

Perceived effects of the delisting of chiropractic services from the Ontario Health Insurance Plan on practice activities: a survey of chiropractors in Toronto, Ontario

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The purpose of this study was to survey a random sample of Toronto chiropractors and gather their perceptions of the effects that the delisting of chiropractic services from OHIP had on their practices profiles.

Methods: A survey was mailed to 199 chiropractors who were asked to disclose demographic information, if they were in practice at the time when OHIP coverage was in effect, the perceived effect OHIP delisting had on their patient volumes, income, the profession's credibility and if they would be in favor of having OHIP reinstated.

Results: Among the 123 respondents in practice during OHIP coverage ($n = 92$), 48.9% indicated they perceived their practice income and 36.6% perceived their patient volume was negatively affected; 57.5% reported both had subsequently recovered. Almost 50% perceived OHIP delisting negatively affected the profession's credibility and 46.1% of respondents were in favor of it being reinstated for chiropractic services; this percentage was much higher among chiropractors who were not in practice during the time of OHIP coverage.

Conclusion: Most chiropractors reported that patient volumes and incomes have returned to pre-delisting levels and few chiropractors who were in practice

Cette étude avait pour objet d'effectuer un sondage auprès de chiropraticiens de Toronto afin de recueillir leurs perceptions sur les conséquences du retrait des services de chiropraxie de l'ASO sur le profil de leur pratique.

Méthodes : un sondage fut posté à 199 chiropraticiens à qui l'on a demandé de divulguer des renseignements démographiques, s'ils exerçaient leur profession au moment l'ASO couvrait ces soins, les conséquences du retrait de la part de l'ASO sur leur clientèle, leurs revenus, la crédibilité de la profession, et s'ils seraient favorables à ce que les soins soient de nouveau couverts par l'ASO.

Résultats : parmi les 123 répondants qui exerçaient leur profession durant la période où les soins étaient couverts par l'ASO ($n = 92$), 48,9 % ont indiqué que leurs revenus avaient diminué, et 36,6 % ont indiqué que leur clientèle avait diminué ; 57,5 % ont affirmé que leurs revenus et leur clientèle avaient subséquemment augmenté au niveau antérieur. Près de 50 % ont perçu le retrait de l'ASO comme ayant une influence négative sur la crédibilité de la profession, et 46,1 % des répondants étaient favorables à ce que les soins soient de nouveau couverts par l'ASO.

Conclusion : la plupart des chiropraticiens ont indiqué que leur clientèle et leurs revenus étaient maintenant identiques au niveau antérieur, et quelques chiropraticiens qui exerçaient leur profession au moment

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during OHIP coverage expressed interest in having it reinstated.

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KEY WORDS: chiropractic, services, OHIP, delisting

Introduction

The Canada Health Act (CHA) forms the legislative basis of Canada's national health insurance program.^{1,2} For provinces to be eligible for federal transfer payments they must provide, at no direct cost to residents, all health care services deemed medically necessary, provided by physicians or provided within hospitals;^{1–4} other services may be insured at the discretion of each province. Thus, the CHA definition of “medical necessity” places non-physician health providers practicing outside of hospital settings at the boundary of what may or may not be considered an insured service⁵ leaving provinces with the flexibility to make funding decisions with respect to community-based services.^{2,3} With the cost of Canadian health care estimated by the Canadian Institute of Health Information exceeding \$142 billion in 2005,^{6,cited in 4} which represented a 7.7% increase from the previous year, the Ontario government used its concerns with respect to health care spending and its legislative flexibility as policy change levers to partially deinsure (more commonly referred to as “delist”) some health care services in 2004, such as physiotherapy, or completely delist some health services, such as chiropractic.

Prior to 2004, starting in the mid-1970s, the Ontario Health Insurance Plan (OHIP)- the provincial insurance branch of the Ministry of Health and Long Term Care (MOHLTC) in Ontario – partially covered chiropractic services. Initially, OHIP paid \$11.75 for an initial visit, \$9.65 for a subsequent visit and \$12 for house call to a total of \$225 per person per year; this amount was decreased to \$150 per year in 2002–03.⁷ However, effective December 1st, 2004, the Government of Ontario delisted chiropractic services from OHIP eligibility with limited warning. This was the first time a jurisdiction in Canada completely delisted chiropractic care from its provincial payment plan and this may have been the first jurisdiction in the world to do so.⁸ At the time of the impending delisting of chiropractic services from OHIP, two docu-

l'ASO couvrir ces soins ont démontré de l'intérêt envers le retour de la couverture de l'ASO.

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MOTS CLÉS : chiropratique, services, ASO, retrait

ments were published- one a self-published study by Professor Pran Manga from the University of Ottawa⁸ and the other by Deloitte⁹ sponsored by the Ontario Chiropractic Association (OCA) – that forecasted the negative effects this action would have on patients in terms of wait times, accessibility to services, costs to the health care delivery system and the marginalization of chiropractic (see Table 1). The OCA also conducted an online survey in 2007 to ascertain what the impact of delisting had on respondents⁷; however, no data has been collected from the chiropractic profession with respect to the perceived effects delisting had on chiropractic practice activities since that time.

The purpose of this study was to survey a random sample of Toronto chiropractors and gather the following information: their perception of the impact OHIP delisting had initially on their patient volumes and subsequent to it; their perception of the impact OHIP delisting had on their office incomes and subsequent to it; their perception of the effects OHIP delisting had on the profession's credibility and; whether or not they would be interested in OHIP coverage being reinstated for chiropractic services and, if so, who should be eligible and what amount should be covered.

Methods

Ethics Review

This study was approved by the Research Ethics Board of the Canadian Memorial Chiropractic College (CMCC).

Selection

The study design was a cross sectional survey targeted towards licenced chiropractors practicing in the Greater Toronto Area (which encompasses Toronto and Mississauga), Ontario. This was an appropriate sample for the investigators to access since 20% of all Ontario chiropractors practice in Toronto. To select our population, the par-

Table 1 *Predicted negative consequences of OHIP delisting to chiropractors and their patients*^{8,9}

- Decrease access to chiropractors due to escalation in costs per visit
- Decrease in quality of care to patients
- Longer wait times to receive care
- Less cost-effective care provided to patients
- Less appropriate care provided to patients
- Increased costs to the MOHLTC
- Increase in expenditures on prescription drugs
- Increase in emergency room visits
- Directional shift away from governments transformation and integration agenda
- Marginalization of the chiropractic profession

ticipants were recruited from Toronto via the College of Chiropractors of Ontario (CCO) online directory on October 21, 2009 [all practicing chiropractors in Ontario must be registered (or licenced) with CCO]. The 591 practicing chiropractors in Toronto were assigned a number; the numbers were randomized to reduce sampling bias by statistical software listed as R project¹⁰ and the first 199 chiropractors selected were used in the study. Since the sampling frame includes all practicing chiropractors in the GTA (population of interest), a randomly chosen group is considered to be highly representative. Chiropractors not in Toronto or not registered with the CCO were excluded from this study. Since not all selected chiropractors had email, it was decided that surveys would be distributed by ground mail. Also, it was posited that mailing out the survey as opposed to an interview would be more efficient both in terms of time and cost.

The surveys were mailed to 199 chiropractors on October 28, 2009 and were received up until December 18, 2009. Data was collected and analyzed January 26, 2010. The choice of sample sized was taken such that 95% confidence intervals around proportions of interest would be sufficiently narrow. Based on the estimate of a 60% response rate we believed we would get 120 people.¹¹ This would ensure that any CI around a proportion with sample size around 120 would yield a confidence interval no wider than 18 percentage points. Surveys were coded and a second survey was re-sent on April 19, 2010 to those chiropractors who had not responded initially. The second

set of surveys were accepted until June 1, 2010. Data was collected from this second step and was analyzed June 8, 2010.

Confidentiality

Each of the participant's records were stored on a password protected computer and any paper work was locked in a filing cabinet and then shredded subsequent to data acquisition in order to protect the privacy of the individuals. Respondents were not required to identify themselves any where on the survey.

Deception

No deception was used in this study.

Survey instrument

The survey questions were developed during a series of discussion among the research team. Since, to the best of our knowledge, this is the first survey of its kind, a unique set of questions were developed that the authors' believed would best capture the data they sought to gather (see Appendix). Thus, the survey had a degree of face validity but was not pre-tested. The study participants were asked to disclose their age, sex, length of time in practice, if they were in practice at the time when OHIP coverage was in effect, if they perceived OHIP delisting affected their patient volume and practice income and, if so, whether or not they perceived their patient volume had subsequently recovered during the intervening years. The participants were also asked if they perceived that OHIP delisting negatively impacted the credibility of the profession. Lastly, survey participants were asked if they would be in favor of OHIP coverage being reinstated and, if so, to what extent and for whom.

Statistical Analysis

Percentages were calculated from the data and are presented in Table form along with raw numbers. A two sided test of differences between proportions was used to compare results.¹⁰ An alpha level of 0.05 was used as the standard for statistical significance. Due to the nature of each variable being dichotomous a chi squared test is warranted. This test is also representative of a test of difference in proportions. Data were coded into a spread sheet. R project statistical software was used in the randomization process.¹⁰

Table 2 Number of years in practice among respondents ($n = 123$)

Years in practice	Percent (n)	95% Confidence Interval
0–5	25.2% (32)	(17.5, 32.9)
6–10	30.1% (37)	(22.0, 38.2)
11–15	13.8% (17)	(7.7, 19.9)
16–20	8.9% (11)	(3.9, 13.9)
21–25	4.1% (5)	(0.6, 7.6)
26–30	6.5% (8)	(2.1, 10.9)
31–35	10.6% (13)	(5.2, 16.0)
>36	0.8% (1)	(0.0, 2.4)

Results

Response rate and number of years in practice

Of the 199 OHIP surveys mailed out, 123 chiropractors responded to the questionnaire representing a response rate of 61.8%. Six surveys were returned to sender. This number of respondents provided a reasonably large proportion of the entire population of interest (chiropractors in the GTA) and thus was thought to be representative of this population with respect to age, gender and number of years in practice. Of the chiropractors who responded, the number of years in practice ranged from 1 to 52 with the average being 13.5 years ($SD = 10.4$) (see Table 2).

Perception of the Effect of OHIP delisting on Chiropractors' Practice Income

Chiropractors were asked to respond whether or not they perceived the delisting of OHIP in 2004 initially affected their businesses financially. Forty-five respondents reported that their practice was negatively affected (36.6%) [95% CI: (0.281, 0.451)], 47 reported their practice was not affected (38.2%) [95% CI: (0.296, 0.468)], and 31 (25.2%) [95% CI: (0.175, 0.329)] were not in practice at the time of OHIP coverage; therefore, this question was not applicable to them. (NB: Seven chiropractors stated that their business was not effected, but circled a

Table 3 Perceived percentages of income lost among those chiropractors in practice during OHIP coverage subsequent to its delisting ($n = 52$)

Percentages of income lost (%)	Percent (n)	95% Confidence Interval
0–10	30.8% (16)	(18.3, 43.3)
11–20	32.7% (17)	(19.9, 45.5)
21–30	23.1% (12)	(7.6, 38.6)
31–40	5.8% (3)	(0.0, 12.2)
41–50	3.8% (2)	(1.4, 9.0)
>50	3.8% (2)	(0.0, 9.0)

“0–10%” decline in practice income. This is explained further in the “study’s limitations” section below). Thus, of the 92 chiropractors in practice at the time of OHIP coverage, 48.9% [95% CI: (0.387, 0.591)] reported their practice was negatively affected and 51.2% [95% CI: (0.410, 0.614)] reported it was not.

With respect to those chiropractors who reported that their practice incomes declined due to OHIP delisting ($n = 52$), roughly a third reported they perceived their practice revenues declined by less than 10%, a third reported they perceived their practice income declined between 11% and 20%, and the remaining third perceived their practice revenue dropped more than 20% (see Table 3).

Perception of the effect of OHIP delisting on chiropractors' patient volume

Respondents were asked whether or not the delisting of OHIP resulted in a decrease of their patient population (or volume) immediately after delisting. Forty-five chiropractors (36.6%) [95% CI: (0.225, 0.507)] said their patient population decreased, 52 (42.3%) [95% CI: (0.225, 0.507)] said their patient population did not decrease, and 26 (21.1%) [95% CI: (0.092, 0.330)] were not in practice at the time of OHIP coverage therefore, this question was not applicable.

Of the respondents who reported a decline in patient populations attributed to OHIP delisting ($n = 45$), 12

Table 4 *Perceived decline in patient volume immediately after the delisting of OHIP (n = 45)*

Percentage of patients lost (%)	Percent (n)	95% Confidence Interval
0–10	26.7% (12)	(13.8, 39.6)
11–20	40% (18)	(25.7, 54.3)
21–30	22.2% (10)	(10.1, 34.3)
31–40	8.9% (4)	(0.6, 17.2)
41–50	2.2% (1)	(0.0, 6.5)
>50	0	

(26.7%) [95% CI: (0.138,0.396)] reported a decline of 0–10%, 18 (40.0%) [95% CI: (0.257,0.543)] reported a decline of between 11–20%, 10 (22.2%) [95% CI: (0.101,0.343)] reported a decline between 21–30% and 5 (11.1%) [95% CI: (0.019,0.203)] reported a decline of over 31% of their patient base (see Table 4).

Those chiropractors who said that their patient volume decreased immediately after delisting of OHIP were asked to state whether or not their patient population has since recovered. Only 40 of the 45 chiropractors who reported a decline in patient volume responded to this question. Of these 40 respondents, 12 (30.0%) [95% CI: (0.158,0.442)] reported that their patient population recovered and is higher than before the delisting, 11 (27.5%) [95% CI: (0.137,0.413)] that their patient population has recovered and it is equal to what it was before and 17 (42.5%) [95% CI: (0.349,0.501)] reported that their patient population has not recovered (Table 5).

Perceived effect of OHIP delisting on the profession's credibility

Chiropractors were asked if they thought that losing OHIP coverage detracted from the credibility of the profession. One hundred and twenty two chiropractors responded to this question. Sixty-four (52.5%) [95% CI: (0.436,0.614)] reported that OHIP delisting detracted from the credibility of the profession, while 58 (47.5%) [95% CI: (0.386,0.564)] said that it did not. However, of the 29 chiropractors who were not in practice under OHIP cover-

Table 5 *Whether or not the patient population/volume has recovered among those chiropractors who perceived their patient population immediately decreased after the delisting of OHIP coverage (n = 40)*

Effects on patient population	Percent (n)	95% Confidence Interval
Patient population recovered and higher than before	30% (12)	(15.8,0.44.2)
Patient population recovered and is equal to before	27% (11)	(13.7,41.3)
Patient population has not recovered	42.5%(17)	(34.9,50.1)

age who responded to this question, 17 (58.6%) [95% CI: (0.407,0.765)] felt that losing OHIP took away from the credibility of the profession. Of the 93 chiropractors who were in practice under OHIP coverage and responded to this question, 47 (50.5%) [95% CI: (0.403,0.607)] believed that losing OHIP detracted from the credibility of the profession as compared to 45 (49.5%) [95% CI: (0.393,0.597)] who did not ($\chi^2 = 0.58$, $df = 1$, $p = 0.447$, $p = 0.45$). There was no statistical significance between these two groups (Figure 2).

Perception of whether or not OHIP should be reinstated for chiropractic services

Chiropractors were surveyed as to their desire for OHIP coverage to be reinstated. One hundred and fifteen respondents addressed this question. Of these 115 respondents, 53 (46.1%) [95% CI: (0.370,0.552)] were in favor of OHIP coverage reinstatement as compared to 62 (53.9%) [95% CI: (0.448,0.630)] who were not. Of the 28 chiropractors that were not in practice under OHIP coverage, 19 (67.9%) [95% CI: (0.846,0.846)] wanted OHIP reinstated compared to 34 of the 87 (39.1%) [95% CI: (0.288,0.494)] chiropractors who were in practice under OHIP coverage ($\chi^2 = 7.06$, $df = 1$, $p = 0.001$). There was a statistical significance between these two groups (see Figure 2)

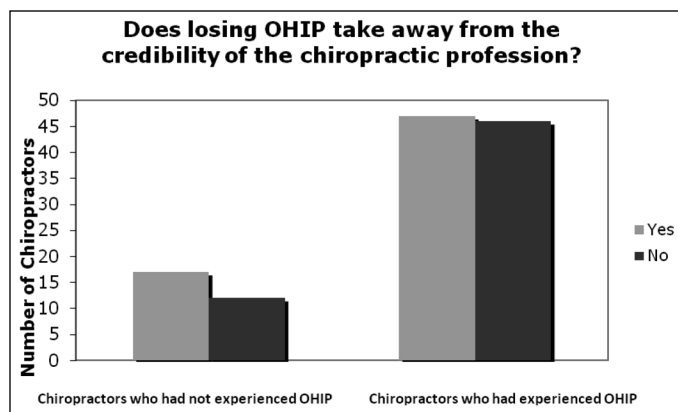


Figure 1 A comparison between chiropractors who had and had not experienced OHIP coverage and if the delisting of OHIP took away from the credibility of the profession.

Perception of amount OHIP should pay for chiropractic services if it were to be reinstated and who should be eligible

Of the respondents who wanted OHIP coverage reinstated ($n = 53$, roughly half of whom were not in practice under OHIP coverage), 43 (91.5%) [95% CI: (0.840,0.990)] wanted greater than the prior coverage of \$9.65 for the general population, 2 of the 47 (4.3%) [95% CI: (-0.012,0.098)] respondents wanted the same coverage (\$9.95) and 2 of the 47 (4.25%) (4.3%) [95% CI: (-0.012,0.098)] respondents wanted less coverage than prior to the delisting (<\$9.95). However, when asked about OHIP coverage for the elderly and children, only 43 chiropractors responded to the question. Of these respondents, 40 expressed their desire for greater coverage (93.0%) [95% CI: (0.854,1.006)], while 2 wanted the same coverage (4.7%) [95% CI: (-0.016,0.110)] and 1 wanted less coverage (2.3%) [95% CI: (-0.002,0.068)] compared to the previous OHIP coverage.

Discussion

In 2004, some physiotherapist (PT) services (so-called “Schedule 5” PT clinics, which are privately owned and community-based) were partially delisted.^{3,4,11} In order to be eligible for public funding under OHIP after December 2004, clients (at the time, PTs were not permitted to use the designation of “doctor” and thus tended not to use the

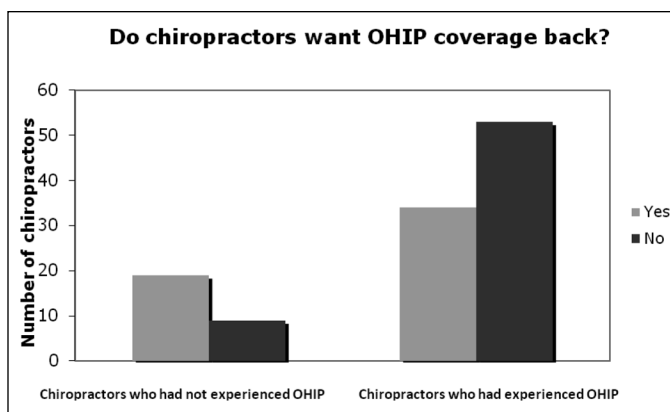


Figure 2 A comparison between chiropractors who had and had not experienced OHIP coverage and if they wanted OHIP coverage reinstated.

term “patient”) in the newly termed “Designated Physiotherapy Clinics” (DPC) must be (a) aged 65 years or older; (b) aged 19 years or younger; (c) resided in a long-term care facility; (d) required PT services at home post-hospitalization or; (e) received social benefits.^{4,11} Three studies reported on the perceptions from PTs and their patients with respect to the impact that delisting had on utilization and accessibility of PT services. Gordon *et al*¹¹ conducted a phone interview of 33 PTs two weeks before and two weeks after the implementation of the new reimbursement requirements. These researchers reported that, immediately following delisting, PTs practicing in Schedule 5 clinics perceived there would be an immediate decrease in demand of services, whereas PT providers from other categories reported no such change. Subsequently, however, all PTs forecasted that there would be a continued decrease in access for ineligible clients but a potential for increased access and reduced wait time among clients who remained eligible for public funding. This posited decrease in access was attributed to the concern that clients would be less likely to pay out-of-pocket for PT services. Further concerns expressed by the interviewees were that clients would be compelled to access other sectors of the publicly funded health care system, principally medical physicians, thus not only driving up health care costs but also increasing medication use as well. Moreover, interviewees in this study expressed their concerns that there would be a diminished quality of care provided to clients

at Schedule 5 clinics due to a low payment structure per client visit, forcing facilities to provide less care in order to maintain their profitability. Lastly, Gordon *et al*¹² noted that, within the European literature, there was a significant reduction in the use of essential medication by patients when they had to co-pay (rather than receive their medications at no cost) and that the effect of delisting of PT services in other provinces, notably British Columbia, resulted in “increased waiting time, a 28% decrease in patients accessing community-based care and reports of patients ending treatment prematurely.”^{13:p166}

Landry *et al*³ reported on any changes among PT clients before and after delisting with respect to access to services and self-reported health (SRH) status. Also using a telephone questionnaire design, these researchers reported that after partial delisting of PT services, 81 of 113 (71.7%) participants who required services continued to receive them; among this group, roughly half (50.6%) remained eligible for OHIP, indicating the remainder of the clients were willing to assume the cost of care themselves (that said, the researchers reported that one-third of clients were able to continue with care because they had private insurance coverage for it). Perhaps more importantly, access after delisting was statistically associated with good health. Specifically, participants who required PT services and received them after delisting were more than 10 times as likely to report good health compared to clients who required but did not receive services.³

In a study that sought to monitor the effect of the partial delisting of PT services on both clients and providers 12 months after its implementation, Paul *et al*⁴ reported that clients rendered ineligible for OHIP coverage continued to experience barriers to access of services across Ontario, most due to the inability or unwillingness to pay out-of-pocket for services. Also, clients in this study expressed their concern with respect to their health status and reported increased use of other health professionals (principally physicians) and services (i.e. hospitals). These authors also reported that DPC providers had experienced a drop in clinic volumes from between 18% to 50%. Similar to the study by Landry *et al* described above, the researchers of this study reported that both PTs and their clients perceived delisting had had a detrimental effect on their health status. These findings led Paul *et al* to conclude: “On the basis of our study of the perceptions of clients and providers, we believe that health outcomes for

individuals no longer eligible for PT services and those who choose to forgo PT entirely may be negatively impacted by delisting policies such as the one implemented by Ontario.”^{4p338} That said, the authors also noted that some PT providers did view delisting of services from publicly-funded government plans as potentially advantageous in terms of financial profitability since clients are paying for services out-of-pocket at a much higher unit price than received by provincial public payors. In other words, these authors, as well as Landry *et al* speculated that the only PTs and clients who were burdened by delisting were DPCs and some home care providers.⁴

Similar studies have been published on the forecasted effects of the delisting of chiropractic services in Ontario. Deloitte, a consulting service, was hired by the Ontario Chiropractic Association (OCA) to conduct a review of the potential consequences of OHIP delisting in 2004.⁹ Deloitte, as well as others, have reported that musculoskeletal (MSK) disorders are among the most costly and disabling disorder to the health care system and of the 1.2 million Ontarians who visit chiropractors a year do so for MSK conditions.⁹ It was predicted that the delisting of OHIP coverage for chiropractors and other health care providers would result in savings by the provincial government of \$200 million dollars over a two year period.^{8,9} However, these expected cost savings may not have accounted for the increased cost caused by the transfer of patients with MSK problems from chiropractors to other health care providers, principally medical doctors or visits to emergency rooms (ERs).^{8,9} In support of this concern, Deloitte reported that a recent poll indicated that, among Ontarians who had seen a chiropractor in the previous year, more than half (54%) indicated that delisting would discourage them from continuing to seek out chiropractic care and would, instead, seek out care from family physicians or emergency departments.⁹ Since OHIP paid approximately \$10 per chiropractic visit, whereas OHIP paid roughly \$30 per physician visit, the cost of a medical consultation would be at least three times higher than a chiropractic consultation, and this cost does not include other costs such as prescription drugs, laboratory or other diagnostic testing. Moreover, the average visit to an emergency room is estimated to be between \$125 and \$143, or an order of magnitude higher than the fee for a chiropractic service.

In addition to concerns above escalating costs to the

health care delivery system, Deloitte also raised concerns with respect to quality of care (in terms of prolonged wait time), effectiveness and appropriateness of care, availability of providers (there is a chronic shortage of family physicians in Ontario), cost-effectiveness of care (chiropractic care is often shown to be more cost-effective than other forms of therapy for MSK conditions such as low back and neck pain), patient satisfaction (chiropractic patients typically report they are very satisfied with the care they receive) and alignment with government priorities.⁹ Manga⁸ raised similar concerns and calculated that although the Ontario government would save \$100 million annually by not paying for chiropractic services they would incur at least \$200 million in additional health care expenditures as patients shift from chiropractors to more costly provincially funded health care services. Manga also voiced his concern that the delisting of chiropractic services would marginalize the profession from the health care sector in Ontario.⁸

A few years after the delisting of services, the OCA surveyed its members to ascertain if their patient numbers and the fees charged to these patients changed as a consequence of it.⁷ Data was collected during two week periods, one in September 2004 and the other in September 2006. The results revealed that respondent chiropractors increased their fees by \$3 in addition to the \$9.65 which was once covered by OHIP. From 2004–2006, the overall number of patients seen by chiropractors decreased with the number of new chiropractic patients reportedly declining by 22% and the average number of patients visits fell from 8.6 annually to 8.3. Conversely, it was reported that patients visiting chiropractors with extended insurance coverage increased by 40% and patients claiming through the Workplace Safety and Insurance Board (WSIB) increased by 44%.⁷

Our study found that many chiropractors reported a decline in their practice revenue around the time of delisting, which chiropractors in this study attributed to that event. However, there may have been other factors effecting this perceived decline in practice revenue, and it bears emphasizing that we are not drawing a causal relationship between OHIP delisting and practice pattern changes based on the data obtained in this study. Mior and Laporte¹⁴ reported that the number of chiropractors in Ontario is on the rise while the number of chiropractic patients has remained unchanged, resulting in a decline in the net rev-

enue of Ontarian chiropractors between 1993 and 2003. Mior and Laporte posited that these demographic trends, combined with the loss of public funding through OHIP, may contribute further to this declining revenue of field practitioners and create more challenges for them in terms of economic sustainability.¹⁴ In this study, some respondents reported they experienced a detrimental effect to both their patient volume and practice income as a result of the OHIP delisting, at least initially. However, almost two-thirds of chiropractors surveyed indicated that their patient volume and practice revenues are now the same or greater than they were at the time of OHIP delisting.

Although it appears that having chiropractic covered under OHIP would benefit the provincial health care system and practicing chiropractors alike, the results of our study indicate that most chiropractors in Toronto do not want OHIP coverage reinstated, a finding most evident among those chiropractors who were in practice during the time OHIP partially covered chiropractic services. There was statistical significance between those chiropractors who were in practice under OHIP as compared to those chiropractors who were not in terms of their desire to have OHIP coverage reinstated. Specifically, those chiropractors who were in practice during OHIP coverage were much less favorably inclined to have OHIP coverage reinstated. There are several possible explanations for this observation.

For the chiropractor, the mechanization of OHIP payment was an arduous process (Gleberzon – personal communication). A practitioner would typically receive reimbursement 30 or 60 days after the date service was rendered, provided the practitioner had the correct demographic information on their patient (date of birth, sex), that the patient informed their chiropractor of any change to their Health Care Card Version Code and that the patient did not exhaust their chiropractic OHIP coverage in a calendar year with another chiropractor. In addition, for a period of time in the early 2000s, the Ontario government instituted the “Social Contract” which reduced the amount reimbursed for a chiropractic service from \$9.65 to \$8.44. In addition, there was another level of regulatory oversight by the MOHLTC, which operated through the Chiropractic Review Committee via the College of Chiropractors of Ontario. It is noteworthy that, according to the OCA survey, patients who had private insurance coverage for chiropractic care through their place of

employment, did not feel the effects of OHIP delisting.⁷ This is because these persons had to exhaust their OHIP coverage prior to accessing their private insurance coverage, since insurance companies considered OHIP another type of insurance and would not co-pay while a patient was eligible under OHIP. OHIP covered patients up to, initially, \$220 a calendar year (beginning July 1), which was reduced to \$150. Thus, it would require roughly 15 visits for a patient to exhaust their OHIP coverage; however, few patients required that many treatments, and thus did not exhaust their OHIP coverage. However, in the absence of OHIP coverage, a patient could immediately be reimbursed for the total amount of a treatment if he or she possessed a private insurance plan. To these patients, OHIP's delisting of chiropractic treatment would be of financial benefit to them.

Over half of the respondents opined that losing OHIP took away from the credibility of the chiropractic profession. Almost 60% of the chiropractors who were *not* in practice during OHIP coverage felt that delisting diminished the credibility of the profession. By comparison, roughly half of the chiropractors who were in practice during OHIP coverage perceived that the credibility of the profession was negatively affected by its delisting. The differences between these two groups were not statistically significant. That said there was a statistically significant difference between those chiropractors who were in practice during OHIP coverage compared to those chiropractors who were not in terms of their desire for OHIP to be reinstated; specifically, the desire to have OHIP reinstated is statistically higher among those chiropractors who were not in practice when it was in effect. Among those chiropractors who do wish to be covered under OHIP again, the vast majority would only do so if they were paid more than the previous amount of \$9.65 and they would be in favor of coverage if it was extended towards seniors, children and low-income persons.

Study Limitations

There were several limitations to this study. The survey instrument was developed by the research team and, although it had face validity, it was not pre-tested to determine its clarity and reliability among respondents.

In constructing our survey, we assumed that the delisting of OHIP would negatively affect chiropractors both in terms of patient numbers and practice revenues

and constructed our survey to reflect this hypothesis. That is to say, we did not provide an option that would indicate a respondent experienced an increase in patient volume or revenue immediately subsequent to delisting. In the comment section of our survey a few chiropractors explained that their practice was positively affected financially and patient numbers increased immediately following the delisting of OHIP coverage. Also, because of the manner in which responses were grouped in our survey, if a chiropractor had not suffered a loss of patients or revenue s/he would have had to circle the "0–10% loss" option. These design flaws must be addressed in any subsequent version of this study. We instructed respondents who asserted that their patient population had declined immediately after delisting to indicate whether or not patient population (volume) had returned to pre-delisting levels; we chose not to ask the same question with respect to patient income since we assumed that patient income would be related to patient volume and a positive improvement in one would result in a positive improvement in the other. However, this did not take into account the possibility that a practitioner may have altered his or her practice activities to increase revenue by means other than patient visits (by offering more services such as acupuncture, orthotics, rehabilitation or perhaps by refocusing on other practice opportunities such as performing independent chiropractic examinations for third party payors such as insurance companies). This possibility ought to be addressed in subsequent studies

The survey was only mailed to chiropractors in Toronto. They may not be representative of all Ontarian chiropractors since Toronto is a large, urban, ethnically-diverse city, and one of the most expensive cities in which to operate a private practice in Ontario, in terms of rent, utilities and so on. Future studies should survey chiropractors in different cities, both urban and rural.

Conclusion

To the best of our knowledge, this is the first study to examine the perceived effects of the delisting of chiropractic services in Ontario on practice revenues, patient volumes and the impact that delisting had to the profession's credibility among a group of randomly selected chiropractors. The findings of our study indicate that, although the delisting of chiropractic services had a detrimental effect on patient volumes and practice revenues,

these negative effects were short-lived. However, over half of practicing chiropractors opined that the delisting of OHIP coverage has had a negative impact on the profession's credibility. Despite this finding, many chiropractors expressed no interest in having OHIP reinstated; this trend was highest among those practitioners who were in practice during the time OHIP was in effect.

Chiropractic services in Alberta and Saskatchewan have recently been delisted from their respective provincial health care plans. It would seem prudent that advocacy groups in these provinces undertake studies such as the one reported here in order to better strategize their actions. For example, perhaps provincial coverage of chiropractic services should be directed towards the elderly, children and low-income persons rather than the population at large. It is possible that, although negatively impacting the credibility of the profession in the short term, many chiropractors may not want a return to the same structure of provincial coverage for chiropractic services, and perhaps neither to all of their patients.

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Appendix A: Research Questionnaire used in this study

1. How many years have you been in practice? _____
2. Were you in practice under OHIP coverage? Yes No
If No, please proceed to question number 5.
3. A) Did OHIP delisting in 2004 immediately affect your business financially?

Yes	No	N/A
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B) If yes, please estimate the percentage of income lost:

	0–10%
	11–20%
	21–30%
	31–40%
	41–50%
	>50%
4. A) Do you feel that the delisting of OHIP decreased your patient population immediately after removal?

Yes	No	N/A
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B) If yes, please estimate the percentage of patients lost:

	0–10%
	11–20%
	21–30%
	31–40%
	41–50%
	>50%

C) Has your patient population recovered?

	Yes, and is higher than before
	Yes, it is about equal
	No
5. Do you feel that losing OHIP takes away from the credibility of our profession in healthcare?

	Yes No
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6. A) Do you want OHIP back?

	Yes No
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B) If yes, under what circumstances?

General population:	<div>>\$9.65</div> <div>\$9.65 (old coverage)</div> <div><\$9.65</div>
Children/elderly:	<div>>\$9.65</div> <div>\$9.65 (old coverage)</div> <div><\$9.65</div>
Other:	_____