




2019 Survey of the New Zealand Chiropractic Profession: Analysis of Survey Data

*Prepared for the New Zealand College of Chiropractic Stakeholders Advisory
Committee*



2019 Survey of the New Zealand
Chiropractic Profession

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Introduction

The Stakeholders Advisory Committee (SAC) advises the New Zealand College of Chiropractic (the College) on trends and developments in the wider community that may help the College to assess and develop its programme. As part of its advisory role, it conducts a triennial survey of the chiropractic profession in New Zealand. This current survey was undertaken during May 2019. The survey was conducted online only and emailed to all registered chiropractors in New Zealand and all College graduates who had an email address listed in the College's database. E-mails were sent by the New Zealand Chiropractic Board and the College inviting chiropractors to participate. The emails included instructions for completing the survey, the purpose of the survey, and they reassured respondents that the survey was anonymous.

The survey was an update of the survey of the profession conducted by the forerunner "Industry Advisory Committee" in 2001 and the previous SAC surveys conducted in 2004, 2007, 2010, 2013, and 2016.

Response

All registered chiropractors in New Zealand and all College graduates who had an email address listed in the College's database were invited to participate in the 2019 SAC Survey. Invitations to complete the survey were also made through the College's Facebook page. There were 640 chiropractors holding current annual practising certificates (APC's) in New Zealand at the time of the survey.

Three hundred and ten chiropractors completed the survey. Of those 251 were current NZ APC holders, the remainder of the respondents were non-practicing or based overseas. This represents a response rate of 39% of APC holders and overall 51 responses more than the 2016 SAC Survey. The response rate for the 2019 survey exceeds the response rate of similar surveys of the chiropractic profession that have been conducted overseas. Most of the survey analysis included in this report is based on the responses from the 251 New Zealand APC holders, as these responses more accurately reflect the chiropractic profession in New Zealand. Where a

question is less relevant to the practice of chiropractic in New Zealand, all respondents' answers have been analysed. Questions that include all responses have been indicated throughout the report.

Survey Response	2001 IAC Survey	2004 SAC Survey	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
APC Holders	241	285	306	414	493	572	640
Replies	181	151	152	113	164	216*	251*
Response Rate	75%	53%	50%	27%	33%	38%	39%

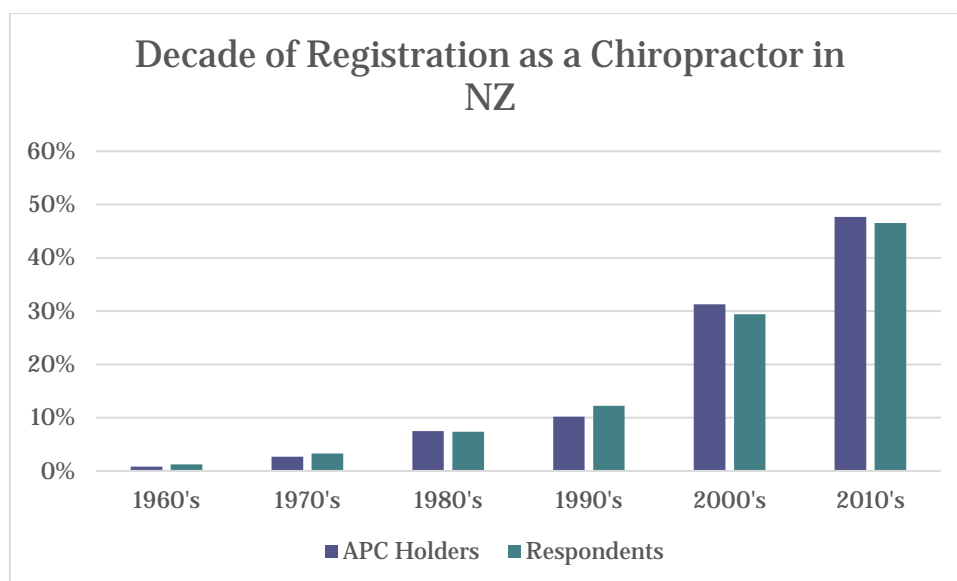
**310 responses were received but 59 were from non-practicing or overseas-based chiropractors who did not hold a current New Zealand Annual Practising Certificate. In 2016, 259 responses were received with 43 from overseas-based chiropractors.*

Representativeness

The response rate is often used as an indicator of the quality or representativeness of survey data. The response rate of the current survey is adequate for a survey of this nature. However, the response rate is not necessarily a good indicator of non-response bias, which may be influenced by several factors. There is likely to be a non-response bias due to the nature of the way chiropractors were invited to participate in the survey. It is likely that College graduates are over-represented. The survey may have a response bias in favour of graduates of the College because the College administered the survey process. Bearing this in mind, we aimed to maximise the response rate by using multiple sources of invitations and acknowledge this potential limitation when analysing and reporting the results of the survey. To understand whether the composition of the responses differs from the composition of the sample as a whole, we have compared the percentage of College graduates who responded to the percentage of APC holders in New Zealand who graduated from the College. We also compared the year of graduation of respondents to that of New Zealand APC holders.

Sixty-nine percent of respondents who hold an APC were graduates of the College (66% in 2016), but only 62% (55% in 2016) of APC holders are College graduates. Therefore, the over-representation of College graduates among respondents is unlikely to be a fatal flaw in the representativeness of the survey.

The percentage of respondents from the College, as well as the tendency of newer graduates to be willing to participate in surveys of this nature, may lead to an over-representation of newer graduates amongst respondents. To investigate this, a chart was plotted based on year of graduation for APC holders and survey respondents practising in New Zealand.



From this chart, it is clear that the decade of graduation is similar between APC holders and survey respondents. In the 2016 survey, there was an over-representation of newer graduates which was not seen in the current survey.

The Chiropractic Practitioner

The first section of the 2019 SAC survey focused on 'the chiropractor'. Questions in this section asked about their chiropractic education, the length of time they had spent in practice, their qualifications, their position in practice and the nature of their continuing education.

The Chiropractor

Fifty percent of respondents were male, which is a decrease compared to the 54% in 2016 and 65% of male respondents in the 2013 SAC survey. One percent of respondents (n=2) indicated that their gender was diverse. Ninety-two percent of respondents indicated that they were currently practising chiropractic as opposed to teaching or conducting research. Of those not currently seeing patients (more than ten patients per week) 35% (n=6) still work within the chiropractic industry (teaching/research/administration) and only one respondent was not seeing patients because they were unable to find work. The majority of other respondents who were not seeing more than ten patients per week were on maternity leave (n=5), or they were just setting up a new practice or beginning a new job (n=3).

Chiropractic Education

Respondents were asked to indicate which institution conferred their chiropractic degree and the year they graduated. Sixty-nine percent of respondents graduated from the NZCC. This continues the trend of increased representation from NZCC graduates, which makes sense based on the increasing percentage of New Zealand APC holders that graduated from the NZCC (62% in 2019 compared to 55% in 2016).

2019 Survey of the New Zealand Chiropractic Profession

Institution	2007 % of Respondents	2010 % of Respondents	2013 % of Respondents	2016 % of Respondents*	2019 % of Respondents*
NZCC	35%	48%	55%	66%	69%
PIT/RMIT	21%	15%	9%	10%	8%
Palmer (Davenport)	11%	7%	9%	5%	5%
AECC	8%	7%	4%	2%	2%
Sherman	7%	5%	6%	4%	2%
Lincoln/National	4%	1%	1%	1%	0.5%
CMCC	3%	3%	4%	2%	2%
Logan	2%	4%	1%	1%	0.5%
Macquarie	2%	1%	1%	2%	2%
Life University	1%	1%	2%	2%	0.5%
Life West	1%	1%	1%	-	0.5%
WSCC	1%	1%	-	1%	1%
Cleveland (Kansas)	1%	2%	1%	1%	-
LACC / SCUHS	1%	2%	3%	1%	1%
New York	-	1%	2%	-	0.5%
Parker College	0%	2%	1%	1%	1%
Northwestern	-	-	1%	1%	0.5%
Barcelona College of Chiropractic	-	-	-	-	0.5%
Institut Franco-Européen de Chiropratique	-	-	-	1%	0.5%
Murdoch	-	-	-	-	0.5%
RMIT (Japan)	-	-	-	-	1%
University of South Wales	-	-	-	-	1%
Palmer (West)	-	-	-	-	1%
University of Surrey	-	-	-	-	0.5%

*New Zealand APC Holders

Length of Time in Practice

Respondents were asked in what year they graduated from chiropractic college. In previous versions of the survey, they were asked when they first registered as a chiropractor in New Zealand.

Length of Time Since Graduation	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Fewer than two years	8%	16%	13%	9%	7%
2-4 years	17%	14%	18%	24%	16%
5-15 years	44%	38%	35%	39%	39%
16-25 years	18%	15%	11%	16%	22%
More than 25 years	13%	16%	24%	12%	16%

Market Readiness

Respondents were asked if they felt that their education adequately prepared them for their chiropractic career? (e.g. Were you 'market ready' when you graduated?). The percentage of NZCC graduates that indicated they were 'market ready' when they graduated rose from 63% in 2016 to 70% in 2019. Across the board, 71% of respondents in 2019 indicated they were 'market ready' when they graduated compared to 66% of respondents in the 2016 survey. This may be because a greater percentage of respondents in 2016 were newer graduates so were reflecting on more recent challenges or experiences compared to the respondents in 2019. Of the respondents who felt they weren't 'market ready', the most consistent theme in their comments was that they felt that they weren't well enough prepared for the 'business' side of running a practice when they graduated.

Do you feel that your education adequately prepared you for your chiropractic career? (Includes overseas based respondents)	2016 +ve Response	2019 +ve Response
NZCC Graduates	63%	70%
Overseas Graduates	73%	74%
All Respondents	66%	71%

Leadership

Respondents were asked if they participate in a 'leadership' position within or outside of the chiropractic profession? (e.g. NZ Chiropractic Board, NZCA, education, mentorship, spokesperson, health sector, community involvement). Slightly more respondents indicated that they participate in a leadership position in the 2019 survey (38%) compared to the 2016 survey (34%). This may reflect the reduced percentage of new graduates amongst the 2019 respondents. The 22% of respondents who indicated that they don't participate in a leadership position, but were interested in doing so, were asked what barriers were stopping them. The most common themes were a lack of time (particularly due to family commitments) and that they were new to practice, so felt they lacked experience.

Do you participate in a 'leadership' position within or outside of the chiropractic profession?	2016 SAC Survey	2019 SAC Survey
Yes	34%	38%
No, I'm not interested in participating in a leadership position	44%	39%
No, however I am interested in participating in a leadership position	22%	22%

Finding Work

Respondents were asked to indicate how long it took to be offered an opportunity to work in the chiropractic industry from the time they completed their studies. Two-thirds of respondents were offered an opportunity to work in the chiropractic industry before they graduated. When just looking at graduates from the last two years, in the 2019 survey, 84% had an opportunity to work before they finished their studies compared to 74% in the 2016 survey.

How long did it take for your first opportunity to work in the CHIROPRACTIC INDUSTRY from the time you completed your studies?	2016 SAC Survey - All Respondents	2019 SAC Survey - All Respondents
An opportunity was available to me before I completed my studies	64%	66%
An opportunity became available within one to six months of completing my studies	32%	30%
An opportunity became available within seven to twelve months of completing my studies	3%	3%
An opportunity became available more than twelve months after completing my studies	0%	1%
I have not worked in the CHIROPRACTIC INDUSTRY since completing my studies	1%	0%

Regional Representation

Respondents were asked to indicate in what area of New Zealand their main practice was located. The location of respondents is relatively consistent with the 2016 SAC survey.

Main Practice Location (For NZ based respondents)	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Northland Region	7%	3%	2%
Auckland Region	37%	47%	43%
Waikato Region	9%	9%	6%
Bay of Plenty Region	10%	9%	9%
Gisborne	-	-	0.5%
Hawke's Bay Region	5%	6%	5%
Taranaki Region	1%	3%	1%
Manawatu-Wanganui Region	4%	1%	2%
Wellington Region	9%	8%	10%
Tasman	-	0.5%	1%
Nelson Region	4%	4%	4%
Marlborough	-	-	0.5%
West Coast Region	1%	0%	0.5%
Canterbury Region	9%	9%	11%
Otago Region	2%	3%	4%
Southland	-	-	0.5%

Tertiary / Post-Graduate Qualifications

Respondents were asked to indicate the highest level of education they had attained. The question options were changed in 2019 to combine a bachelors degree and Doctor of Chiropractic degree. In previous surveys, several respondents who have a Doctor of Chiropractic degree indicated they had a doctoral degree / PhD. This is likely the reason for the small differences in responses in the 2019 survey.

Type of Qualification	2016 SAC Survey	2019 SAC Survey*
Bachelors / Doctor of Chiropractic Degree	70%	76%
Post-Graduate Certificate	3%	6%
Post-Graduate Diploma	9%	6%
Master's Degree	5%	8%
Doctoral Degree	8%	1%

*Question modified in 2019

Respondents were asked to describe their post-graduate diplomate status (or equivalent) through an ACA or ICA speciality board, council, academy, or association. Fewer respondents indicated that they're working towards a diplomate in 2019. This may reflect the lack of diplomate courses that are currently being run in the region.

Status	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
None / Does not apply	78%	76%	80%	84%
Work toward diplomate status (or equivalent) but not completed	14%	14%	7%	5%
Diplomate status (or equivalent) through an ACA or ICA specialty board, council, academy, or association	9%	10%	13%	11%

Continuing Education Activities

Respondents were asked to indicate ‘in which continuing education opportunities do you participate?’ In the 2019 survey, the trend continued with another large increase in the percentage of respondents completing online courses or webinars compared to previous surveys. For the first time in the 2019 survey an option of ‘Attend regional NZCA meetings’ was added. Forty-five percent of APC holders indicated they attend these meetings.

Continuing Education Activities	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Read journals	79%	73%	67%	70%	71%
Attend conferences/seminars	90%	90%	91%	91%	94%
Attend diplomate courses	9%	10%	16%	16%	11%
On-line courses	8%	21%	32%	41%	71%
Attend regional NZCA meetings	-	-	-	-	45%
Attend hospital staff CE meetings	1%	2%	5%	3%	2%

Respondents were asked to describe any other CPD activities they engaged in. The most common activities specified included meeting with peers outside of NZCA regional meetings and engaging in formal continuing education.

Areas of Interest in Continuing Education

Respondents were asked to indicate which areas of continuing education they were interested in participating. The most popular area of interest was chiropractic technique (67%).

Area of Interest	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Philosophy	44%	41%	42%	33%
Research skills	19%	12%	16%	15%
Integrative healthcare	33%	29%	38%	41%
Outcomes assessment	30%	26%	30%	27%
Practice development	45%	46%	56%	47%
Marketing	29%	31%	38%	35%
Clinical neurology	60%	59%	69%	49%
Paediatrics	42%	45%	57%	46%
Sports chiropractic	42%	29%	37%	37%
Chiropractic technique	75%	76%	77%	67%
Succession planning	9%	11%	18%	15%
The associate driven practice	16%	23%	21%	16%
Diagnostic Imaging	35%	39%	37%	32%
Rehabilitation	37%	24%	30%	33%
Clinical Nutrition	42%	41%	46%	33%
Animal chiropractic	14%	16%	18%	21%
Diagnosis and Management of Internal Disorders	13%	11%	18%	16%
Orthopaedics	28%	21%	18%	15%
Communication strategies*	-	-	-	43%
Business skills*	-	-	-	44%

*Added in 2019

Barriers to Undertaking CPD

In 2019 a question was added to explore what barriers chiropractors in New Zealand face to undertaking CPD. Cost is the biggest barrier identified by respondents, followed by location.

What barriers are there to you undertaking relevant CPD?	2019 +ve Response
There are no barriers to me undertaking relevant CPD	47%
Cost	21%
Relevant CPD opportunities are not available to me near my location	15%
I find it difficult to find enough time to engage in relevant CPD	6%

Position in Practice

New Zealand APC holders were asked to indicate what best described their position in practice. In the 2019 survey, the percentage of sole chiropractors rebounded towards levels seen prior to

the 2016 survey. This may be due to the large number of recent graduates completing the 2016 survey compared to the 2019 survey.

Position in Practice	2004 SAC Survey	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Sole Chiropractor	51%	46%	38%	44%	30%	39%
Principal with associate/s	13%	17%	23%	22%	18%	19%
Partner	15%	11%	8%	9%	13%	8%
Associate	14%	14%	20%	19%	31%	30%
Sharing facilities	6%	5%	5%	5%	4%	4%
Locum	1%	5%	1%	-	1%	0.5%
Other	-	2%	1%	1%	2%	1%

Chiropractic Identity and Practice

In the 2019 SAC survey, respondents were asked three questions about chiropractic identity and practice that they had not been asked before. These questions were drawn from a recent survey of Australasian chiropractic¹ students and North American chiropractic students.² In these previous student surveys, the majority of students would like to see an emphasis on the correction of vertebral subluxation, while recognising the importance of evidence-based practice. The authors of these surveys considered these views to be contradictory, suggesting cognitive dissonance (the mental conflict that occurs when beliefs or assumptions are contradicted by new information). In the 2019 SAC survey, 73% of New Zealand chiropractors either agreed or strongly agreed that the primary purpose of the chiropractic examination is to detect vertebral subluxations. This compares to 55% of Australasian students and 47% of North American students. Eighty-eight percent of respondents in the 2019 SAC survey agree or strongly agree that the chiropractic profession is strongly placed to provide care to infants and young children, compared to 68% of Australasian students (this question was not included in the North American survey). In the 2019 SAC survey, 45% of New Zealand chiropractors indicated that they agree or strongly agree that contemporary and evolving scientific evidence is more important than traditional chiropractic principles. This compares to 55% of respondents in each of the student surveys.

2019 SAC Survey

Statement	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither Agree nor Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
The primary purpose of the chiropractic examination is to detect vertebral subluxations	9%	7%	11%	34%	39%
The chiropractic profession is strongly placed to provide care to infants and young children	5%	5%	13%	31%	47%
Contemporary and evolving scientific evidence is more important than traditional chiropractic principles	2%	14%	39%	30%	15%

Statement	<i>2019 SAC survey 'agree or strongly agree'</i>	<i>Australasian student survey 'agree or strongly agree'</i>	<i>North American student survey 'agree or strongly agree'</i>
The primary purpose of the chiropractic examination is to detect vertebral subluxations	73%	55%	47%
The chiropractic profession is strongly placed to provide care to infants and young children	88%	68%	NA
Contemporary and evolving scientific evidence is more important than traditional chiropractic principles	45%	55%	55%

The Chiropractic Practice

This section of the survey investigated the nature of the work environment and chiropractic practice including: office location, practice growth, office procedures and structure, practice management systems, staff requirements, fees, income, practice volume, and billing and office equipment. Survey results for this section were limited to respondents who practise in New Zealand.

Practice Location

Respondents were asked if they practise in more than one location. Results were consistent with previous surveys.

Practice Location	2004 % Yes	2007 % Yes	2010 % Yes	2013 % Yes	2016 % Yes	2019 % Yes
Do you practise from more than one location?	29%	22%	21%	24%	29%	24%

With regards to office location, respondents were also asked to indicate the type of community their primary practice was located. Results were consistent with previous surveys.

Main Practice Location	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
City	37%	36%	37%	30%
Suburb	39%	37%	42%	42%
Small town	13%	12%	10%	15%
Small town / Rural	10%	15%	11%	11%
Rural	-	-	-	2%

Need for More Chiropractors

Respondents were asked if more chiropractors were needed in their local area. Forty-four percent responded, 'yes'. If Auckland-based chiropractors are removed this increases to 52%. Only 33% of Auckland-based chiropractors believe Auckland needs more chiropractors. In contrast, 62% of Wellington-based chiropractors believe their region needs more chiropractors.

Question	2004 'yes'	2007 'yes'	2010 'yes'	2013 'yes'	2016 'yes'	2019 'yes'
Does your locality need more chiropractors?	63%	69%	47%	45%	40%	44%

Practice Growth

Respondents were asked to indicate the growth status of their practice. Sixty-seven percent of respondents indicated their practice was growing. This is the highest percentage since the 2004 SAC survey.

Practice Status	2004 SAC Survey	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Growing	71%	50%	44%	54%	63%	67%
Staying Level	29%	45%	39%	43%	34%	29%
Declining	0%	4%	16%	4%	3%	4%

Associates and Partners

Respondents were asked if they ‘would consider taking on an associate or partner within the next 12 months?’ 43% responded ‘yes’ which is consistent with previous surveys.

Question	2004 'yes'	2007 'yes'	2010 'yes'	2013 'yes'	2016 'yes'	2019 'yes'
Would you consider taking on an associate or partner in the next 12 months?	59%	51%	35%	46%	46%	43%

Components of Chiropractic Practice

Respondents were asked to estimate what percentage of their time each week was spent on various aspects of chiropractic practice including: patient care and education, documentation of care and business management during a typical week. The response options were changed in 2019 to include external marketing and/or public education. There was a small drop in the 2019 survey time estimates for each category across the board compared to the 2016 survey. This is most likely due to the inclusion of an additional response category.

Percent of Time Spent on Components of Chiropractic Practice	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey*
Direct Patient Care and education	73%	69%	61%	62%	60%
Documentation of care	9%	16%	20%	20%	17%
Business Management / administration / internal marketing	18%	15%	17%	18%	13%
External marketing and/or public education	-	-	-	-	10%

**Response options were changed in 2019*

Patient Visit Time Allocation

Respondents were asked to indicate how long they allowed for an average new patient visit, report of findings, progress exam and adjustment visit. The average visit time for a new patient visit was 41 minutes; the average report of findings was allocated 23 minutes; the average adjustment 13 minutes; and the average progress exam 21 minutes. These visit durations were all consistent with the 2016 SAC survey.

2019 SAC Survey

Visit Time	New Patient	Report of Findings	Adjustment	Progress Exam
Minimum	15 mins	Less than 5 mins	Less than 5 mins	5 mins
Maximum	90 mins	90 mins	45 mins	60 mins
Average	41 mins	23 mins	13 mins	21 mins
Median	40 mins	20 mins	10 mins	20 mins
Mode	30 mins	30 mins	15 mins	15 mins

2016 SAC Survey

Visit Time	New Patient	Report of Findings	Adjustment	Progress Exam
Minimum	10 mins	Less than 5 mins	Less than 5 mins	Less than 5 mins
Maximum	90 mins	60 mins	75 mins	65 mins
Average	39 mins	23 mins	13 mins	20 mins
Median	35 mins	20 mins	10 mins	15 mins
Mode	30 mins	30 mins	10 mins	15 mins

Staff and Co-workers

Respondents were asked to indicate the number of full-time and part-time support staff and other healthcare providers in their offices. The average number of people working in respondents' offices increased across the board in just about all categories.

2019 SAC Survey

FULL-TIME	0	1	2	3	4	5 or more	Average
CA's	56%	23%	14%	2%	3%	2%	0.82
Associates	53%	19%	12%	11%	1%	3%	1.00
Locums	98%	2%	1%	-	-	-	0.03
Partners	77%	14%	7%	1%	2%	-	0.38
Business/Financial /Practice Managers	68%	29%	3%	-	-	-	0.35
Other Healthcare Providers	73%	8%	7%	4%	3%	5%	0.69

2016 SAC Survey

FULL-TIME	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5 or more</i>	<i>Average</i>
CA's	58%	23%	12%	2%	3%	1%	0.70
Associates	55%	24%	15%	5%	2%	0%	0.76
Locums	99%	1%	-	-	-	-	0.01
Partners	77%	16%	3%	2%	2%	-	0.34
Business/Financial /Practice Managers	77%	21%	1%	-	-	1%	0.27
Other Healthcare Providers	68%	13%	8%	7%	3%	2%	0.67

2019 SAC Survey

PART-TIME	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5 or more</i>	<i>Average</i>
CA's	40%	17%	19%	14%	6%	4%	1.41
Associates	74%	17%	6%	2%	-	1%	0.40
Locums	100%	-	-	-	-	-	0
Partners	87%	13%	1%	1%	-	-	0.15
Business/Financial /Practice Managers	83%	17%	-	-	-	-	0.17
Other Healthcare Providers	70%	14%	9%	3%	2%	3%	0.60

2016 SAC Survey

PART-TIME	<i>0</i>	<i>1</i>	<i>2</i>	<i>3</i>	<i>4</i>	<i>5 or more</i>	<i>Average</i>
CA's	41%	22%	21%	13%	3%	1%	1.16
Associates	73%	18%	8%	2%	-	-	0.38
Locums	98%	2%	-	-	-	-	0.02
Partners	84%	14%	2%	-	-	-	0.18
Business/Financial /Practice Managers	79%	20%	1%	1%	-	-	0.24
Other Healthcare Providers	72%	13%	10%	2%	2%	1%	0.50

Computer Equipment

Respondents were asked whether they use a computer programme to manage their appointment book or to enter clinical information (instead of a patient file card). For the first time in 2019 respondents were also asked whether they have an online booking system. The percentage of respondents who use a computer programme to manage their appointment book grew to 90%. The percentage of respondents that use a computer programme to enter clinical information continues to grow and is 63% in the 2019 SAC survey. Forty-six percent of respondents indicated they use an online booking system in the 2019 survey.

Use of a Computer Programme	2004 SAC Survey	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
To Manage Appointment Book	77%	67%	70%	79%	86%	90%
To Enter Clinical Information	-	10%	25%	38%	46%	63%
To book patients online	-	-	-	-	-	46%

The following tables summarise the programmes used to manage appointment books and to enter clinical information. Due to the high number of programmes available only programmes with greater than 2% of market share have been included. Cliniko now has the largest market share (45%) of the appointment book programmes in 2019.

Appointment Book Software Programme	2004 SAC Survey	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Capable	30%	39%	37%	31%	23%	12%
Cliniko	-	-	-	13%	24%	45%
Excellent Practice	-	-	-	8%	11%	8%
Front Desk	8%	15%	18%	17%	17%	14%
Gensolve	-	-	-	5%	5%	7%
Houston Medical	17%	8%	11%	6%	8%	4%
Other	45%	38%	36%	20%	12%	10%

‘Cliniko’ also now has the largest market share of clinical information programmes, with 50% in the 2019 SAC Survey.

Clinical Information Software Programme	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Capable	39%	44%	35%	18%	8%
Cliniko	-	-	-	35%	50%
Excellent Practice	-	-	4%	12%	4%
Front Desk	8%	4%	6%	11%	14%
Gensolve	-	-	6%	11%	9%
Houston Medical	-	-	-	-	3%
Other	53%	52%	49%	13%	12%

Respondents who currently use paper-based systems in their office were asked whether they planned to acquire software that will enable them to adopt a paperless record keeping system. Of those that do not currently use a paperless system, 42% replied that they had no plans to adopt a paperless system, 48% plan to adopt a paperless system in the next five years, and 10% plan to adopt a paperless system in the future but not within the next five years. Slightly more respondents indicated that they plan to move to a paperless office in the future in the 2019 survey compared to the previous surveys.

Do you plan to acquire computer software that will enable you to adopt a paperless record keeping system?	2013 'yes'	2016 'yes'	2019 'yes'
No, not in the foreseeable future	52%	49%	42%
Yes, within the next 5 years	43%	44%	48%
Yes, but not within the next 5 years	5%	7%	10%

X-ray Equipment

Respondents were asked to indicate whether the practice they work in has x-ray equipment, and for those who do, whether they use digital x-ray equipment. The number of respondents who own x-ray equipment increased slightly from 21% in the 2016 SAC survey to 24% in the 2019 survey. Of those respondents with x-ray equipment, the percentage using digital equipment rose from 68% in the 2016 survey to 81% in the current survey.

X-ray Equipment	2010 SAC Survey 'Yes' Response	2013 SAC Survey 'Yes' Response	2016 SAC Survey 'Yes' Response	2019 SAC Survey 'Yes' Response
Have own x-ray machine	55%	32%	21%	24%
If yes to above, do you use digital equipment	0%	35%	68%	81%

Radiographic Fees

This question asked respondents to indicate x-ray fees for both sectional views and full spine series.

Radiographic Fees	Sectional View	Full Spine Series
Median	\$50	\$120
Minimum	\$20	\$80
Maximum	\$70 or more	\$200 or more

Visit Fees

Respondents were asked to indicate the fee for a standard visit for different patient types. The following tables summarise the results for the questions relating to a standard office visit and new patient visit fees. Small increases were reported in visit fees between recent surveys.

Adult Adjustment Fee	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Average	\$41	\$47	\$49	\$53	\$54
Median	\$40	\$45	\$50	\$50	\$55
Minimum	\$25	\$20	\$25	\$30	\$25
Maximum	\$65	\$105	\$150+	\$110	\$150+

Child Adjustment Fee	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Average	\$29	\$34	\$37	\$40	\$41
Median	\$30	\$35	\$35	\$40	\$40
Minimum	\$10	\$15	\$10	\$10	\$10
Maximum	\$65	\$60	\$100	\$100	\$100

Adult Patient (without x-rays)	New Fee x-	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Average		\$60	\$74	\$76	\$87	\$90
Median		\$60	\$70	\$75	\$85	\$85
Minimum		\$10	\$10	\$20	\$30	\$10
Maximum		\$140	\$130	\$150+	\$150+	\$150+

Child Patient (without x-rays)	New Fee x-	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Average		\$48	\$57	\$59	\$70	\$74
Median		\$45	\$50	\$55	\$65	\$70
Minimum		\$10	\$10	\$10	\$10	10
Maximum		\$130	\$130	\$150+	\$150+	\$150+

Discounted Fees

Respondents were asked if they offer discounted fees or plans including family visits, pre-paying for several visits, individual year plans, and family year plans. Responses were consistent with recent surveys.

Discount Fee or Plan Offered	2010 SAC Survey 'Yes' Response	2013 SAC Survey 'Yes' Response	2016 SAC Survey 'Yes' Response	2019 SAC Survey 'Yes' Response
Family visit	59%	65%	58%	56%
Prepay for a number of visits	48%	49%	44%	48%
Individual year plan	20%	16%	15%	15%
Family year plan	15%	15%	13%	11%

Number of Office Visits

Respondents were asked to indicate the average number of patient visits they personally see each week. Across New Zealand based respondents, the average number of patient visits was 89 per week; the median number was 80 per week, with a maximum of 300 visits per week. These values are consistent with the 2016 SAC survey. When responses were broken down based on time in practice the steady increase in average and median practice volume seen in 2016 was less obvious.

Patient Visits per Week (OVERALL)	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey*	2019 SAC Survey*
Average	119	99	88	89
Median	100	80	80	80
Maximum	400	480	280	300

*New Zealand based respondents only

2019 Survey Breakdown of Weekly Patient Visit Numbers Based on Time in Practice (New Zealand APC Holders)

Patient Visits per Week	Less Than 2 years in Practice	2-5 Years in Practice	6-10 Years in Practice	Longer than 10 Years in Practice
Average	74	69	80	105
Median	80	60	60	80
Maximum	300	160	180	300

2016 Breakdown of Weekly Patient Visit Numbers Based on Time in Practice - NZ Based Chiropractors

Patient Visits per Week	Less Than 2 years in Practice	2-5 Years in Practice	6-10 Years in Practice	Longer than 10 Years in Practice
Average	59	56	80	120
Median	40	40	80	120
Maximum	240	140	200	280

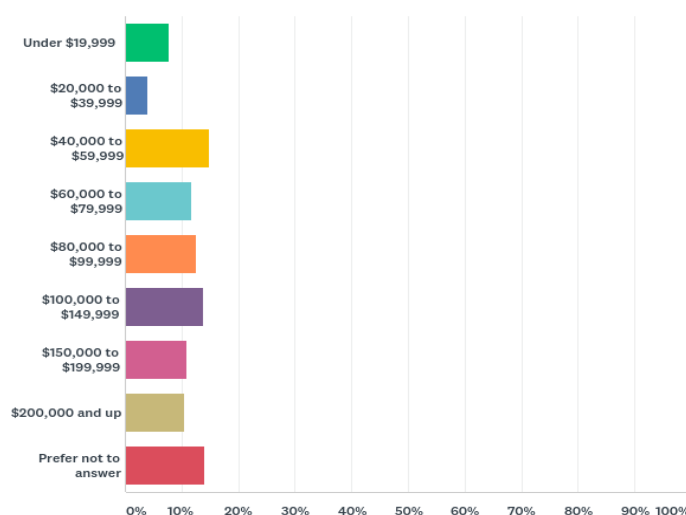
Yearly Income

Respondents were asked to indicate their total income for 2018. Answers were recorded in income brackets of \$20,000 or \$50,000. Calculations of average income would be rough estimates, so median income brackets have been reported instead of averages. The figures below are for New Zealand APC holders. Two of the categories below appear down in the 2019 survey compared to the 2016 survey. This may not reflect a significant drop in income, as it may simply relate to small differences where the median value is either at the top of one income bracket or the bottom of the next in the different surveys.

Total Median Income in 2018	2016 SAC Survey	2019 SAC Survey
Less Than 2 years in Practice	40-60K	20-40K
2-5 Years in Practice	40-60K	40-60K
6-10 Years in Practice	80-100K	80-100K
Longer than 10 Years in Practice	150-200K	100-150K
NZ APC Holders	80-100K	80-100K

2019 SAC Survey: Total income in 2018 of NZ APC holders

Q7 What was your total income last year?



Assessment / Analytical / Diagnostic EQUIPMENT

Respondents were asked to indicate which assessment /analytical/diagnostic **equipment** they use in their practice ‘**at least sometimes**’. To reduce the survey time and potential confusion when answering this question, this question was asked differently in the 2019 survey compared to previous surveys. In the 2019 survey, a simple ‘yes’ or ‘no’ answer was requested instead of an estimate of how often equipment was used. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked. From the list of equipment, the only items that are used ‘at least sometimes’ by half or more of the respondents were blood pressure cuff, a reflex hammer, and x-ray equipment.

Assessment / analytical / diagnostic equipment used at least ‘sometimes’	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey*
Thermography equipment	22%	23%	19%
Surface EMG	20%	17%	14%
Blood pressure cuff	62%	68%	52%
Stethoscope	51%	54%	34%
Otoscope	28%	33%	20%
Ophthalmoscope	28%	36%	20%
Reflex hammer	84%	85%	75%
Weight scales	36%	35%	32%
Thermometer	23%	34%	15%
Plumb line	21%	21%	16%
Posture analyser (eg. SAM)	22%	34%	31%
Inclinometer	16%	21%	14%
Pressure algometer	2%	4%	2%
Heart Rate Variability monitor	13%	11%	16%
Dynamometer	16%	17%	9%
Pinwheel or other device to test pain sensation	55%	45%	45%
Tuning fork	56%	58%	47%
Pulse Oximeter	5%	10%	10%
Foot scanner	7%	11%	6%
X-ray equipment (Adults – either in your practice or by referral)#	NA	NA	53%
X-ray equipment (Children 0-15yrs - either in your practice or by referral)#	NA	NA	25%
Visual analogue scale	48%	54%	46%
Oswestry	25%	17%	11%
Roland Morris	18%	16%	6%
Neck Disability Index	10%	14%	9%
Quality of Life Questionnaire	32%	29%	14%

#Added in 2019 survey / *Question modified in 2019

Assessment / Analytical / Diagnostic PROCEDURES

Respondents were asked to indicate which assessment /analytical/diagnostic **procedures** they use in their practice ‘**at least sometimes**’. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Diagnostic / Analytic Procedures	<i>2010 +ve</i>	<i>2013 +ve</i>	<i>2016 +ve</i>	<i>2019 +ve*</i>
Motion palpation	100%	100%	99%	97%
Static palpation	100%	100%	100%	100%
Vertebral artery tests	90%	80%	82%	43%
Vital signs	84%	84%	85%	49%
Orthopaedic tests	100%	99%	99%	93%
Muscle tests – (myotomes)	99%	96%	97%	86%
Muscle tests (AK and other technique protocols)	83%	77%	79%	51%
Muscle stretch reflexes	94%	91%	94%	69%
Dermatomes	93%	92%	90%	65%
Cranial nerve tests	94%	91%	93%	70%
Cardiopulmonary examination	62%	57%	60%	14%
Abdominal examination	74%	65%	66%	24%
Gait analysis	95%	96%	91%	70%
Laboratory Examinations	51%	43%	45%	14%

**Question modified in 2019*

X-ray Examination

The following table reports the way respondents describe the way they use x-rays in their practice. Responses in the 2019 survey were relatively consistent with the 2016 survey.

Use of X-rays	<i>2010 SAC Survey</i>	<i>2013 SAC Survey</i>	<i>2016 SAC Survey</i>	<i>2019 SAC Survey</i>
I do not routinely use x-rays in practice	16%	20%	26%	23%
I evaluate x-rays to rule out pathology only	26%	26%	27%	31%
I evaluate x-rays as a part of my technique system only	1%	1%	1%	0.5%
I evaluate x-rays to both rule out pathology and as a part of my technique system	57%	54%	46%	46%

Adjustive Procedures

Respondents were asked to indicate which **adjustive procedures** they use in their practice ‘**at least sometimes**’. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Techniques that were used by half or more of all chiropractors ‘at least sometimes’ include Diversified Technique, extremity adjusting, Activator adjusting instrument, Gonstead Technique, Thompson Technique, Sacro Occipital Technique, and cranial techniques.

Adjustive Procedure	2010 SAC +ve response	2013 SAC +ve response	2016 SAC +ve response	2019 SAC +ve response*
Activator Methods Chiropractic Technique (AMCT)	49%	50%	53%	24%
Activator Adjusting Instrument (Without following the AMCT analysis protocol) -	86%	87%	90%	82%
Other adjusting instrument	23%	32%	34%	15%
Applied Kinesiology (AK)	52%	46%	46%	27%
Bio Energetic Synchronisation Technique (B.E.S.T.)	13%	7%	8%	5%
Chiropractic Biophysics Technique (CBP)	14%	14%	9%	7%
Cox Flexion Distraction Technique	20%	15%	18%	8%
Cranial Adjusting	67%	68%	73%	53%
Diversified Technique (DT)	98%	93%	98%	95%
Extremity adjusting	95%	94%	96%	81%
Gonstead Technique	81%	75%	73%	56%
Logan basic	45%	35%	28%	15%
Meric	13%	12%	10%	0%
Neuro Emotional Technique (NET)	25%	22%	30%	13%
Network Spinal Analysis	19%	18%	21%	11%
NIMMO / Receptor tonus	43%	27%	19%	8%
Palmer upper cervical / HIO	42%	48%	43%	25%
Pierce-Stillwagon	16%	6%	4%	1%
Sacro Occipital Technique (SOT)	74%	58%	64%	52%
Thompson Technique	79%	70%	81%	63%
Torque Release Technique (TRT)	15%	16%	16%	8%

*Question modified in 2019

In the 2019 SAC survey, respondents were asked to indicate what approach they use when adjusting patients to investigate how name techniques are utilised. Almost three-quarters of New Zealand chiropractors use an integrative approach best suited to each patient that draws from different name techniques.

Please indicate which statement best represents the approach you use when adjusting patients in your practice.	2019 SAC Survey
I primarily use a single 'name technique' in my practice (e.g. Gonstead/Activator/Thompson)	7%
I select from a number of 'name techniques' and use the one most suited to each patient	15%
I use an integrative / combination of approaches from different 'name techniques' that are best suited to each patient	73%
I use a technique approach that I have developed myself	5%

Non-Adjustive Procedures

Respondents were asked to indicate which **non-adjustive procedures** they use in their practice 'at least sometimes'. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Non-Adjustive Procedure	2010 SAC +ve response	2013 SAC +ve response	2016 SAC +ve response	2019 SAC +ve response*
Acupuncture / Meridian Therapy	20%	22%	18%	10%
Bracing with lumbar support, cervical collar, etc.	32%	30%	26%	14%
Heel lifts or foot orthotics	44%	37%	34%	17%
Corrective/Therapeutic exercises	92%	83%	80%	60%
Taping/strapping	39%	34%	46%	35%
Ice pack / Cryotherapy (in clinic)	25%	24%	32%	13%
Ice pack / Cryotherapy (home use)	78%	72%	69%	48%
Heat pack / Moist heat (in clinic)	29%	13%	18%	10%
Heat pack / Moist heat (home use)	70%	64%	63%	46%
Massage therapy (by chiropractor)	43%	42%	41%	27%
Massage therapy (by referral)	94%	83%	82%	65%

*Question modified in 2019

Health Promotion

Respondents were asked to indicate which **health promotion and wellness procedures** they use in their practice ‘**at least sometimes**’. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Health Promotion and Wellness Procedures	<i>2010 SAC +ve response</i>	<i>2013 SAC +ve response</i>	<i>2016 SAC +ve response</i>	<i>2019 SAC +ve response*</i>
Changing risky/unhealthy behaviours	100%	98%	97%	91%
Disease prevention/early screen advice	90%	94%	90%	52%
Ergonomic/postural advice	100%	98%	99%	91%
Nutritional/dietary recommendations	97%	98%	96%	78%
Physical fitness/exercise promotion	100%	99%	99%	89%
Relaxation/stress reduction recommendations	99%	98%	97%	87%
Mental / emotional training (e.g. meditation)[#]	-	-	-	63%
Self-care strategies	97%	98%	98%	80%

*[#]Added in 2019 survey / *Question modified in 2019*

Advertising / Promotion / Communication

Respondents were asked to indicate which forms of **advertising/promotion/ communication** they had used **in the past 12 months**. This was the first time this question was asked in a SAC survey.

Which forms of advertising / promotion / communication were used in the last 12 months	<i>2019 SAC +ve response</i>
Facebook posts	74%
Facebook advertising (paid Facebook ad campaigns)	32%
Instagram	31%
Google Adwords	32%
Daily Deals (e.g. Grabone, Groupon or similar)	4%
Google reviews	20%
Youtube	3%
Videos / animations on your website or that you send to patients	12%
Blogs	20%
Spinal health class / workshop	31%
Spinal screenings / Public place marketing	45%
Newsletters (Mailed or emailed)	37%

For the first time in the 2019 SAC survey, respondents were also asked whether they agree or disagree with the statement ‘I have a clear understanding of the advertising guidelines that apply to me as a chiropractor.’ Seventy-eight percent of respondents agreed or strongly agreed with the statement.

Statement	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither Agree nor Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>
I have a clear understanding of the advertising guidelines that apply to me as a chiropractor	3%	5%	14%	53%	25%

Sales to Patients

Respondents were asked to indicate which items they sell to their patients ‘**at least sometimes**’. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Items Sold to Patients	2004 SAC +ve	2007 SAC +ve	2013 SAC +ve	2016 SAC +ve	2019 SAC +ve*
Nutritional supplements	38%	58%	55%	61%	75%
Homeopathic remedies	15%	15%	21%	22%	14%
Essential Oils[#]	-	-	-	-	13%
Pillows	54%	62%	44%	48%	54%
Braces & Supports	33%	36%	30%	28%	31%
Orthotics	29%	30%	22%	22%	17%

*[#] Option added in 2019 / *Question modified in 2019*

Professional Referrals

Respondents were asked to indicate which health professionals made at least one patient **REFERRAL TO THEM in the past 12 months**. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Referred <u>FROM</u> Others	2010 SAC +ve response	2013 SAC +ve response	2016 SAC +ve response	2019 SAC +ve response*
Acupuncturist	51%	49%	57%	48%
Another Chiropractor	93%	88%	83%	80%
Dentist	40%	34%	31%	18%
Nurse Practitioner	48%	43%	33%	17%
General Practitioner	91%	83%	79%	73%
General Surgeon	26%	18%	17%	8%
Massage Therapist	90%	81%	86%	72%
Midwife	67%	58%	63%	40%
Neurologist	15%	10%	10%	2%
Neurosurgeon	11%	6%	9%	1%
Nutritionist	33%	24%	28%	12%
OB/GYN	14%	6%	7%	1%
Orthopaedic Surgeon	23%	21%	19%	11%
Paediatrician	18%	8%	10%	2%
Physiotherapist	55%	51%	58%	61%
Podiatrist	38%	28%	27%	14%
Psychologist / Psychiatrist	21%	16%	11%	9%
Radiologist	15%	11%	9%	2%

**Question modified in 2019*

Respondents were asked to indicate which health professionals **THEY REFERRED AT LEAST 1 PATIENT TO in the past 12 months**. This question was asked differently in previous surveys with more answer options possible. Differences in responses between the 2019 survey and previous surveys may be related to how the question was asked.

Referred <u>TO</u> Others	2010 SAC +ve response	2013 SAC +ve response	2016 SAC +ve response	2019 SAC +ve response*
Acupuncturist	82%	70%	79%	68%
Another Chiropractor	95%	92%	95%	73%
Dentist	66%	48%	47%	27%
Nurse Practitioner	20%	11%	18%	2%
General Practitioner	98%	95%	92%	81%
General Surgeon	36%	18%	21%	9%
Massage Therapist	99%	90%	90%	77%
Midwife	39%	34%	32%	16%
Neurologist	48%	34%	34%	16%
Neurosurgeon	27%	18%	16%	10%
Nutritionist	52%	44%	49%	24%
OB/GYN	18%	15%	10%	1%
Orthopaedic Surgeon	48%	47%	41%	36%
Paediatrician	24%	18%	23%	9%
Physiotherapist	72%	70%	81%	73%
Podiatrist	56%	51%	47%	36%
Psychologist / Psychiatrist	40%	29%	28%	16%
Radiologist	60%	66%	65%	47%

*Question modified in 2019

Accident Compensation Corporation (ACC)

ACC Acceptance and Invoicing

Respondents were asked to indicate whether they accept ACC patients in their practice and, if yes, how they invoice these patients. The percentage of respondents lodging and invoicing electronically continues to rise.

Question	2007 SAC 'Yes'	2010 SAC 'Yes'	2013 SAC 'Yes'	2016 SAC 'Yes'	2019 SAC 'Yes'
Do you accept ACC patients?	96%	94%	92%	97%	93%
Do you lodge claims electronically?	23%	42%	41%	65%	77%
Do you invoice electronically?	29%	56%	63%	77%	87%
Do you have patients pay you and claim back from ACC themselves?	11%	13%	11%	2%	3%

Percentage of ACC

Respondents were asked to indicate what percentage of their practice was made up of patients subsidised by ACC. The median estimate rose from 30% in previous surveys to 40% in the 2019 survey.

Percent of ACC in Practice	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Median	30%	30%	30%	30%	40%
Range	0-90%	0-85%	0-95%	5-100%	5-90%

Referral of ACC Patients

Respondents were asked what percentage of their ACC patients were self-referred, medical referrals or referred by other treatment providers. The results were consistent with the 2016 survey.

Referral Method	2007 SAC Survey	2010 SAC Survey	2013 SAC Survey	2016 SAC Survey	2019 SAC Survey
Self-referred	78%	70%	81%	78%	75%
Medical referral	14%	22%	12%	11%	12%
Referred by other treatment provider	8%	8%	6%	11%	13%

Research

Respondents were asked how they use research in practice. Ninety-one percent of respondents indicated they use research in their practice. This was consistent with the 2016 survey when the question was first asked.

Question	2016 SAC 'Yes'	2019 SAC 'Yes'
Do you use research in your practice? (e.g. when communicating with your patients or to help you make evidence informed choices regarding patient care)	88%	91%

For the first time in 2019, respondents were asked to indicate what research they think will best serve the chiropractic profession. They were asked to rank five different categories of research from most important (1) to least important (5). Rank scores were then calculated to understand how important respondents felt the different types of research would best serve the profession. The higher the rank score the more important the category was deemed to be. Research that

investigates the effects of chiropractic care on nervous system function or health and wellness was deemed to be the most important research to serve the profession.

Type of Research	2019 SAC Rank Score
Research that investigates the effects of chiropractic care on nervous system function and brain-body communication (i.e. how an adjustment works)	4.10
Research that investigates the effects of chiropractic care on health and wellness (i.e. clinical research that investigates whether chiropractic care improves overall health, wellbeing, and quality of life)	3.78
Research that investigates how reliable and valid subluxation indicators are (i.e. can we reliably locate subluxations and once located does specificity matter when adjusting them)	2.18
Research that investigates how effective chiropractic care is at helping people with conditions / pain (e.g. musculoskeletal pain conditions, stroke, neurodegenerative conditions, neurodevelopmental disorders, injury prevention)	2.73
Research that investigates the effects of chiropractic care on special populations (e.g. pregnant women, babies, kids, athletes, older adults etc)	2.41

For the first time in 2019, respondents were also asked whether they supported chiropractic research financially or by engaging in research. Over half of respondents indicated that they don't directly support or engage in chiropractic research.

Do you support chiropractic research in any of the following ways? Please select all that apply	2019 SAC 'Yes'
Centre for Chiropractic Research Supporters Programme / donor	20%
ASRF member / partner / donor	13%
Hamblin donor / research week participant	18%
I engage in chiropractic research myself	8%
I don't directly support or engage in chiropractic research	53%

The New Zealand College of Chiropractic

This section of the survey asked respondents for their opinions regarding the College and graduates from the College. It also asked College graduates to comment on their perception of their education at the College.

To obtain a 'net promoter score' (NPS) relating to the College, respondents were asked to use a scale of 0 to 10 to indicate how likely is it that they would recommend the New Zealand

College of Chiropractic to a prospective student (0=Not at all likely and 10=Extremely likely). This question was first asked in 2016. Fifty-nine percent of respondents in the 2019 survey indicated that they were extremely likely (10/10) to recommend the College to a prospective student, which is an increase from 50% in the 2016 survey. The NPS was calculated by subtracting the percentage of detractors (scores of 0-6) from promoters (scores of 9-10). The 2019 SAC survey College net promoter score was 48, which is an increase from the 2016 SAC survey NPS of 38. Net promoter scores of above 0 are deemed good, and those that are 50 or above are generally considered to be excellent.

How likely is it that you would recommend the New Zealand College of Chiropractic to a prospective student?	2016 SAC	2019 SAC
Percent that responded ‘Extremely likely’	50%	59%
Net promoter score	38	48

The College attempts to engage with stakeholders, so a question was introduced in the 2016 survey that asked if respondents engage with the College. In 2019 44% of respondents indicated they do engage with the College, which is a decrease from 55% of respondents in 2016.

Do you engage with the New Zealand College of Chiropractic (e.g. attend College events, teach at the College, financially support the College etc)	2016 SAC Survey	2019 SAC Survey
Yes	50%	44%
No, and I am not interested in engaging with the College	16%	24%
No, but I am interested in engaging with the College	29%	32%

Graduate Profile

The next questions informed respondents that the College had developed a graduate profile that describes the characteristics and attributes they believe will help graduates to develop into the ‘world’s best chiropractors.’ Respondents were asked to indicate whether they felt they were in a position to provide feedback about recent College graduates (graduates from the last three years). Twenty-six percent of respondents were a recent graduate, and 32% were familiar with recent NZCC graduates so provided feedback related to the College’s graduate profile.

Are you in a position to provide feedback about recent College graduates	2019 SAC Survey
Yes, I am a recent NZCC graduate	26%
Yes, I am familiar with recent NZCC graduates	32%
No, I am not familiar with any recent NZCC graduates	42%

Recent graduates were asked to self-reflect about whether they agree or disagree with statements from the College’s graduate profile. Recent graduates indicated that they felt they exemplify all graduate profile statements well and agreed most strongly with the statements relating to their professionalism, commitment to further development, and willingness to collaborate.

Please indicate whether you agree or disagree with the following graduate profile statements	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither agree nor Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>	<i>Weighted Average</i>
I demonstrate excellence in all aspects of chiropractic care with an evidence-informed patient focus	0%	5%	11%	45%	40%	4.2
I am professional in everything I do	0%	0%	5%	34%	62%	4.6
I eloquently communicate and demonstrate chiropractic principles and contribute to the health of my community	2%	2%	3%	46%	48%	4.4
I have a high degree of emotional intelligence and resilience	0%	2%	5%	48%	46%	4.4
I am committed to continuous personal and professional development	0%	0%	2%	31%	68%	4.7
I willingly collaborate to achieve the best outcomes	0%	0%	6%	28%	66%	4.6

Respondents who were familiar with recent graduates were asked to indicate whether they agree or disagree that the following graduate profile statements exemplify the characteristics and attributes of the recent NZCC graduates that they know. As with most exercises that involve either self-reflection or judging others, the recent graduates who were self-reflecting gave themselves higher rankings in relation to the graduate profile statements compared to respondents who weren’t recent graduates. Respondents judging recent graduates gave similar responses to all graduate profile statements with the statement relating to eloquent communication ranking the highest.

The recent NZCC graduates I know...	<i>Strongly Disagree</i>	<i>Disagree</i>	<i>Neither agree nor Disagree</i>	<i>Agree</i>	<i>Strongly Agree</i>	<i>Weighted Average</i>
Demonstrate chiropractic excellence in all aspects of chiropractic care and with an evidence-informed patient focus	6%	18%	10%	53%	13%	3.5
Are professional in everything they do	2%	10%	25%	51%	11%	3.6
Eloquently communicate and demonstrate chiropractic principles and contribute to the health of their communities	2%	9%	24%	49%	16%	3.7
Have a high degree of emotional intelligence and resilience	3%	16%	31%	43%	14%	3.5
Commit to continuous personal and professional development	6%	7%	31%	43%	14%	3.5
Willingly collaborate to achieve the best outcomes	7%	8%	28%	43%	14%	3.5

College graduates were asked to indicate in what areas they felt the College prepared them well for practice. Consistent themes to emerge were that College graduates felt the technique programme prepared them well for practice and the communication skills they learnt and their understanding of philosophy prepared them well for practice. These were consistent with the responses from the 2016 SAC survey.

College graduates were also asked to indicate how the College could have better prepared them for practice. The most consistent theme for this question in the 2019 survey was that graduates would have liked to have been better prepared for many aspects of running and growing a business. This was also the most consistent theme in the 2016 SAC survey. In the 2019 survey, some graduates also indicated that they would have liked to focus more on communication strategies.

The last question in the 2019 SAC survey asked College graduates whether their perception of the College had improved, stayed the same, or declined since graduating. In the 2019 SAC survey, 27% of graduates indicated their perception had improved, which was a decrease from 37% in the 2016 survey. Thirteen percent of respondents indicated their perception of the College had declined since graduating in the 2019 SAC survey, which is similar to the 10% of

respondents in the 2016 survey. These results aren't necessarily negative, as it may indicate that recent graduates in the 2019 survey were more impressed with the College at the time of their graduation and felt that the College has remained consistent since graduation.

Since graduating, your perception of the NZCC has...	2016 SAC Survey	2019 SAC Survey
Improved	37%	27%
Stayed the same	53%	60%
Declined	10%	13%

References

1. de Luca KE, Gliedt JA, Fernandez M, et al. The identity, role, setting, and future of chiropractic practice: a survey of Australian and New Zealand chiropractic students. *J Chiropr Educ* 2018;**32**(2):115-25.
2. Gliedt JA, Hawk C, Anderson M, et al. Chiropractic identity, role and future: a survey of North American chiropractic students. *Chiropr Man Therap* 2015;**23**(1):4.