A question of quality and quantity of chiropractic care

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Faced with great increases in the costs of health care, the government agencies responsible for funding are taking a much more active role in the decision making process regarding the expenditure of health care dollars. This paper reviews how a government analysis of the type of care rendered by chiropractors can result in assumptions about the quality of care which may be erroneous. Although data from Saskatchewan is presented, the issues and arguments are relevant in all areas where chiropractic care is insured.

KEY WORDS: chiropractic care, government analysis, cost effective care, manipulation

Confrontées avec une grande augmentation des coûts des services de santé, les agences gouvernementales responsable du subventionement prennent un rôle plus actif dans le processus de prise des décisions en ce qui concerne les frais médicaux. Cet écrit passe en revue comment une analyse du gouvernement du type de soins rendus par les chiropracteurs peuvent résulter en des suppositions sur la qualité des soins qui peuvent être érronés. Malgré la présentation des données du Saskatchewan, les résultats et les arguments sont relevants dans tous les domaines ou les soins chiropractiques sont assurés.

MOTS CLÉS: soins chiropractiques, analyse du gouvernement, soins à coûts réduits.

Introduction

The purpose of this paper is to review some of the issues surrounding the economics of chiropractic care. Saskatchewan provides a unique opportunity to gather some statistically useful data in this area since it provides unlimited coverage for chiropractic care. In other provinces in Canada, there are limits on the insurance coverage for chiropractic care for individual patients or for a family. Once a patient has depleted his or her chiropractic insurance, that patient is lost to statistical review for that particular year.

Recently, there has been an increase in the literature concerned with assessment of the cost of health care.[1,2] Tremendous pressure is being applied to health professionals to utilize the least expensive method of therapy.[3,4] In their quest to get the best value for the health care dollar, public agencies responsible for funding health care services appear to reflect the attitude that less expensive care is better care.[5] Waiting lists for elective surgery[6,7] and assessment of care for the aged[8] reflect priority decisions that are made in the interests of economics. To some, balancing the budget, not patient comfort, is the most important consideration.[9,10,11]

The Saskatchewan Medical Care Insurance Commission (the commission) is charged with providing payment for services rendered by health care practitioners to citizens of Saskatchewan. Some see this body as a mere insuring agency with no option but to pay for services rendered on behalf of insured patients. However, the commission is also charged with the responsibility to see that commission monies are used wisely. To this end, the commission has developed methods of analysis in order to monitor expenditures in various areas.

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This paper will deal with some of the problems associated with government monitoring of chiropractic expenditures and how such monitoring can lead to erroneous conclusions about chiropractic care. Although only Saskatchewan data is presented, the issues are relevant in other Canadian provinces and countries where chiropractic treatment is insured.

The chiropractic patient population

There is no doubt that the vast majority of patients seeking chiropractic care do so because of spinal pain. Studies in the United Kingdom, New Zealand and Canada show that from 85 to 95 per cent of patients present to chiropractors because of spinal pain.[12,13,14] Moreover, a large proportion of these patients have chronic backache. It is, therefore, important to understand the natural history of chronic spinal pain in order to draw any conclusions about how chiropractors manage these patients.

Chronic back pain is characterised by exacerbations and remissions.[15] To date, there is no known treatment that can completely cure chronic back pain. Back school, bed rest, manipulation and discectomy can relieve symptoms over a variable length of time, but in a majority of cases, sooner or later, the pain returns.[16-19] There is no known treatment that can significantly alter the natural history of spinal pain over the long term.[20] Chronic back pain is, therefore, a problem which requires ongoing management. Patients who are relieved by a certain treatment are likely to return for more of the same. In fact, it is not unreasonable to expect a successful chiropractor to have large numbers of patients returning to see him or her for management of their spinal discomfort.

The economics of chiropractic care

(i) Cost effectiveness

The cost of chiropractic care has been studied in a few instances in the last ten years. Chiropractic care has been shown to be less expensive than medical care of back pain patients in studies of Workman's Compensation data from Utah[21] and Oregon.[22] A study in West Virginia[23] showed that chiropractic care was

more expensive than medical care. Closer examination of the West Virginia data reveals that a cohort of ten chiropractors skewed the costs of chiropractic care to such an extent that the chiropractic care was not cost effective. These ten chiropractors charged worker's compensation for items such as nutritional advice and detention time (time spent essentially resting in the office following treatment).

Studies in Manitoba[24], and Iowa[25] have shown that chiropractic care does not act as a substitute for medical care. In fact, a rise in medical manpower was attended with a slight rise in chiropractic utilization. The demonstration of a relatively successful therapy for the care of acute and chronic back pain seems to result in increased interprofessional cooperation or at least increased patient utilization of the chiropractic services.

(ii) Government analysis of chiropractic care

In Saskatchewan, one of the systems used to monitor chiropractic care is known as discrete patient analysis. Discrete patients refer to the number of individual patients on whose behalf payment was made by the commission for care given by the practitioner within a specified time frame (per quarter or per year).[26]

The term services per discrete patient is derived by dividing the discrete patient count into the total number of services rendered by the practitioner for which payments were made during the quarter (year). If a practitioner had a total of 1000 visit services, and had seen 200 discrete patients, the services per discrete patient would equal 5.

The term case mix refers to the "melting pot" that in total encompasses the patient population of an individual practitioner. It is the sum of many variables including the age, sex, socioeconomic status, occupation, and past health history for each patient. In addition, the specific diagnosis for each patient includes the severity of symptomatology, the presence or absence of physical signs, and the presence or absence of other health problems.[27]

(iii) Saskatchewan data

Tables 1,2 and 3 present a collection of data involving chiropractors in Saskatchewan from the fiscal years 1980-81 to 1984-85.[28-33] Data from the fiscal year 1981/82 is shown in Figure 1.[33] The graph shows the number of chiropractors who fall in each range of average visit services per discrete patient. Note that the graph resembles a normal Gaussian curve with most practitioners near the mean.

Table 1[28-32] SASKATCHEWAN CHIROPRACTORS BY AGE GROUP

	under 35	35-44	45-54	55-64	65 +
Chiropractors by age group receiving $30,000 or more from MCIC and practicing in Saskatchewan at the end of the year	39	19	12	13	2

Table 2[28-32] DATA INVOLVING CHIROPRACTIC CARE IN SASKATCHEWAN

	80-81	81-82	82-83	83-84	84-85
Number of chiropractors (income > $20,000)	65	69	76	81	85
Number of chiropractors registered in Sask.	78	79	88	91	92
Number of services performed by chiropractors (000's)	545.6	581.3	618.1	619.0	675.7
Chiropractic claims as a per cent total MCIC claims received	3.7	3.8	4.2	4.4	3.9
Average payment per practitioner (000's)	62.7	70.3	73.1	78.5	78.5
Population per practitioner (000's)	12.9	12.5	11.4	11.1	11.2
Average number of discrete patients per practitioner (000's)	1.4	1.4	1.4	1.4	1.3
Average patient contacts per practitioner (000's)	7.8	7.8	7.9	7.9	7.5
Per cent of beneficiaries treated	8.2	8.7	9.0	9.4	9.5

FIGURE 1[33]

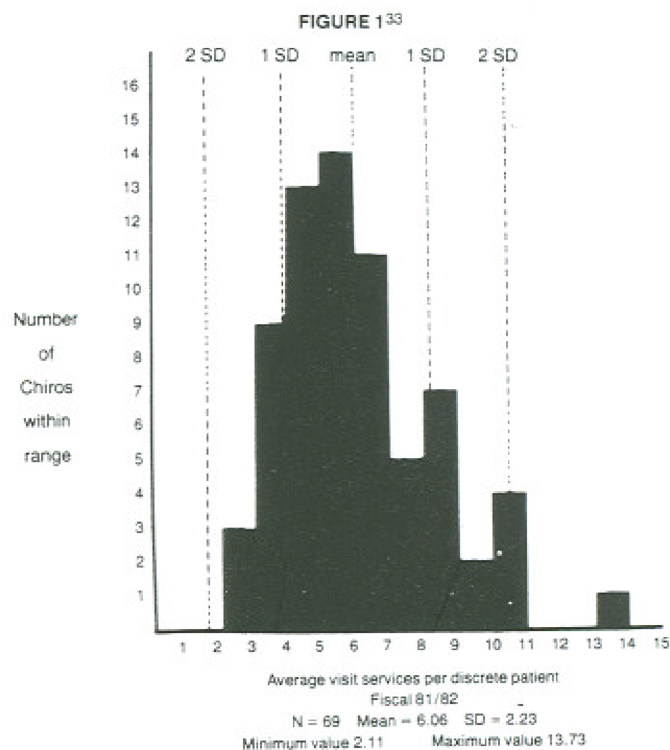

Table 3[33] NUMBER OF CHIROPRACTORS WITH INCOME GREATER THAN OR EQUAL TO $20,000 BY RANGE OF AVERAGE VISIT SERVICES PER DISCRETE PATIENT

Average Visit services per Discrete Patient	Number of Chiropractors Within Range			
	81-82	82-83	83-84	84-85
1.0 – 1.99	–	–	–	–
2.0 – 2.99	3	2	3	3
3.0 – 3.99	9	11	10	10
4.0 – 4.99	13	16	13	15
5.0 – 5.99	14	11	15	13
6.0 – 6.99	11	14	16	18
7.0 – 7.99	5	7	5	15
8.0 – 8.99	7	6	9	5
9.0 – 9.99	2	3	5	4
10.0 – 10.99	4	3	1	2
11.0 – 11.99	–	1	2	–
12.0 – 12.99	–	–	1	1
13.0 – 13.99	1	2	–	–
14.0 – 14.99	–	–	1	–
15 +	–	–	–	–
Number of chiropractors with income greater than or equal to $20,000	69	76	81	86
Mean Visit services per Discrete Patient	6.06	6.09	6.22	6.08
Standard Deviation	2.23	2.21	2.40	1.99
Minimum Value	2.11	2.21	2.21	2.03
Maximum Value	13.73	13.74	14.81	12.25

Discussion

Health economists have demonstrated that when the number of practitioners in a region increases, the health care costs of that region increase at an almost proportionate rate. Some have gone so far as to suggest that physicians have a "target income" and it may be easy to rationalize a level of patient care that may be excessive. If five treatments are necessary, six or seven will not do any harm.[34-38] It could also be argued that more chiropractors are striving for higher target incomes. It is not possible to distinguish the actual motives of individual practitioners using the available data. It is essential that more discriminative analysis be applied before generalizing about the number of chiropractic services.

The services per discrete patient value is used by the commission to identify practitioners who differ from the mean. The chiropractic representatives on the Chiropractic Review Board are asked to justify why there are variations from the mean in the practice patterns of these practitioners.

As it is presently employed, problems in the analysis of the services per discrete value outweigh any useful data that could be obtained. The system assumes that any differences in the conditions of patients who consult chiropractors are not significant or that all chiropractors see the same case mix of patients. The services per discrete patient value gives no information on individual case visits. Obviously, some patients were seen one or two times while other patients were seen much more frequently. Thus, the analysis of services per discrete patient is really not sophisticated enough to allow anything but trend analysis and conclusions. Nonetheless, this value is used as a measure of the number of times that most patients are seen in a practitioner's office.

If the services per discrete patient figure is to be a useful one, it must be compared to the diagnosis of patients seen in chiropractic offices. The diagnostic code that is presently used by chiropractors in Saskatchewan is neither accurate nor complex enough to be of any use in determining diagnostic related groups. This code actually resembles a service code and is presently used in a slightly modified form across Canada to code chiropractic services. It was developed in the late 1960's and reflects issues of that time period. The diagnostic acumen of chiropractors has advanced considerably in the past fifteen years. Work is underway to change the code to more accurately reflect the case mix of chiropractors in this province.

The case mix of one practitioner may be vastly different from that of another, although with less sensitive measures, the two patient populations may appear to be similar. Each practitioner tends to attract certain types of patients. Although a group of patients may be easily matched for sociodemographic values, the specific diagnosis of each patient may vary widely. This, in turn, affects the number of treatments required for relief. Moreover, patient response to the same treatment for the same condition can vary substantially.

Manipulation is becoming more widely accepted as an effective mode of therapy for the treatment of acute and chronic back pain [21, 39-41] In addition, researchers are beginning to comment on the effectiveness of different regimens of treatment.[42-49] A study on the treatment of low back and leg pain was recently completed at University Hospital in Saskatoon. The authors found that a two-to-three-week trial of daily manipulations was often more successful in alleviating the patients' back pain than the same number, or a fewer number of treatments spread over a longer time frame. Most patients in the study responded better to a concentrated regimen of manipulations than they had to occasional manipulative care in the past.[50] The difference was not in the manipulative skills of the researchers but in the frequency of treatment, that is, daily manipulations. These same patients had often been treated many times by other chiropractors but not in a concentrated fashion.

Conclusion

Increasing scientific, professional and public acceptance of chiropractic care has led to an increased patient compliance with suggested regimens of therapy. Evidence that regimens of therapy are more successful for chronic conditions has changed the practice patterns of some practitioners. These practitioners

generally show increased quarterly values of services per discrete patient, indicating that the patients are seen fairly often over a short period of time and are then discharged from active care.

Table 1 shows that the chiropractic profession in Saskatchewan is a young one. A majority of the practitioners are under the age of 45. These individuals have many years of productive practice ahead of them and it is unlikely that the size of their practices will diminish in the near future.

Increased acceptance and therefore utilization of manipulative therapy will lead to increased health care expenditures for those practitioners specializing in that method of therapy. This has already happened in Saskatchewan. Increasing numbers of Saskatchewan chiropractors are treating an ever increasing percentage of the total commission claims received. However, the average patient contacts and the average number of discrete patients per practitioner have remained relatively constant (see Table 2). More chiropractors are treating more of the population every year and are therefore consuming a greater share of the health care pie.

In self governing professions, it is expected that individual practitioners should at least be able to provide care for their patients on a level that is expected of the "reasonable practitioner". How would the "reasonable chiropractor" care for a particular patient with a certain diagnosis, health history and socioeconomic status? There are no absolutes in the art of patient management, however, in general terms one should expect a similar approach to a particular problem.

Consider the maximum and minimum values shown in Figure 1. It is possible to argue theoretically that these two extremes represent two vastly different patient populations. One case mix contains simple, mild problems, capable of being treated in one or two treatments. The second case mix contains a patient population with considerably more severe troubles, likely of a chronic nature. A more reasonable explanation is that these two values represent two divergent views on the art of patient management. As well, it is likely that the two case mixes are indeed somewhat dissimilar.

Which approach is the more correct one? The answer to this dilemma lies in appropriate examination procedures, accurate diagnostic skills and adequate records. If a practice case mix requires a high value for services per discrete patient, then it is the practitioner's responsibility to have a high value. If the practice is an acute care practice it is unlikely that the annual figures should be too distant from the mean.

This is a complex issue, but we must as a profession, do the clinical research to decide on our parameters of care before they are set for us. The parameters must be based on therapeutic utility and not be governed by short term monetary concerns.

As consumers, we hope that our health care dollars are spent wisely. However, decisions on the treatment plan for individual patients can never be a matter of economics. Each patient deserves individual decisions regarding his or her health problem.

The commission has the right and responsibility to review how health care dollars are being spent. However, the tools of the review must be based on correct assumptions or result in artificial analysis which does not accurately reflect reality. Combined with accurate data collection, the analysis of services per discrete patient could be a useful tool in the review of the costs of chiropractic care. As well, it would be a helpful guide in peer review of practice patterns.

The costs of chiropractic care will continue to rise in Saskatchewan as an increasing number of practitioners see an increasing segment of the population. The increased public acceptance, increasing scientific demonstration and interprofessional understanding of the efficacy of manipulation will all contribute to the rise in costs. New money should be diverted to the chiropractic budget to cover this increased utilization. Over the long term, conservative therapies such as chiropractic will save the government money because of their cost-effectiveness. It is up to chiropractors to ensure that this message is heard in both the public and political areans.

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Answers to Roentgenology Quiz

1 a,b,c,d,e
2 a,b,c,d
3 a,b,c,d,e
4 b,d,e
5 a,b,c,e
6 e
7 a,b,c,d,e
8 c,d,e
9 a,b,c,d,e
10 a,b,c,d,e