	66	<b>37.7</b>
	Undecided	9	5.1
	Disagree	2	1.1
Strongly Disagree	0	0	
<i>Topic #16: Expanding the Scope of Chiropractic Practice</i>			
Q31: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	84	<b>48.0</b>
	Agree	76	<b>43.4</b>
	Undecided	10	5.7
	Disagree	4	2.9
Strongly Disagree	1	0.6	
Q32: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	87	<b>49.7</b>
	Agree	76	<b>43.4</b>
	Undecided	11	6.3
	Disagree	1	0.6
Strongly Disagree	0	0	

Table 2.  
JEB course survey results (continued)

Topic #17: Small Group Session – Chiropractors as Entrepreneurs				Topic #21: Small Group Session – Ethical Practice Activities			
Q33: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)	Q41: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	69	<b>39.4</b>		Strongly Agree	77	<b>44.0</b>
	Agree	77	<b>44.0</b>		Agree	74	<b>42.3</b>
	Undecided	18	10.3		Undecided	19	10.9
	Disagree	10	5.7		Disagree	3	1.7
	Strongly Disagree	1	0.6		Strongly Disagree	2	1.1
Q34: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)	Q42: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	85	<b>48.9</b>		Strongly Agree	90	<b>51.4</b>
	Agree	75	<b>42.9</b>		Agree	66	<b>37.7</b>
	Undecided	15	8.6		Undecided	16	9.1
	Disagree	0	0		Disagree	2	1.1
	Strongly Disagree	0	0		Strongly Disagree	1	0.6
Topic #18: Small Group Session – Prohibition Against Sex with a Patient – Treating a Spouse				Topic #22: Chiropractic as a Career			
Q35: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)	Q43: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)
	Strongly Agree	91	<b>52.0</b>		Strongly Agree	105	<b>60.0</b>
	Agree	72	<b>41.1</b>		Agree	56	<b>32.0</b>
	Undecided	7	4.0		Undecided	10	5.7
	Disagree	3	1.7		Disagree	3	1.7
	Strongly Disagree	2	1.1		Strongly Disagree	1	0.6
Q36: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)	Q44: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=174)
	Strongly Agree	105	<b>60.0</b>		Strongly Agree	109	<b>62.6</b>
	Agree	60	<b>34.3</b>		Agree	55	<b>31.4</b>
	Undecided	6	3.4		Undecided	8	4.6
	Disagree	4	2.3		Disagree	1	0.6
	Strongly Disagree	0	0		Strongly Disagree	1	0.6
Topic #19: Small Group Session – Boundary Crossing versus Boundary Violation				Topic #23: Lean Canvass Business Module – Foundations of Business Planning			
Q37: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)	Q45: I found the material in this Module was well presented	Response Option	Score	Percent (n=175)
	Strongly Agree	77	<b>44.0</b>		Strongly Agree	8	4.6
	Agree	74	<b>42.3</b>		Agree	30	17.1
	Undecided	19	10.9		Undecided	45	25.7
	Disagree	3	1.7		Disagree	57	<b>32.6</b>
	Strongly Disagree	2	1.1		Strongly Disagree	35	<b>20.0</b>
Q38: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=)	Q46: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	90	<b>51.4</b>		Strongly Agree	65	<b>37.1</b>
	Agree	66	<b>37.7</b>		Agree	61	<b>34.9</b>
	Undecided	16	9.1		Undecided	25	14.3
	Disagree	2	1.1		Disagree	14	8.0
	Strongly Disagree	1	0.6		Strongly Disagree	10	5.7
Topic #20: Small Group Session – Attending a Discipline Hearing; Lessons Learnt				Topic #24: Lean Canvass Business Module – Customer Segments/ Target Customers			
Q39: I was actively engaged during this small group session	Response Option	Score	Percent (n=175)	Q47: I found the material in this Module was well presented	Response Option	Score	Percent (n=174)
	Strongly Agree	105	<b>60.0</b>		Strongly Agree	12	6.9
	Agree	56	<b>32.0</b>		Agree	37	21.3
	Undecided	10	5.7		Undecided	42	24.1
	Disagree	3	1.7		Disagree	51	<b>29.3</b>
	Strongly Disagree	1	0.6		Strongly Disagree	32	<b>18.3</b>
Q40: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=174)	Q48: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	109	<b>62.3</b>		Strongly Agree	63	<b>36.0</b>
	Agree	55	<b>31.6</b>		Agree	63	<b>36.0</b>
	Undecided	8	4.6		Undecided	24	13.7
	Disagree	1	0.6		Disagree	11	6.3
	Strongly Disagree	1	0.6		Strongly Disagree	14	8.0



Table 2.  
JEB course survey results (continued)

<i>Topic #25: Lean Canvass Business Module – Unique Value Proposition</i>				<i>Topic #27: Assignment – Proposition Statement for the Chiropractic Profession</i>			
Q49: I found the material in this Module was well presented	Response Option	Score	Percent (n=175)	Q53: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=173)
	Strongly Agree	16	9.1		Strongly Agree	25	<b>14.3</b>
	Agree	43	24.6		Agree	72	<b>41.6</b>
	Undecided	39	22.3		Undecided	37	21.4
	Disagree	50	<b>28.6</b>		Disagree	28	16.2
	Strongly Disagree	27	<b>15.4</b>	Strongly Disagree	11	6.3	
Q50: This topic is important for me to know as a future chiropractor				<i>Topic #28: Assignment – Advertising of non-NMSK conditions</i>			
	Response Option	Score	Percent (n=175)	Q54: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=174)
	Strongly Agree	65	<b>37.1</b>		Strongly Agree	75	<b>43.1</b>
	Agree	72	<b>41.1</b>		Agree	77	<b>44.3</b>
	Undecided	15	8.6		Undecided	10	5.7
	Disagree	12	6.9		Disagree	9	5.2
	Strongly Disagree	11	6.3	Strongly Disagree	3	1.7	
<i>Topic #26: Lean Canvass Business Module – Financial Management</i>				<i>Topic #29: Assignment- Discipline Hearing Report</i>			
Q51: I found the material in this Module was well presented	Response Option	Score	Percent (n=174)	Q55: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	13	7.5		Strongly Agree	81	<b>46.3</b>
	Agree	28	16.0		Agree	62	<b>35.4</b>
	Undecided	42	24.0		Undecided	24	13.7
	Disagree	51	<b>29.3</b>		Disagree	6	3.4
	Strongly Disagree	40	<b>23.0</b>	Strongly Disagree	2	1.1	
Q52: This topic is important for me to know as a future chiropractor				<i>Topic #30: Assignment – Chiro-Legal Report</i>			
	Response Option	Score	Percent (n=175)	Q56: This topic is important for me to know as a future chiropractor	Response Option	Score	Percent (n=175)
	Strongly Agree	100	<b>57.1</b>		Strongly Agree	82	<b>46.9</b>
	Agree	49	<b>28.0</b>		Agree	59	<b>33.7</b>
	Undecided	12	6.9		Undecided	27	15.4
	Disagree	7	4.0		Disagree	4	2.3
	Strongly Disagree	7	4.0	Strongly Disagree	3	1.7	

Table 3a.  
Students' perceptions of lectures topics.

Lecture Topic	'Well-presented' % Strongly Agree/Agree	'Important to know' % Strongly Agree/Agree
Who's who, What's what, Tribalism and the Social Contract	87.5	95.7
Professionalism, Ethics and Codes of Contest	83.0	100
Professional Misconduct Regulations	89.7	98.3
Chiropractic Scope of Practice	93.7	99.4
Marketing, Advertising and Internal Office Promotion	88.5	98.2
Prohibition Against Sex with a Patient	89.7	96.9
Complaints and Discipline	92.0	96.9
Record Keeping and Special Reports	84.6	97.7
Career Options, Banking and Dealing with the Media	67.8	95.5
Panel Discussion: <i>What Should the Proposition Statement of the Chiropractic Profession Be?</i>	69.2	96.6

**Lectures (Tables 3a and 3b)**

With respect to the lectures on 'Who's Who and What's What, Tribalism and the Social Contract', 'Professionalism, Ethics and Codes of Conduct', 'Professional Misconduct Regulations', 'Chiropractic Scope of Practice', 'Advertising, Marketing and Internal Office Promotion', 'Prohibition Against Sex with a Patient' and 'Complaints and Discipline' approximately 90% of students either 'agreed' or 'strongly agreed' they were well presented and over 95% of them 'agreed' or 'strongly agreed' these topics were important for them to know as future chiropractors.

Over 95% of students 'agreed' or 'strongly agreed' the lectures on 'Record Keeping and Special Reports' and 'Career Options, Banking and Dealing with the Media' were important for them to know as future chiropractors. Approximately 84% of students 'agreed' or 'strongly agreed' the lecture on 'Record Keeping and Special Reports' but only 68% of students 'agreed' or 'strongly agreed' the lecture on 'Career Options, Banking and Dealing with the Media' were well presented.

One of the lecture sessions consisted of a panel presentation on 'What Should the Proposition Statement of the

Table 3(b).  
Detailed description of topics in each lecture.

Lecture Title	Topics Discussed in Lecture	
Who's who, what's what, tribalism and the social contract	<ul style="list-style-type: none"> <li>• Discussion of various chiropractic organization and their mandates (e.g. regulatory bodies and their committees, advocacy groups, malpractice carrier, academic institutions, government agencies)</li> <li>• Discussion of difference between the Charter, Legislation, Acts, Standards of Practice, Guidelines, and Policies</li> </ul>	<ul style="list-style-type: none"> <li>• Definition of a profession</li> <li>• Definition of professionalism</li> <li>• Defining the chiropractic profession</li> <li>• Challenges to the trustworthiness of the profession</li> <li>• Controversies within the profession</li> <li>• Social contract, social closure and socialization cycle as it applies to chiropractic</li> </ul>
Professionalism, ethics and code of conduct	<ul style="list-style-type: none"> <li>• Principles of beneficence</li> <li>• Definition of fiduciary duties</li> <li>• CCA code of ethics and conduct</li> </ul>	
Professional misconduct regulations	<ul style="list-style-type: none"> <li>• Review of professional misconduct regulations in Ontario</li> </ul>	
Advertising, Marketing and Internal Office Promotion	<ul style="list-style-type: none"> <li>• Definition of advertising, marketing and internal office promotion</li> <li>• Review of advertising standards of practice across Canada</li> </ul>	<ul style="list-style-type: none"> <li>• Examples of controversial advertising across Canada and other jurisdictions</li> <li>• Caselaw examples</li> </ul>
Scope of Chiropractic Practice	<ul style="list-style-type: none"> <li>• Review of chiropractic scope of practice across Canada and other jurisdictions</li> <li>• Definition of controlled act versus activities in the public domain</li> <li>• Acupuncture</li> <li>• Animal chiropractic</li> </ul>	<ul style="list-style-type: none"> <li>• Vaccination and immunization</li> <li>• Limited prescription rights</li> <li>• Requirements to use chiropractic technique system on patients</li> <li>• Caselaw examples</li> </ul>
Prohibition against having sex with a patient	<ul style="list-style-type: none"> <li>• History of Issue</li> <li>• Definition of patient</li> <li>• Differentiation between sexual harassment, sexual misconduct, sexual violation and sexual abuse across Canada</li> </ul>	<ul style="list-style-type: none"> <li>• Spousal exemption</li> <li>• Mandatory reporting</li> <li>• Sexual harassment of doctors by their patient</li> <li>• Caselaw examples</li> </ul>
Record keeping and special reports	<ul style="list-style-type: none"> <li>• Record keeping requirements and Standards of Practice</li> <li>• Privacy and Confidentiality</li> </ul>	<ul style="list-style-type: none"> <li>• Consent</li> <li>• Special reports</li> <li>• Caselaw examples</li> </ul>
Career options, contracts, banking and dealing with the media	<ul style="list-style-type: none"> <li>• Career options available to a chiropractor</li> <li>• Purchasing a practice</li> <li>• Operating costs</li> </ul>	<ul style="list-style-type: none"> <li>• Capital expenditures</li> <li>• Speaking to the media</li> <li>• Examples from real-life</li> </ul>
Complaints and discipline	<ul style="list-style-type: none"> <li>• Understanding complaints process</li> <li>• Understanding discipline process</li> <li>• Caselaw examples</li> </ul>	



*Chiropractic Profession Be?*” (see description of assignment below). Panelists included representatives (typically the CEO) from the World Federation of Chiropractic, the Canadian Chiropractic Association, the Ontario Chiropractic Association and the Alliance for Chiropractic (previously the Chiropractic Awareness Council). Usually, a representative from the College of Chiropractors of Ontario (CCO) also participates; unfortunately, that was not the case during the 2018-19 academic year. When asked, 69.2% of students perceived the panel was ‘well presented’ and 74.9% ‘agreed’ or ‘strongly agreed’ this topic was important for them to know as future chiropractors. Table 4 provides details of the content of each of these lectures.

#### *Small group facilitated sessions (Table 5)*

Approximately 90% of students stated they were actively engaged in, and approximately 90% of students ‘agreed’ or ‘strongly agreed’ it was important for them to know as future chiropractors, the following small group session topics: ‘*Resolving Ethical Dilemmas*’; ‘*Advertising non-Neuromusculoskeletal (NMSK) conditions*’; ‘*Expanding the Chiropractic Scope of Practice*’; ‘*Prohibition Against Sex with Patient – Spousal Exemption*’; ‘*Boundary-Crossing vs Boundary Violation*’; ‘*Attending a Discipline Hearing – Lessons Learnt*’; ‘*Ethical Practice Activities*’ and ‘*Chiropractic as a Career*’.

A slightly lower percentage of students (83.4%) stated they were actively engaged during the ‘*Chiropractors as*

Table 4.  
*Detailed description of each small group session*

Session Title	Session focus/structure
Rewriting the chiropractic oath	<ul style="list-style-type: none"> <li>Students tasked with rewriting the Chiropractic Oath CMCC graduates take during convocation, originally written in the 1940s</li> </ul>
Resolving Ethical Dilemmas	<ul style="list-style-type: none"> <li>Students discuss how they handle various ethical dilemmas they found themselves in and whether or not they would have handled it any differently in hindsight</li> </ul>
Chiropractic Industry	<ul style="list-style-type: none"> <li>Students consider information that discusses chiropractic as an industry (e.g. utilization rates in different geographical locations, average incomes, job satisfaction rates)</li> </ul>
Creating a Proposition Statement for the Chiropractic Profession	<ul style="list-style-type: none"> <li>Students create a proposition statement for the chiropractic profession</li> </ul>
Advertising non-NMSK conditions by individual chiropractors and/or professional organizations	<ul style="list-style-type: none"> <li>Students debate whether or not individual chiropractors and/or chiropractic organizations ought to advertise potential benefits of chiropractic care for the management of non-NMSK conditions (e.g. colic, enuresis, asthma, gastro-esophageal reflux disorder, urinary incontinence)</li> </ul>
Expanding the chiropractic scope of practice	<ul style="list-style-type: none"> <li>Students discuss the political challenges, pros and cons of an expansion of the chiropractic scope of practice (e.g. ability to order advanced imaging tests, ability to order laboratory testing, ability to have limited prescription privileges)</li> </ul>
Chiropractors as entrepreneurs	<ul style="list-style-type: none"> <li>Tutors discuss their experiences with operating a chiropractic practice and students share their experiences of shadowing chiropractor in the field</li> </ul>
Prohibition against having sex with patients – treating a spouse	<ul style="list-style-type: none"> <li>Students discuss complexities of providing care for a healthcare provider’s spouse</li> </ul>
Boundary crossing versus a boundary violation	<ul style="list-style-type: none"> <li>Students consider when does a boundary crossing, during which a chiropractic may self-disclose personal information in order to develop a rapport with a patient, becomes a boundary violation</li> </ul>
Attending a discipline hearing	<ul style="list-style-type: none"> <li>Students share their experiences of attending a discipline hearing</li> </ul>
Ethical practice activity	<ul style="list-style-type: none"> <li>Students consider the ethical of various practice activities, including prepayment packages, open concept offices and the obligation of a potential patient to bring in their spouse or significant other during their report of findings</li> </ul>
Chiropractic as a Career	<ul style="list-style-type: none"> <li>Students consider the pros and cons of various career options available to them as a chiropractor</li> </ul>

Table 5. Students' perception of small group facilitated sessions.

Small Group Facilitated Session	'Actively Engaged' % Strongly Agree / Agree	'Important to know' % Strongly Agree / Agree
Resolving Ethical Dilemma	92.0	92.2
Advertising non-NMSK conditions	95.5	93.7
Expanding Chiropractic Scope of Practice	91.4	93.1
Prohibition Against Sex with a Patient – Spousal Exemption	93.1	94.3
Boundary Crossing v Boundary Violation	86.3	89.1
Attending a Discipline Hearing – Lessons Learnt	92.0	93.9
Chiropractic as Entrepreneurs	83.4	91.8
Chiropractic Industry	84.0	85.2
Creating a Proposition Statement for the Chiropractic Profession	69.7	62.2
Rewriting the Chiropractic Oath	72.5	44.6

Table 6. Students' perception of online business course (Lean Canvas)

Small Group Facilitated Session	'Well Presented' % Strongly Agree / Agree	'Important to know' % Strongly Agree / Agree
Foundation of Business Planning	52.6	72.0
Customer Segments/ Target Customer	47.6	72.0
Unique Value Proposition	44.0	78.2
Financial Management	52.3	85.1

Table 7. Students' perception of course assignments

Course Assignment	Important to Know % Strongly Agree / Agree
Proposition Statement	55.9
Attending a Discipline Hearing	81.9
Chiropractic Legal-Report	80.6
Advertising non-NMSK conditions	87.3

Entrepreneurs' small group session, although 91.8% of them 'agreed' or 'strongly agreed' it was important for them to know as future chiropractors. Likewise, 84% of students stated they were actively engaged during the small group session that discussed 'the Chiropractic Industry' and a similar percentage (85.2%) of them 'agreed' or 'strongly agreed' this topic was something that was important for them to know as future chiropractors.

Student responses were far less favorable for the small group session that tasked them with developing a 'Proposition Statement' for the chiropractic profession. Specifically, 69.7% of students stated they were actively engaged during this small group session and only 62.2% of students 'agreed' or 'strongly agreed' this topic was important for them to know as future chiropractors.

During the first small group session students were tasked with re-writing the Chiropractic Oath CMCC graduates take during convocation. This was a group assignment. When asked, 72.5% of students stated they were actively engaged in this small group session and only 44.6% 'agreed' or 'strongly' this project was important for them to know as future chiropractors. Table 5 provides details of the topics discussed during each small group session.

*Lean Canvas (Table 6)*

In general, students had much less favorable perceptions toward the online Lean Canvas business modules. Roughly 50% of students 'disagreed' or 'strongly disagreed' the content of all four Lean Canvas sessions were well presented. Seventy two percent (72%) of students 'agreed' or 'strongly agreed' the Lean Canvas module on 'Foundation of Business Planning' and 'Custom Segments/ Target Customers' were important to know as future chiropractors. That number increased to 78.2% for the Module on the 'Unique Value Proposition' and increased still further to 85.1% for the Module on 'Financial Management'.

*Course assignments (Table 7)*

There were four course assignments submitted for grading by the small group facilitators for the JEB course. Students changed facilitators (tutors) four times during the course. A group assignment required students to create a proposition statement for the chiropractic profession. For the purpose of this assignment, the following

definition was used to define a proposition statement: 'A value proposition is a marketing statement that describes why a consumer should choose a particular product or service. To develop a value proposition, one must identify the need of the target demographic group, address the need and add value. For chiropractors to develop a value proposition appropriately, they must identify what is missing in the health care portfolio overall and whether they can consistently add value by meeting that need'.<sup>3</sup> Examples of proposition statements over the years include 'Chiropractors as Spine Care Experts', 'Chiropractors as MSK Specialists' and 'Chiropractors as Wellness Experts'. The proposition statement had to be defended by appropriate references from peer-reviewed literature. Students were also required to create advertising material and an advertising strategy for their proposed statement (e.g. use of social media, use of print; radio or television commercials or; grass-roots communication with other healthcare providers such as medical doctors and so on).

Similar to their perception of the panel presentation and small group session on this topic, only 55.9% of students 'agreed' or 'strongly agreed' this assignment was important for them to know as chiropractors.

One of the requirements for this course was for students to attend a Discipline Hearing (DH) at a regulated health-care professional college. This has been a requirement for this course dating back to the 1980s. Students could fulfil this requirement in their home province during scheduled breaks in the academic year. Since DHs are - with very few exceptions - open to the public, regulatory bodies post the dates of upcoming DHs on their webpages. These notifications include the name of the member and the Notice of Hearing which lists the allegations against them. Over 81% of students reported they 'agreed' or 'strongly agreed' attending a DH was important for them to know as future chiropractors.

Students were required to prepare a Chiropractic Legal Report (CLR) for grading. For this course, the CLR was to be written from the perspective of a professional letter to a patient's lawyer subsequent to a motor vehicle accident or other similar injury resulting in litigation. Slightly over 80% of students 'agreed' or 'strongly agreed' this was important for them to know as future chiropractors.

Lastly, another group assignment required students to state whether or not individual chiropractors and/or the

profession writ large should be permitted to advertise the management of non-NMSK conditions. With respect to this topic, 87.3% of students 'agreed' or 'strongly agreed' it was important for them to know as future chiropractors.

### *Written comments*

Students were given the opportunity to provide written comments. The responses fell into six broad categories: lecture presentation; business management content; Chiro-Legal Report (CLR); course outline; the open book examination and; small group sessions.

### *Comments on lecture presentation*

There were 32 written comments provided by students pertaining to the lectures (see Table 8 for representative examples). In general, students were universally positive with respect to their feedback on the lecture material and presentation style. By far one of the teaching strategies students enjoyed the most was 'story-telling' - that is, when students were provided real-life examples of scenarios or caselaw illustrating the topic under discussion.

### *Comments on Business Management modules*

Forty-six students provided comments pertaining to the

Table 8.

### *Written comments on lecture presentation*

- Dr G knows his sh\*t. He is the go to guy with regards to discipline, governing bodies, laws etc
- I liked the course! Great info! The timing of some of the due dates could have been better but that is being picky
- Course content was great, engaging, necessary and well delivered. Love the occasional swears because it really helps drive the point home. Try some F-bombs next time around ;)
- I thoroughly enjoyed the course. Dr G has great insight into important topics that we need to know as chiropractors. As a student thinking about the gray areas of practice can be frustrating. I enjoyed Dr G's takes on the topics. I feel mostly confident in processes that I need to do as a licensed DC. Thank :)
- Love your stories & enthusiasm Dr G!
- Loved the course, especially the labs! Very important info for us to know going into 4th year and beyond - Dr Gleberzon taught it well and made it fun/interesting. Thanks for a great course!

online business management modules (see Table 9 for representative examples). Not surprisingly, based on their responses provided in the survey itself, the comments were not favorable. Almost all students who provided comments wrote they held unfavorable opinions of the assignments associated with each online module. Many students suggested the online content be replaced by a lecture-based course that allowed a more interactive and fulsome discussion of business management concepts and strategies. Many students admitted to a general lack of financial literacy and they perceived this course did little or less to address that knowledge gap.

#### *Comments on CLR, course outline, open book examination and small group sessions*

Sixteen students commented that, although they perceived the CLR was a worthwhile assignment to do, not enough instruction was provided on how to do it. Thirteen students commented on the course outline suggesting the due dates for each assignment be made clearer. Nine students complained about the open-book examination, which allowed them to bring with them any written notes they wished to bring (e.g., copies of PowerPoint presentations, personal notes, Noteservice notes) [Author's Note: Noteservice is a student directed initiative where a student takes notes of lectures of different courses that are then printed and bundled together and distributed to the students who subscribe to the service].

Inexplicably, these nine students stated that having to print out the all the course material and then having to throw it all out was a waste of paper. Students did not mention that they were under no obligation to bring any notes with them, let alone required to throw them out after the exam.

Lastly, seven students commented on the small group sessions. The comments were generally personal observations, neither positive nor negative, although two students stated re-writing the chiropractic oath was a waste of their time.

#### **Discussion**

Adult education has generally moved away from an exclusive lecture-based 'sage-on-the-stage' format to a format that uses multiple teaching strategies, mostly notably small group sessions. Skinner *et al.*<sup>4</sup> described how the use of small group learning opportunities enhanced

Table 9  
*Written comments on Business Management*

- Was not a big fan of the business modules. They are important but poorly done
- The lean canvas assignments were frustrating to complete as they were largely the same as the assignments we had completed last year in our CP class. These modules focus heavily on entrepreneurship and business planning two topics which have already been extensively covered. I feel I would have benefitted more had the focus been more on how to practically operate a business once doors are open for business (ie financial management, bookkeeping, operating patient management software etc)
- The online business modules were very confusing and hard follow. What is required for this class is really unorganized and confusing. Mandatory in class step by step lectures on how to start a business, run a business and financial fees would be very beneficial
- The business modules are not helpful to someone who lacks business knowledge/experience. An intro course held in-class in first year would help introduce the subject better than having us try online on our own.
- We need a business course designed and taught by chiropractors! Online modules from Centennial College are useless. Giving online business modules to students who have NO business background is useless. I googled everything and essentially learned/obtained nothing (with the exception of UVP). Additionally these modules don't seem to be catered towards 'selling' a health service rather they feel more like selling a product which is not the same thing
- The business modules are poor. I love business and learning about it, but these assignments are tedious, annoying, and honestly provided almost no value or knowledge that I will take away moving forward. In-class would be better or even small group would be better
- The business section of this course needs to be taught at a lecture. Leaving 3rd year, I still know very little about operating a business and entrepreneurship. I am in no way ready or confident enough to start my own or take over a chiropractic office. Teach us business basics, the how-to's, definitions, banking info, etc.

interpersonal and communication skill development for physiotherapy students. They contend interpersonal skills entail effective communication, active listening, cultural competency and professionalism. These attributes, they wrote, are needed to enhance communication between a healthcare provider and their patient and family or carer, as well as between the healthcare provider and their colleagues, other healthcare providers, regulatory bodies and other professional organizations.<sup>4</sup>

In an article advocating that adult learning theories be applied to medical education, Abela<sup>5</sup> describes various



tools that can create a dynamic learning environment, many of which were used in the JEB course including: emphasizing the relevance of what is being taught; use of small groups to tackle abstract or difficult subjects and; open discussion on current 'how topics'. Advocating for what is referred to as Transformative Learning - which stresses the importance of the teacher in facilitating learners to question and reflect on their own and others' assumptions - Abela opines small group work is especially useful to formulate ideas on a particular topic.<sup>5</sup>

At CMCC courses and course instructors are evaluated using an online platform such as SurveyMonkey ([www.surveymonkey.com](http://www.surveymonkey.com)). The author of this study teaches 8 different courses and is very familiar with the survey instrument and content. Unfortunately, the questions asked in the survey are very generic, bordering on being anodyne. Examples of survey questions include "what did you find most helpful to your learning?" and "did the faculty member model professionalism?" with response options ranging from 'always' to 'hardly ever'. In addition to the lack of granularity of the survey questions, response rates have historically ranged from 8% to 22%, numbers that are non-representative of a class of 185 students and do not allow for any fulsome exploration of responses.

In order to address this problem, the author devised a specific paper survey with more precise questions, in hopes of not only yielding a higher response rate but also to better understand how its redesign was perceived by students. In a limited way, it would serve as a quality control measure of the success - or lack of success - of the various components of the course.

In this study, a paper survey distributed directly to students resulted in a very high response rate of over 94%. This is considerably higher than most surveys and runs counter to the observation that response rates in surveys tend to be declining overall.<sup>6,7</sup> It may speak to the high motivation of students to share their opinions on this course.

With the few exception described above, the vast majority of students had favorable perceptions of the lectures, small group sessions and course assignments. In general students perceived the lectures were well presented and they were actively engaged in almost all of the small group sessions.

In their comments, many students specifically men-

tioned they found 'story-telling' to be one of the most effective teaching strategies used by the lecturer to illustrate the topic under discussion. This is consistent with recommendations offered by attendees at a workshop conducted during the 2018 WFC Education Conference held in London, UK (the workshop was facilitated by the author of this study).<sup>8</sup> That workshops sought to standardize jurisprudence, ethics and business management courses taught at chiropractic programs worldwide and asked attendees to discuss which teaching strategies they found worked best in the classroom. Almost to a person they agreed story-telling by lecturers or small group facilitators was the best way to engage students.<sup>8</sup>

Students overwhelmingly perceived almost all the lectures, small group sessions and assignments were important things for them to know as future chiropractors, with one notable exception: The one topic that students had a poor perception of was the panel discussion, small group session and assignment pertaining to developing a proposition statement for the chiropractic profession. Despite the PI's best efforts, it is possible that chiropractic students do not appreciate how having a unifying proposition statement for the profession could advance it in the eyes of the public, other healthcare professions and the media.

Similarly, although they reported the content was important for them to know as future chiropractors, the majority of students had unfavorable perceptions of the online business management modules delivered by Lean Canvas. This is not entirely surprising. The content was not specific to establishing a chiropractic practice and there were many topics not covered, including: types of insurances either required or needed by chiropractors (e.g. malpractice, life, critical illness, disability, office liability); capital expenditures specific to chiropractic practice; issues related to hiring and training chiropractic health assistants (CHAs); how to read a financial statement; how to create an investment portfolio; how to appraise a practice for sale or purchase; associateship contracts and; basic financial literacy. Unfortunately, when the business management modules were being constructed the author of this study was not consulted. Not only were there content deficiencies but also factual errors in the final product delivered to students. There were also problems with the functionality of the online modules (e.g. some embedded links were inactive, pages within the module did not always transition properly). Although these IT problems

were resolved over subsequent years they, coupled with what was perceived as inadequate business content, led to student frustration with this learning experience and low perception of its value to them.

The intradepartmental meetings that reconstructed the JEB course also eliminated the Year IV lecture-based business course that did exist (as well as the course that taught undergraduate students different chiropractic technique systems). Likewise, the Year IV assignment that required interns to develop a business plan for opening a chiropractic practice was also terminated, despite the fact that project that been an integral and successful component of the jurisprudence since its inception in the 1970s. The results of this study support the development of a series of business or entrepreneurship courses for students, perhaps housed within its own dedicated department, in much the same way there are departments dedicated to anatomy, clinical diagnosis and technique.

To be fair, healthcare professional education is often-times underrepresented with respect to business management content. Ciolfi and Kasen<sup>9</sup> surveyed a group of Ontario chiropractors in order to examine the relationship between chiropractors' perceived level of business knowledge required and perceived level of current business knowledge. They found there was a significant knowledge gap in six of eight variables examined (strategic management, marketing, accounting, organizational behavior, operations and legal and ethics). A more recent study by Ciolfi *et al.*<sup>10</sup> interviewed 16 Ontario practicing chiropractors (not all CMCC graduates) and asked them about their perceptions of the quality of business education they received while at chiropractic college. The majority of interviewees stated that, while their requirements for business education were both broad and essential, they perceived the education they did receive minimally contributed to their business skills upon graduation.

Gleberzon, Perle, and Lamarch<sup>11</sup> conducted a workshop during the 2011 Association of Chiropractic College and Research Agenda Conference (ACC-RAC) on the topic of ethical practice management. Workshop attendees identified student debt load as the most common reason for a chiropractor to engage in unethical practice activities, although some attendees also identified a new graduate impatience to develop a successful practice and a sense of entitlement as other contributing factors. Attendees suggested chiropractic students be presented with

examples of ethically-based chiropractic practices, positive role-models and examples of unethical activities, especially if they resulted in disciplinary action by licensing boards.

Moreover, workshop attendees unanimously advocated for a standardized model curriculum for practice building to be taught at all chiropractic programs that emphasized business skills and financial acumen, undergirded by an ethical framework. Workshop attendees suggested business content ought to include: understanding contracts; basic accounting skills; effective advertising; how to use demographic information to increase patient traffic; staff training; insurances and; continuing education requirements.<sup>11</sup>

That said, at the same time the workshop were being conducted in 2011, based on a comparative audit of 11 North American chiropractic programs, Gleberzon<sup>12</sup> reported there was a lack of standardization of jurisprudence and business management courses and there was no consensus of a model curriculum.

### *Changes to course based on student survey results*

As a result of this survey, several changes were made to the course for the 2019-2020 academic year. The lecture on 'career options, contracts, banking and dealing with the media' was revamped, with additional information on insurance, contracts and operating and capital expenditures added.

The small group session that discussed the lack of a spousal exemption in Ontario that would allow a healthcare professional to treat a spouse was dropped in favor of a session discussing how to operate a chiropractic practice.

There were specific assignments provided by Lean Canvas for each online business module. Two of the four assignments were decoupled from their associated business module and replaced with assignments that focused on issues related to operating a practice. One assignment tasked student with investigating the types and costs of various insurances associated with chiropractic (see list above), licensing body registration fees and costs of attending various seminars, workshops or programs a chiropractor may wish to pursue (e.g. acupuncture, animal chiropractor, Webster technique, paediatric chiropractic care, Active Release Technique© and other chiropractic technique systems).



The other assignment asked students to provide the pros and cons of working in an urban, suburban or rural setting. Students were also asked to consider the pros and cons of operating a practice in a medical building, of having a street level practice, of practicing in a strip mall or of having a home-based practice. Lastly students were asked to list the pros and cons of various career options including: sole practitioner; partnership; associateship; locum doctor; providing only home treatments; conducting independent assessments and; becoming involved in teaching, research and chiropractic professional organizations (e.g. OCA, CCA, CCO, WFC, AFC).

In order to quell the anxiety some students had with respect to the content and format of the Chiro-Legal Report, more details were provided along with links to representative examples. Lastly, a separate chart was constructed that clearly listed the due dates for all assignments of the course.

### *Limitations*

There were several limitations to this study. There were only two questions inquiring about a student's perception of the lectures and small group sessions in the course. It is possible additional questions would have revealed more information and produced different scores. It is also possible the questions were too restrictive.

Even though the survey was distributed at the end of the course when all other course assignments had been submitted and graded it is still possible students skewed their responses to curry favor with the course coordinator. Theoretically this potential limitation could have been avoided by administering the survey after each lecture and small group session, but this would have resulted in several other problems.

First, there were eight lectures and 12 small groups sessions (facilitated by five different faculty members) delivered every other week, meaning there would have been 32 surveys (eight from lecture and 24 from small group sessions) to collate and extract data from, rather than the only one survey administered in this study. An even bigger problem would be the variability of the number of students who attended each lecture.

Since college policy prohibits making lecture attendance mandatory, number of students who attended each lecture varied considerably throughout the course. For example, based on a very rough visual estimate the majority

of students attended the first lecture and the Panel discussion but fewer students attended the lecture on the prohibition against having sex with a patient. This would have resulted in a varying number of surveys being completed, assuming all students in attendance completed them. With a varying denominator for each survey response rate it would be very difficult to draw any conclusions from the data. By contrast, because the survey was administered only once, the number of respondents was consistent and overall student perceptions easier to explore.

Students may have suffered from recall bias since the survey was administered in April and some lectures and small group sessions were conducted the previous September. However, this was probably mitigated by the fact the survey was administered during the final examination which was comprehensive and based on the entire year's work; this meant that, in order to prepare for the exam (which had a class average of roughly 85%), students ought to have reviewed all course work including lectures and small group sessions.

Lastly, a significant limitation of this study was the survey itself. Beyond a certain degree of face validity, no attempt was made to validate it in terms of its content, construct or criterion. If used in future studies the survey used in this study could be tested to establish its overall validity.

### **Conclusions**

A unique paper 56-item questionnaire delivered at the end of the JEB course resulted in 94% response rate that yielded important information on students' perception of its lectures, small group sessions, assignments and online business management modules. Overall students had very favorable perceptions of the restructured course components that included lectures, small group sessions and course assignments. Unfortunately, students had poor perceptions of the Lean Canvas business modules. There are no current solutions to address these concerns.

Future studies are needed to establish model and standard jurisprudence and business management curricula in chiropractic education. Comparisons of jurisprudence, ethics, and business management courses taught at other chiropractic programs worldwide may offer further guidance on how to enhance this component of chiropractic education.

The results of a comparative audit of JEB courses

taught elsewhere, in addition to this study, may serve as a template for quality improvement efforts to enhance standardization of jurisprudence and business management courses in chiropractic curricula.

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