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Beyond spinal manipulation: should Medicare expand coverage for chiropractic services? A review and commentary on the challenges for policy makers

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Abstract

Objectives: Private insurance plans typically reimburse doctors of chiropractic for a range of clinical services, but Medicare reimbursements are restricted to spinal manipulation procedures. Medicare pays for evaluations performed by medical and osteopathic physicians, nurse practitioners, physician assistants, podiatrists, physical therapists, and occupational therapists; however, it does not reimburse the same services provided by chiropractic physicians. Advocates for expanded coverage of chiropractic services under Medicare cite clinical effectiveness and patient satisfaction, whereas critics point to unnecessary services, inadequate clinical documentation, and projected cost increases. To further inform this debate, the purpose of this commentary is to address the following questions: (1) What are the barriers to expand coverage for chiropractic services? (2) What could potentially be done to address these issues? (3) Is there a rationale for Centers for Medicare and Medicaid Services to expand coverage for chiropractic services?

Methods: A literature search was conducted of Google and PubMed for peer-reviewed articles and US government reports relevant to the provision of chiropractic care under Medicare. We reviewed relevant articles and reports to identify key issues concerning the expansion of coverage for chiropractic under Medicare, including identification of barriers and rationale for expanded coverage.

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Results: The literature search yielded 29 peer-reviewed articles and 7 federal government reports. Our review of these documents revealed 3 key barriers to full coverage of chiropractic services under Medicare: inadequate documentation of chiropractic claims, possible provision of unnecessary preventive care services, and the uncertain costs of expanded coverage. Our recommendations to address these barriers include the following: individual chiropractic physicians, as well as state and national chiropractic organizations, should continue to strengthen efforts to improve claims and documentation practices; and additional rigorous efficacy/effectiveness research and clinical studies for chiropractic services need to be performed. Research of chiropractic services should target the triple aim of high-quality care, affordability, and improved health.

Conclusions: The barriers that were identified in this study can be addressed. To overcome these barriers, the chiropractic profession and individual physicians must assume responsibility for correcting deficiencies in compliance and documentation; further research needs to be done to evaluate chiropractic services; and effectiveness of extended episodes of preventive chiropractic care should be rigorously evaluated. Centers for Medicare and Medicaid Services policies related to chiropractic reimbursement should be reexamined using the same standards applicable to other health care providers. The integration of chiropractic physicians as fully engaged Medicare providers has the potential to enhance the capacity of the Medicare workforce to care for the growing population. We recommend that Medicare policy makers consider limited expansion of Medicare coverage to include, at a minimum, reimbursement for evaluation and management services by chiropractic physicians.
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Introduction

Chiropractic education and practice in the United States

Graduation from an accredited chiropractic college in the United States requires 90 semester hours of undergraduate study with an emphasis on the biological sciences, followed by completion of 10 trimesters of chiropractic education and training at professional educational institutions accredited both regionally and by the Council on Chiropractic Education. Didactic courses taught in chiropractic colleges closely parallel the science curricula of medical schools[1]; but chiropractic education particularly emphasizes musculoskeletal diagnosis, radiology, and extensive training in spinal manipulation. Optional postgraduate training can lead to board certification in specialized fields. To qualify for state licensure, graduates must pass 4 sets of national board examinations. Some states also require additional examinations. Doctors of chiropractic (DCs) are licensed as portal-of-entry providers who may evaluate and treat patients autonomously and without referral. In most states, insurance equality laws mandate inclusion of chiropractic benefits in health insurance plans. Commonly covered services include evaluation and management services, physical therapy modalities, radiographs, and some laboratory services.[2] Davis et al[3] estimated that there were 74,623 licensed DCs in the United States in 2006; and in that year, chiropractic physicians provided 18.6 million clinical services under Medicare Part B at a cost of $420 million.[4] Overall spending for chiropractic care in the United States totaled more than $5.9 billion in 2006.[5]

Chiropractic treatment of spinal pain

The care of spinal pain in the United States is costly and highly variable in its effectiveness. From 1997 to 2005, the inflation-adjusted cost of all health services for US adults with spine problems increased by 65%; but the effectiveness of care declined during the same period, as measured by age- and sex-adjusted self-reported measures of health-related quality of life among adults with spine problems.[6] A study of Medicare beneficiaries found an “epidemic” rise in episodes of nonspecific low back pain (the most common type), accompanied by dramatic increases in health care charges.[7] Up to 96% of complaints of chronic low back pain in older adults can be managed nonsurgically[8]; and there is a pressing need to identify and use appropriate, cost-effective, and low-risk treatments.[7] Good quality randomized clinical trials have demonstrated that spinal manipulation, as

performed by DCs, is an effective conservative treatment option for certain types of low back and neck pain and for some headaches.[9-12] A clinical guideline issued jointly by the American College of Physicians and the American Pain Society recommended spinal manipulation for acute, subacute, and chronic low back pain.[13] The Bone and Joint Decade 2000-2010 Task Force on Neck Pain and Its Associated Disorders reported that spinal manipulation is likely to be helpful for grade I and II nontraumatic neck pain,[14] and the American Geriatric Society has stated that chiropractic care is an appropriate option for managing elderly patients with chronic pain.[15]

The scope of chiropractic practice under Medicare

Although, in most states, chiropractic physicians provide—and private insurance plans reimburse for—a wide range of clinical services, the only chiropractic service for which Medicare allows reimbursement is spinal manipulation.[16] In 1972, DCs requested that Medicare provide coverage for services on a level equal to other health care providers. This proposal was heavily opposed by some in organized medicine. A narrower scope of practice for DCs, however, was offered to make a successful proposal (R. Phillips, personal communication by e-mail to J. Whedon; January 26, 2012), which resulted in limited coverage of services mandated by Congress as a Medicare benefit. Later, efforts by DCs to broaden the scope of reimbursed practice under Medicare led to the conduct of a demonstration project that found high levels of patient satisfaction; but expanded services were associated with increased overall costs for Medicare.

Advocates for expanded coverage cite evidence for the clinical effectiveness of chiropractic services[9,11,12] and high levels of patient satisfaction with chiropractic care,[17] but reports on chiropractic services under Medicare have argued that some DCs provide unnecessary services and fail to provide adequate clinical documentation.[18,19] Among unnecessary services, chiropractic care provided for purposes of prevention or health promotion (often referred to as *maintenance care*) is of particular concern. Furthermore, the value of chiropractic services other than spinal manipulation is uncertain, as there is not enough research at present to support other services.[12]

Information is needed to inform the decisions of chiropractic leaders and Medicare policymakers who want to provide better care, improve health, and lower costs for the growing population of Medicare beneficiaries with spinal pain disorders. In the spirit of concern over these issues, we wished to examine evidence regarding expanding coverage of chiropractic services under the Medicare payment system. To inform policy regarding the provision of chiropractic services under Medicare, the purpose of this commentary is to address the following questions: (1) What are the barriers to expand coverage for chiropractic services? (2) What could potentially be done to address these issues? (3) Is there a rationale for Centers for Medicare and Medicaid Services (CMS) to expand coverage for chiropractic services?

Methods

Reviews of published government reports on chiropractic were performed, and authors considered contextual factors not emphasized in previous government reports. The strengths and weaknesses of expanded Medicare coverage of chiropractic services were discussed, and alternative policy recommendations were identified and included in this article.

A systematic search of the medical literature for relevant articles in Medline and Google Scholar was performed. The searches were first conducted in September 2010 and were subsequently updated on 4 occasions, with the most recent update conducted in October 2012. We searched both Medline and Google Scholar for *peer-reviewed articles*. We conducted unlimited Medline searches for "chiropractic AND Medicare" and for "chiropractic AND maintenance". We conducted 4 advanced searches of Google Scholar for "allintitle: chiropractic or chiropractic maintenance," "allintitle: DCs maintenance," "allintitle: chiropractic Medicare," and "allintitle: DCs Medicare." Based upon the lead investigator's review of abstracts, all resultant articles except those that met inclusion were excluded. The inclusion criteria specified peer-reviewed articles that focused specifically on chiropractic under Medicare or on chiropractic maintenance care. In addition to the peer-reviewed publications, we searched Google for "report chiropractic CMS" and "'office of inspector general' chiropractic" to identify and include for review all government narrative reports on the provision of chiropractic services under Medicare. The lead investigator reviewed the full text of all included articles and identified key issues of cost and quality relevant to the provision and potential expansion of coverage for chiropractic services under Medicare. Subsequently, the investigative team—consisting of 2 chiropractic physicians and 2 medical

physicians—reviewed the evidence on these key issues. Following an iterative process of decision making regarding how to analyze and interpret the evidence, the team agreed upon a qualitative synthesis of the evidence. We summarized the findings for the key issues that present challenges to achieving full coverage of chiropractic services under Medicare and made recommendations for meeting those challenges.

Results

The literature search yielded a total of 129 articles. Based upon abstract reviews, we excluded 100 articles because of duplication or failure to meet inclusion criteria, leaving 29 peer-reviewed articles for full-text review, including 13 articles related to chiropractic under Medicare[20-32] and 16 articles on chiropractic maintenance care.[33-48] In addition, we reviewed 7 government reports issued on the provision of chiropractic services under Medicare, which included 5 reports on chiropractic under Medicare prepared by the Office of Inspector General (OIG; US Department of Health and Human Services) and corresponding official responses,[18,19,49-51] a report of the Comprehensive Error Rate Testing (CERT) program,[52] and the report to Congress on the *Demonstration of Expanded Coverage of Chiropractic Services Under Medicare*.[17] Thus, we performed a full-text review of a total of 36 publications (29 peer-reviewed articles plus 7 government reports), all of which were included in our effort to identify the key policy issues and develop a qualitative synthesis of the evidence. Table 1 outlines the 3 key issues that were identified as barriers to full coverage of chiropractic services under Medicare. The key issues included (1) claims documentation, (2) the possible provision of unnecessary preventive care services (maintenance care), and (3) the uncertain consequences of increased coverage on costs.

Claims documentation

In 2009, the OIG reported that 83% of chiropractic claims failed to meet at least 1 documentation requirement and that Medicare paid an estimated $46 million for inadequately documented chiropractic claims.[19] The report recommended that CMS take measures to enforce documentation requirements for chiropractic physicians.[19] In response, the American Chiropractic Association (www.acatoday.org) developed documentation standards and has taken active steps to educate their members in their proper implementation.

The CERT program measures improper payments in the Medicare fee-for-service program, including chiropractic services. The program monitors the accuracy of Medicare payments by the *paid claims error rate* ([dollars overpaid + dollars underpaid]/total dollars allowed). It also monitors the accuracy of claims submitted by providers through the *provider compliance error rate* (dollars submitted incorrectly/total dollars submitted).[55] In 2003, CERT reported that DCs had the highest provider compliance error rate among types of Medicare providers. The DC error rate has declined in recent years but, in 2009, still remained significantly higher than the national average[52] (Table 2).

Medicare's requirements for clinical documentation of chiropractic services are shown in Table 3.[53] These

Table 1 Key issues for expanded coverage for chiropractic services under Medicare

	Issues	Challenges	Recommendations
Claims documentation	OIG reports inadequate documentation of chiropractic claims.[19,52]	DCs must correct deficiencies. Medicare requires documentation of chiropractic evaluation and services but does not reimburse for same.	State and national chiropractic organizations should continue and strengthen efforts to improve claims and documentation practices.
Maintenance care	Medicare considers "maintenance care" to be an unnecessary service.[53] Small clinical trials support the effectiveness of "maintenance care,"[35,36,40,54] but more evidence is needed.	To conduct the research required to demonstrate any benefits of "maintenance care"	Conduct rigorous efficacy/effectiveness studies.
Uncertain consequences of increased coverage on costs	A demonstration project projected increased costs from expansion of coverage.[17]	Methodological concerns about the demonstration Lack of cost-effectiveness data	Conduct needed clinical studies, targeted at the triple aim of high-quality care, affordability, and improved health.

DC, doctor of chiropractic; *OIG*, Office of the Inspector General.

Table 2 National Medicare fee-for-service error rates, 2008

Provider type	Paid claims error rate				Provider compliance error rate
	Error rate	Projected improper payment amount	Standard error	95% Confidence interval	
Chiropractic	10.5%	$57,754,537	1.2%	8.2%-12.9%	30.2%
All provider types	4.5%	$3,366,409,599	0.1%	4.2%-4.8%	15.5%

Adapted from CMS.gov: Improper Medicare Fee-For-Service Payments Report—May 2008 Report http://www.cms.gov/apps/er_report/preview_er_report.asp?from=public&which=long&reportID=9&tab=4.

Table 3 Documentation requirements for chiropractic services provided under Medicare

Initial visit

1. History, including:
   a. Symptoms causing patient to seek treatment
   b. Family history if relevant
   c. Health history (general health, prior illness, injuries, or hospitalizations; medications; surgical history)
   d. Mechanism of trauma
   e. Quality and character of symptoms/problem
   f. Onset, duration, intensity, frequency, location, and radiation of symptoms
   g. Aggravating or relieving factors
   h. Prior interventions, treatments, medications, secondary complaints
2. Description of present illness, including:
   a. Mechanism of trauma
   b. Quality and character of symptoms/problem
   c. Onset, duration, intensity, frequency, location, and radiation of symptoms
   d. Aggravating or relieving factors
   e. Prior interventions, treatments, medications, secondary complaints
   f. Symptoms causing patient to seek treatment
3. Evaluation of musculoskeletal/nervous system through physical examination
4. Diagnosis, including:
   a. Primary diagnosis (spinal level of vertebral subluxation)
   b. Secondary diagnosis (neuromusculoskeletal condition necessitating treatment)
5. Treatment plan, including:
   a. Recommended duration and frequency of visits
   b. Specific treatment goals
   c. Objective measures to evaluate treatment effectiveness
6. Date of initial treatment

Subsequent visits

7. History, including:
   a. Review of chief concern
   b. Changes since last visit
   c. System review if relevant
8. Physical examination, including:
   a. Examination of area of spine involved in diagnosis
   b. Assessment of change in patient condition since last visit
   c. Evaluation of treatment effectiveness
9. Documentation of treatment given on day of visit

requirements are largely consistent with the profession's own standards.[56,57] Although most of Medicare's documentation requirements for DCs are for evaluation and management services (requirements 1-5 and 7-8), evaluations performed by DCs are not reimbursed even though Medicare does pay for evaluations performed by medical and osteopathic physicians, nurse practitioners, physician assistants, podiatrists, physical therapists, and occupational therapists. In addition, Medicare requires DCs to document the presence of "vertebral subluxation" (requirement 4a) to qualify for reimbursement of spinal manipulation. CMS defines *vertebral subluxation* as "a motion segment in which alignment, movement integrity and/or physiological function of the spine are altered although contact between joint surfaces remains intact."[53] It is important to note that this chiropractic definition of subluxation should be distinguished from the orthopedic definition of subluxation of the spine, which often results from trauma, may be unstable, and in many cases contraindicates the use of closed manipulation procedures. Within the chiropractic profession, vertebral subluxation is a theoretical construct that, although widely debated,[58] has yet to be validated by experimental evidence.[59,60] Despite the fact that the term may be out of date, Medicare requires this because it is a part of the original 1972 provision.

Maintenance care

There are many in the chiropractic profession who suggest that chiropractic care may help maintain health and prevent disease, and recent efforts to define these concepts have been published.[61]) The CMS define *maintenance care* as "a treatment plan that seeks to prevent disease, promote health, and prolong and enhance the quality of life; or therapy that is performed to maintain or prevent deterioration of a chronic condition."[16] The CMS have ruled that maintenance care provided by DCs is not medically "reasonable and necessary" and, therefore, is not reimbursable.[53]

However, issues related to the provision of maintenance care were noted in all 5 OIG reports on chiropractic services under Medicare published between 1986 and 2009 [18,19,49-51]; OIG research methods included surveys, claims data analyses, and clinical medical record reviews. The OIG most recently found that maintenance care, although not an allowed service, constituted 36% of chiropractic services provided under Medicare in 2006, at a cost of $157 million, [19] and that efforts to curtail payments for maintenance care had been ineffective. [19] The OIG studies that used medical record reviews provided no description of standardized review methods and failed to give consideration to measures of the value of chiropractic services such as patient preference, clinical effectiveness, or cost-effectiveness. No tests for statistical significance of findings were provided. The OIG concluded that unnecessary costs associated with the provision of maintenance care by DCs would create vulnerability for Medicare [19] but provided neither a rigorous definition of *maintenance care* nor sound evidence of reasons to exclude it from coverage. [62]

Uncertain consequences of increased coverage on costs

From 2005 to 2007, CMS conducted a *Demonstration of Expanded Coverage of Chiropractic Services Under Medicare* to examine its effects on Medicare costs. The demonstration was conducted in 4 sites across the country and was intended to evaluate the effects of the greater availability of chiropractic services on total Medicare costs. Patients who participated in the demonstration reported high levels of satisfaction with chiropractic care, but the expansion of services was associated with a $50 million increase in total Medicare costs among chiropractic users. The investigators projected that nationwide expansion of chiropractic services would cost Medicare between $582 million and $1.15 billion annually. [17] However, nearly all of the increased costs during the demonstration project were attributable to 1 site: Chicago, IL, and its contiguous suburbs. The selected sample of demonstration sites may not have been nationally representative. [63]

Discussion

Section 2706 of the Patient Protection and Affordability Act prohibits private health insurers from discriminating, with respect to participation or coverage, against health care providers acting within the scope of their licenses. [64] The letter of Section 2706 does not apply to Medicare, but there is good reason to argue that it should do so. This review highlights certain disparities related to the participation of DCs under Medicare and several important challenges—and opportunities—for enhancing the role of DCs. The integration of chiropractic physicians as fully engaged Medicare providers has the potential to enhance the capacity of the Medicare workforce to care for the growing population of older adults with spinal pain. However, given the potential for continued provision of unnecessary services, compliance issues, and cost uncertainties, should Medicare expand allowable chiropractic services?

The analysis of budget neutrality of the Medicare chiropractic demonstration performed by Brandeis University underscores the difficulty of projecting the effects of a national health policy decision. [17] A recent reanalysis of the demonstration concluded that the demonstration results were disproportionally influenced by Chicago area demonstration sites and that the elimination of certain clinical services would have substantially reduced the direct effect of the demonstration, as well as estimates of the national impact of expansion of services. [65] The decrease in nonchiropractic neuromusculoskeletal (NMS) visits during the final 6 months of the demonstration, coupled with the increases in chiropractic visits, suggests a possible substitution effect. [17] The hypothesis that there may be long-term cost savings associated with use of chiropractic services is supported by recent findings that health costs are lower for patients who see a DC, based on analysis of a large representative national data set. [66] Ultimately, a full understanding of the effects of expanded coverage for chiropractic services must include assessment of their clinical value, quality, and net effects on health care costs over time.

Lack of a quantitative definition of maintenance care makes it difficult, if not impossible, for CMS to identify the provision of maintenance care if and when it does occur. Valid assessment of the provision of maintenance care under Medicare should begin with understandable terminology. Hawk et al [40] adopted the term *extended care* as a more accurately descriptive term than *maintenance care*. It is not surprising that the OIG was not able to provide a rigorous definition for *maintenance care*. A valid definition of *maintenance care* should account for timing and frequency of interventions, as well as duration of episodes of care. In a recent analysis of Medicare Part B claims spanning a 16-year period, Weigel et al [28] found that, from 1991 to 2007, the average number of episodes of chiropractic care per chiropractic user ranged from 4 to 23; the average episode lasted 5 to 29 days, with an average of

1 to 3 visits per episode. The definition of *extended care* should be congruent with patterns of utilization of extended care reported in observational studies and with the controlled visit schedules used in interventional studies of extended care. Published quantitative definitions of *extended care*[40,45-47,67] range as follows: frequency of visits, 4 to 26 per year (mean, 17; median, 17); duration, 9 to 12 months. Intervals between visits for chiropractic "maintenance care" or "preventive maintenance," have been operationally defined in experimental studies as lasting from 2 to 4 weeks.[36,40,54] However, in surveys of practitioners, the intervals appear to be more variable, ranging from slightly less than 1 month to 3 to 4 months.[42]

The evidence of small clinical trials is supportive of the effectiveness of maintenance care[35,36,40,54]; but at this time, the value of extended chiropractic care provided under Medicare is uncertain. We recommend that rigorous research be conducted on the prevalence, clinical outcomes, and costs of extended chiropractic care provided under Medicare. Research on the effectiveness and cost-effectiveness of extended chiropractic care will inform guidelines for its utilization, which in turn may be used to inform retrospective evaluations of the utilization of extended care.

Complete and accurate clinical documentation of services provided and their effects on patient outcomes are necessary, and the reported inadequacy of chiropractic documentation is a legitimate and significant concern. Documentation for chiropractic services should be held to the same standards as those applied to other health care providers. Because most chiropractic physicians are independent practitioners with little institutional oversight, state and national chiropractic organizations need to work closely with insurers, including Medicare, to formulate standards and ensure compliance with them. The chiropractic profession's effort to improve clinical documentation is a critical need, as are rigorous efforts aimed at continual performance improvement. The chiropractic profession must redouble its efforts to ensure adherence to the highest quality standards in patient care delivery. However, the CMS policy of not reimbursing DCs for evaluation and management services should also be reevaluated in the same light.

Limitations

This review is intended to provide a broad contextual overview of the principal policy issues related to coverage of chiropractic under Medicare; thus, we did not report all of the quantitative findings of reviewed articles, nor did we suggest detailed tactics for addressing the issues. The value and effectiveness of chiropractic interventions other than spinal manipulation for older adults are not clear, and consideration of the clinical evidence for such interventions should be included in any decision regarding the expansion of chiropractic services under Medicare. However, the effectiveness of interventions other than spinal manipulation did not appear as a key issue in our review and, therefore, fell outside the scope of this article.

The validity of this analysis is limited by the methodology used. We found considerable heterogeneity with regard to study design among the included publications, with review articles, observational studies, secondary data analyses, and surveys all included in our review. The included articles varied considerably with regard to methods and outcomes measures. Inadequate descriptions of methods in many articles made it difficult to judge or compare risk of bias. The highly disparate nature of the included articles thus precluded the performance of a coherent systematic review; and we did not adhere to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, which are intended to improve the reporting of systematic reviews and meta-analyses. Because we did not formally evaluate the quality of evidence reviewed herein, our assessment of the evidence may have been biased; but we made a diligent effort to base our recommendations upon a balanced view of all the available evidence.

Conclusions

We identified 3 key issues as barriers to full coverage of chiropractic services under Medicare. The key issues include claims documentation, the possible provision of unnecessary preventive care services (maintenance care), and the uncertain consequences of increased coverage on costs. To overcome these barriers, the chiropractic profession and individual physicians must assume responsibility for correcting deficiencies in compliance, documentation, and the filing of claims. At the same time, CMS should reexamine their policies related to chiropractic reimbursement, applying the same standards relative to patient evaluation and treatment to chiropractic physicians as they do to other health care providers. Because the effectiveness and cost of preventive/maintenance care are unknown, further research is needed; and guidelines on the provision of extended care should be

informed by the clinical evidence. The uncertain costs of coverage for services other than spinal manipulation must be weighed against the potential benefits to the health of the population. Based upon these findings, we recommend that Medicare policy makers consider limited expansion of Medicare coverage to include, at a minimum, reimbursement for evaluation and management services by chiropractic physicians.

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