

## Self-Study of Values, Beliefs, and Conflict of Interest

### The Bone and Joint Decade 2000–2010 Task Force on Neck Pain and Its Associated Disorders

Rhoda Reardon, DP&OT,\* and Scott Haldeman, DC, MD, PhD†

**Study Design.** Observation and survey of values, beliefs, and conflicts of interest.

**Objective.** To study the values, beliefs, and potential conflicts of interest that the Neck Pain Task Force brought to their deliberations.

**Summary of Background Data.** Researchers' values and beliefs were studied to uncover areas of divergence and to develop guiding principles to assist decision making.

**Methods.** An observer used direct observation and survey of the Neck Pain Task Force, facilitated discussion, and developed a "disclosure tool" to collect information about relationships between researchers, funders, and others with a vested interest in the outcome.

**Results.** Clinicians and research methodologists brought different imperatives to the research process. Clinicians focused on offering useful advice, whereas methodologists guarded investigative rigor to ensure that evidence actually supported advice. Group conflict did not polarize along "clinical discipline lines." The Advisory Committee had greater impact when given a clear task and time to work as a group. The Neck Pain Task Force agreed on a set of "guiding principles," which became an overarching doctrine to guide their work. The disclosure questionnaires described relationships between Neck Pain Task Force members and other entities that might have had a financial interest in the topic.

**Conclusion.** This study describes a process used to assess values, beliefs, and conflicts of interest among members of a scientific task force, and how this was used to create "guiding principles" to assist the research team in deliberations, particularly when conflict arose. Most members of the Neck Pain Task Force had potential conflicts of interest with various stakeholders, but there was marked diffusion of these potential conflicts and no evidence that any funder or other vested interest stakeholder was likely to have a significant impact on the deliberations or conclusions of the Neck Pain Task Force.

**Key words:** task force, neck pain, values, conflicts of interest, guidelines. *Spine* 2008;33:S24–S32

ence health care policy by supporting or rejecting current treatment protocols. Recommendations from such groups may also influence the future direction of research, and the conclusions are likely to affect how patients, clinicians, and policy makers look at a healthcare issue. A task force convened to survey a substantial literature and made judgments about which studies are of sufficient quality to contribute to pooled knowledge bears the weight of this responsibility and in this regard, the Neck Pain Task Force grappled with several issues. They were a diverse group representing 14 disciplines and 9 countries, but, at the same time, many of the research secretariat and advisors were previously known to each other and had worked and published together before undertaking this work. They were cognizant of their responsibility to disclose relationships and financial arrangements, which could be perceived as conflict of interest but also recognized that their individual "values and beliefs" could potentially have an impact on their decision making.

Conflict of interest has been described as, "a set of conditions in which professional judgment concerning a primary interest (such as a patient's welfare or the validity of research) tends to be unduly influenced by a secondary interest (such as financial gain),"<sup>1</sup> or, "a situation in which personal benefit or economic gain (either direct or indirect via an individual's research program, institution, or individual reputation) takes priority over clarity or accuracy of the reporting of the research."<sup>2</sup>

The Neck Pain Task Force agreed that in meeting their disclosure obligations they would address 3 key questions: (1) Can we, as clinicians and scientists, make our values and beliefs regarding research, in general, and neck pain, in particular, transparent? (2) Can we examine our own values and beliefs and use this awareness to improve our work as a research team? (3) Can we define and implement a comprehensive method for describing and disclosing our relationships?

They decided to invite an observer to join their deliberations who could assist them to examine researcher values and beliefs and monitor their work over time to observe how their values and beliefs might have an impact on their decisions and conclusions.

#### Materials and Methods

The Task Force recruited an experienced individual with a clinical background who possessed the following attributes: an understanding of the research milieu and process; an awareness of public health care policy making as well as private insurer issues and concerns; broad experience in group process; and

Recommendations from prestigious task forces can affect how patients are diagnosed and treated. They may influ-

From the \*College of Physicians and Surgeons of Ontario, Ontario, Canada; †Department of Neurology, University of California, Irvine, CA; and Department of Epidemiology, School of Public Health, University of California, Los Angeles, CA.

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Address correspondence and reprint requests to Rhoda Reardon, Education Coordinator, Quality Management Division, College of Physicians and Surgeons of Ontario, 80 College Street, Toronto, ON, Canada M5G 2E2; E-mail: rreardon@cpso.on.ca

experience in translating research outcomes to real-world environments. [The observer (first author RR) brought the following experience to her task: 15 years of clinical practice as an occupational therapist; 7 years as project manager working directly with government, private insurers, and for-profit health care providers; and 7 years working in a work/health research organization developing and evaluating knowledge transfer strategies with researchers, clinicians, and policy makers. Her current association is with the College of Physicians and Surgeons of Ontario, which has special interest in improved healthcare quality.] Other options were considered, including the hiring of a professional ethicist or a lay observer. However, it was difficult to find a medical ethicist who “fit the bill,” and it was felt that lay observers would not be equipped to understand and assess all the relevant factors. The recruited individual was free of any direct or indirect professional or financial interest in the outcome of the Neck Pain Task Force.

### The Authors' Roles

The first author (RR)<sup>3</sup> acted as an observer and was given a “seat at the table” to observe the task force at work. The observer (RR) was assisted by the second author (SH), who acted as an advisor from within the Neck Pain Task Force. The observer (RR) was responsible for observing how the Neck Pain Task Force functioned. She also developed and carried out a survey of members' values and beliefs as well as a survey of disclosure of potential conflict of interest. All observations and conclusions were made solely by the observer. The advisor from the Task Force (SH) was responsible for ensuring the observer understood the scope and process of the Neck pain Task Force deliberations as well as potential areas of conflict of interest and bias.

### Data Collection Methods

Several methods were developed, which allowed the observer to “plug in” to the Neck Pain Task Force deliberations.

**Direct Observation of the Neck Pain Task Force.** Over a 3-year period, the observer attended 5 meetings of the Neck Pain Task Force. She observed them at work, administered 2 surveys, and led discussions of their values and beliefs. In all, this yielded ~130 hours of participant observation.

**Survey of Values and Beliefs and Subsequent Roundtable Discussion.** The first survey, conducted in early 2004, involved collecting information from the Scientific Secretariat and the Advisory Committee about members' values and beliefs about scientific investigation, their backgrounds (cultural, training, and experience), and also their opinions about how the Neck Pain Task Force functioned as a team.

The assumption was that each individual brought a set of unique perspectives, made up of values, beliefs, and viewpoints, which, in turn, arose from personal background, training, and experience as a researcher and/or clinician. These attributes were seen as indivisible from the application of the scientific rules and principles of systematic review. The plan was to examine and document these factors for the following purposes: to guide the ongoing work of the Task Force, and to make members' pre-existing values and beliefs transparent, so that they could be included in the final Task Force report.

All Neck Pain Task Force members (including the Scientific Secretariat and the Advisory Committee) were asked to reflect on and respond in narrative fashion to 4 specific questions (Table 1). This would require them to think about themselves,

about their fellow scientists, and about the potential users of the Neck Pain Task Force Report. Members were encouraged to avoid self-censorship and to provide frank responses.

The answers were collected and analyzed by the author. In June of 2004, an aggregate report and presentation was used to stimulate a roundtable discussion at a meeting of the full Task Force (including the Scientific Secretariat, Advisory Committee, and Administrative Committee) (see Table 2 for some sample responses).

**Relationship Disclosure Via Questionnaires.** Many methods have been developed to help researchers identify and report relationships, which might give the appearance of conflict of interest regarding a particular study. In deciding to create a comprehensive disclosure format, the Task Force was guided by work of others, specifically work published in the *instructions for authors* and *conflict of interest statements* in the scientific journals *Spine*, the *New England Journal of Medicine*, the *Journal of the American Medical Association*, and the *Annals of Internal Medicine*, as well as 2 scientific/professional groups, the *North American Spine Society* and the *American College of Rheumatology*.

It was also important to agree on the purpose of disclosing relationships. To help clarify this, the Neck Pain Task Force adopted the American College of Rheumatology definition of disclosure: “(The) identification of relationships which might pose actual or potential conflicts” and relevant types of relationships as, “Pertinent entities with a financial interest in the topic.”

Neck Pain Task Force members were asked to complete questionnaires aimed at identifying potential conflicts of interest. They were expected to report such relationships (existing or in negotiation) over the full duration of the Neck Pain Task Force work (2000–2007).

### Questionnaire 1

Members of the Scientific Secretariat and the Advisory Committee were asked to describe the nature of any relationships with those identified as funders of the Neck Pain Task Force.

**Table 1. Narrative Questions Directed at Members of the Scientific Secretariat and Advisory Committee**

Think about yourself:
In thinking about yourself, consider your own values, beliefs, and strongly held views. If you were limited to only two or three, what do you hold as central values in scientific investigation?
Think about how your background (for example your age, gender, and cultural background) influences your viewpoint. What influence comes from your training and experience?
Think about the Task Force as a larger team:
The intent of this question is not to name individuals but to collect your perceptions about your fellow Task Force members. What is your opinion about the larger team and how their views, beliefs and experiences have an impact on the collective work? Are there some individuals who exert more influence than others? Why do you think that is?
Think about the ultimate readership of the Task Force report: Eventually, the Task Force report will enter the public domain. What do you foresee that future readers/reviewers of the report may perceive to be the impact of the individuals who completed the work?
Describe yourself:
Would you describe yourself as
● a “clinician with research expertise,” or
● a “researcher with clinical awareness,” or
● use your own words.

**Table 2. Sample Responses to Survey Questions From Neck Pain Task Force Members****Question**

Would you describe yourself as

1. a "clinician with research expertise" or,
2. a "researcher with clinical awareness," or
3. use your own words.

Most responders described themselves as "both a clinician and researcher," but one responder's captured the issue that self-perception is not the point:

*"I would say I am both a researcher and a clinician, but in the broader health community, we are perceived and categorized largely by our clinical training."*

**Question:**

In thinking about yourself, consider your own values, beliefs, and strongly held views. If you were limited to only two or three, what do you hold as central values in scientific investigation?

Almost every responder included words describing the objectivity of science (integrity, honesty, objectivity, rigor, neutrality, one responder summed it this way:

*"Setting aside personal agendas/views to allow the data to speak to us in new ways."*

**Question:**

Think about how your background (for example, your age, gender, and cultural background) influences your viewpoint. What influence comes from your training and experience?

An interesting quote from one member:

*"I belong to a country that has a very different social and economic reality from that of other countries represented at the Neck Pain Task Force. That certainly influences my viewpoints: for example, I try to consider what the actual impact of the Neck Pain Task Force conclusions would be in an underdeveloped country."*

**Question:**

What is your opinion about the larger team and how their views, beliefs and experiences have an impact on the collective work? Are there some individuals who exert more influence than others? Why do you think that is?

Most responders acknowledged that some individuals had more influence but none felt this was an issue of great concern. This quote sums it up:

*"There are individuals with more influence than others, mainly because of more knowledge in some areas. The positive thing is that in many respects, this influence varies with the topic."*

**Question:**

Eventually, the Neck Pain Task Force report will enter the public domain. What do you foresee that future readers/reviewers of the report may perceive to be the impact of the individuals who completed the work?

Many ideas were put forward here. For example:

*"I think the individuals who completed the Task Force will act somehow as the "business card" of the Task Force: it will be very important for the first impression of the reader/reviewer, and it might bias the reader/reviewer's . . . opinion of (us)."*

*"I believe that the value of a Task Force of this type is to present a target that other groups may use as a basis for discussion, and that the controversies that can be expected on publication of the final document will serve as much good as the actual contents of the document."*

**Questionnaire 2**

Members of the Scientific Secretariat were asked to describe the nature of any relationships they had with entities, which might have a financial interest in the topic of neck pain.

**Questionnaire 3**

Members of the Scientific Secretariat were asked to provide information about any nonfinancial relationships with the Neck Pain Task Force's nonfinancial supporters (known as Association Sponsors).

**■ Results****Direct Observation**

Three key types of interaction were noted during direct observations of the Neck Pain Task Force Scientific Secretariat and Advisory Committee:

**Clinician Versus Methodologist**

The clinicians in active practice on the team had significant research training and experience and many of the research methodologists had started their careers with clinical training and/or practice before devoting themselves entirely to research. The observer noted that members seemed to appreciate one another's perspectives and skills. However, the mix of clinicians and methodologists was the single greatest source of conflict. Clinicians pressured the group to reach conclusions, offer advice, and make the output "usable" by health care practitioners and patients. Research methodologists tended to be more cautious about moving beyond research findings to the application of such findings in the "real world."

In the clinical paradigm, the principles of evidence-based practice direct the clinician to consider the best available evidence, to combine it with his or her own training and experience, and then to use it to make clinical decisions. Given the paucity of research in many areas, clinicians must often rely on training and experience and are often required to act with limited or no evidence. The methodologists, however, have a concern about providing information and advice when it is based on evidence that is not strong enough to be confident of its validity. The methodologists preferred to wait for more or better studies rather than risk premature recommendations.

It was in the "gray zone" where the evidence was neither weak nor strong that the conflicts between the clinicians and the methodologists were most evident. The clinicians typically accepted the "good enough" approach, whereas the methodologists preferred to report findings and make recommendations for more research.

These debates appeared to be driven by 2 underlying positions; the clinicians believed that 6 years of study (*i.e.*, the duration of Neck Pain Task Force) should yield as much practical help as possible for people with neck pain and their health care providers. Meanwhile, the methodologists sought to ensure that the conventions of scientific investigation were rigorously evident in their conclusions, and no weakly supported advice was offered. The final report of the Neck Pain Task Force was forged from the interaction between these 2 fundamental points of view.

**The Impact of Discipline, Seniority, and Authority**

The Scientific Secretariat included a range of individuals from graduate students to eminent and experienced scientists, embracing multiple disciplines and clinical specialties. It was clear that some members commanded more attention than others and were

more likely to “shut down” debate by force of their personalities and their relative position within the group. In some cases, these interactions became quite heated, with emotions running high. Usually, a mediator would emerge, and during these contentious exchanges, he or she would call a “time out”; the group was then able to return to work after a short recess. It was interesting to see how remarkably tolerant members of the task force were of one another’s occasional “acting out” and that they were able to move “past the moment” and resume their efforts in a collegial manner.

Chiropractic and medicine were the 2 predominant clinical disciplines represented within the Scientific Secretariat. One might expect that members who shared a clinical background would act as a “block” during the discussions, but this was not observed. Some of the most heated discussions and areas of disagreement were noted within each of these 2 groups; no polarization by discipline emerged.

### ***The Role of the Advisory Committee***

The observer had an opportunity to monitor the Advisory Committee during the course of two 4-day meetings. The advisors were a group of clinicians, researchers, and clinician-researchers representing multiple disciplines with 10 of the members having medical degrees representing various specialties. They came from 8 different countries and were convened 4 times to assist and advise the Scientific Secretariat on all phases of the research.

The Advisory Committee seemed to have the greatest impact on the Neck Pain Task Force when its members were given a clear task to complete, and when they had time to work on their own (without the Scientific Secretariat present) to build consensus and generate concrete suggestions and recommendations.

In large group discussions, Advisory Committee members were prone to “speechifying” and often led the conversation down the path of their own particular interest. Having the Advisory Committee work together in caucus with a clear task maximized their utility and allowed them to provide feedback to the Neck Pain Task Force, along with significant suggestions for moving forward.

### ***Survey of Values and Beliefs and Subsequent Roundtable Discussion***

The response rate to the survey of Scientific Secretariat members and members of the Advisory Committee was 76% (22/29). The results, including comments from a roundtable discussion, which followed presentation of the survey findings, yielded a richly detailed picture of the Neck Pain Task Force. The group is composed of members from 9 countries: Australia, Brazil, Canada, France, Japan, Sweden, Switzerland, the United Kingdom, and the United States. Many members have lived and worked in multiple countries. Members come from 14 different clinical disciplines or specialties (neurology, orthopedic surgery, chiropractic, physical therapy, occupational therapy, psychology, rheumatology, internal medicine,

pain management, physical medicine and rehabilitation, dentistry, economics, and epidemiology and biostatistics); many members were trained in 2 or even 3 disciplines. Although some members are primarily clinicians and others primarily researchers, most have a clinical background with subsequent training in research. From the roundtable discussion, it was evident that this mix of culture, discipline, and research training was highly valued by the Neck Pain Task Force. There was a belief that this diversity led to greater awareness of members’ individual biases and predisposed them to be more tolerant of other opinions. According to the survey, most members believed that conducting a good systematic review requires the skills of both clinicians and research methodologists. Although clinicians believed that their perspective on the problem of neck pain was particularly valid, methodologists reported that their views on scientific methods were respected. Both groups believed a “healthy split” existed within the Neck Pain Task Force: as 1 participant noted, “Our diversity often leads to a productive debate.”

The exploration of values and beliefs yielded a set of 9 “guiding principles,” which were endorsed by the Scientific Secretariat in late 2004. The Neck Pain Task Force referred to these principles over the course of its deliberations, especially when difficult issues arose.

### ***Nine “Guiding Principles”***

1. The members of the Neck Pain Task Force Scientific Secretariat and Advisory Committee form an international and transdisciplinary body of scientists, clinicians, and patient advocates who actively contribute so that
  - any disciplinary or cultural biases are minimized;
  - an understanding and integration of the views of a wide range of stakeholders are considered.
2. The combined input of methodologists and clinicians is necessary in conducting a systematic review of the literature to ensure that judgments and decisions are balanced by both scientific rigor and clinical reality.
3. All members of the Neck Pain Task Force have the same influence in the development and approval of the decisions made by the Neck Pain Task Force. Clear and transparent rules are used, and the decision-making process is guided, as needed, by Neck Pain Task Force members with specialized expertise on the issue of the moment.
4. In reviewing the research of their peers, the Neck Pain Task Force members value research that is scientifically sound, may lead to improved health, consider the primacy of the patient’s perspective, generate results, which are practical and applicable, and consider the clinical significance of outcomes.

5. Methodologically strong evidence is more important than expert opinion, but poor quality research may be worse than opinion because it can masquerade as “truth.” An important output of the systematic review will be to distinguish and highlight good quality research.
6. Both the etiology of and prognosis for neck pain are complex and almost certainly multifactorial. Psychological and societal factors may be as important as pathophysiological, biologic, or genetic factors. The presence of neck pain with no identifiable pathoanatomical origin should not lead to the automatic assumption that a complaint of neck pain is illegitimate or an issue of secondary gain.
7. People with neck pain, clinicians who treat neck pain, insurers who pay for treatment, and public policy makers could all benefit from understanding the evidence about neck pain. Researchers need to ensure that as new evidence is created, it is made readily available to the relevant audiences, and, in which the evidence is strong, is expressed as clear, actionable ideas, which are ready for use in decision making.
8. Researchers and clinicians need an ongoing exchange about ideas, priorities, and how evidence and clinical expertise inform scientific investigation and patient care.
9. The conclusions of the Neck Pain Task Force should be updated as new evidence emerges so that current best evidence is available for all decision makers.

### Using the Guiding Principles

Discussing values and beliefs was a useful and stimulating exercise, but it did not uncover any significant areas

of “disconnection” or divergence within the Neck Pain Task Force members. Instead, the process served to validate for the researchers that they shared values and beliefs; they developed the 9 guiding principles as a way to turn this discussion into a useful construct. The principles evolved into an unconscious backdrop for many discussions, and the principles surfaced to assist when the way forward was not clear. For example, the group came back frequently to principles that reminded them about why this work was being done, particularly the importance of keeping the best interests of the person with neck pain as the central focus.

### Relationship Disclosure

The first step taken by the Neck Pain Task Force Administrative Committee was to accept all major funding only as unrestricted grants to the University of Alberta or the University of Toronto. The goal of this arrangement was to avoid influence or even the appearance of influence from funders (see Introduction by Haldeman *et al* for details on funding). The Administrative Committee also prohibited any representative of a funding organization from taking part in Neck Pain Task Force discussions. Finally, a comprehensive method was used to determine and declare any and all relationships between funders and Neck Pain Task Force members (see Tables 3–5).

### Task Force Funders Included

#### Insurance Companies

National Chiropractic Mutual Insurance Company (USA)  
 Canadian Chiropractic Protective Association (Canada)  
 State Farm Insurance Company (USA)

**Table 3. The Nature of Additional Relationships Between Task Force Members and Funders, and the Dollar Value of These Relationships**

Task Force Funder	Researcher or Advisor	Nature of Relationship	Dollar Value*
Amgen	Peloso Maetzel	Employment	Major
		Employment	Major
	Bombardier	Holding office†	Minor
		Equity ownership‡	Major
Canadian Chiropractic Protective Agency	Haldeman	Organizational benefits§	Minor
		Consultancies; lecture fees	Minor
	Cassidy	Expert witness	Minor
		Consultancies; lecture fees	Minor
Insurance Bureau of Canada Lanforsakringar NCMIC	Cote Cassidy	Expert witness	Minor
		Consultancies; lecture fees	Minor
	Holm Haldeman	Organizational benefits§	Minor
		Expert witness	Major
State farm Whiplashcommissionen	Johnson Haldeman	Organizational benefits§	Major
		Consultancies; lecture fees	Major
	Cassidy	Organizational benefits§	Minor
		Other	Minor
		Consultancies; lecture fees	Minor

\*Minor dollar value (\$250–\$10,000 annually); major dollar value (more than \$10,000 annually).

†Holding Office refers to membership on board of directors; advisory board; other office.

‡Stock ownership or options (*e.g.*, medical industry-related investments or other investments) with companies that might have a vested interest in the NPTF outcomes.

§Organizational Benefits refers to benefits received (or to be received) directed to a research fund, foundation, educational institution or other nonprofit organization which the author has/have been associated. (*e.g.*, endowments, equipment, biomaterials, discretionary funds, support of office or research staff, support of training such as fellowships, sponsorship of trips, other sponsorships).

**Table 4. The Nature of Relationships Between Members of the Scientific Secretariat and Other Relevant Entities, and the Dollar Value of These Relationships**

Entity With Potential Financial Interest in Topic	Researcher	Nature of Relationship	Dollar Value*
American Osteopathic Association	Hurwitz	Honoraria	Minor
Arthritis Society of Canada	Peloso	Grants received or pending	Major
		Organizational benefits†	Major
DePuy Spine	Carragee	Organizational benefits†	Major
European Spine Journal	Nordin	Paid advisory	Minor
Foundation for Chiropractic Education and Research	Hurwitz	Grants received or pending	Minor
Grunenthal	Peloso	Paid advisory	Minor
		Consultancies; lecture fees	Minor
		Honoraria	Minor
		Grants received or pending	Major
Health Services Utilization Research Commission of Saskatchewan	Peloso	Grants received or pending	Major
		Organizational Benefits†	Major
Institute for Health and Outcomes Research	Peloso	Grants received or pending	Minor
Insurance Corporation of British Columbia	Carroll	Grants received or pending	Major
	Cassidy	Grants received or pending	Major
Impact Medical Solutions	Haldeman	Paid advisory	Minor
Johnson and Johnson companies (Ortho McNeil, PRI)	Peloso	Paid advisory	Minor
		Consultancies; lecture fees	Minor
		Honoraria	Minor
		Grants received or pending	Major
Lippincott Williams Wilkins	Nordin	Royalties	Major
Medical-legal expert witness	Guzman Haldeman	Expert witness expert witness	Minor major
Merck	Peloso	Paid advisory	Minor
		Grants received or pending	Major
National Center for Complimentary and Alternative Medicine	Hurwitz	Paid advisory	Minor
		Grants received or pending	Minor
National Institutes of Health	Peloso	Grants received or pending	Major
NIOSH	Nordin	Grants received or pending	Major
Nukleus	Nordin	Paid advisory	Minor
Ontario Chiropractic Association	Hogg-Johnson	Grants received or pending	Major
Ontario Ministry of Health and Long Term Care	Hogg-Johnson	Grants received or pending	Major
	Guzman	Employment	Minor
Pfizer, (Saearle, Pharmacia)	Peloso	Paid advisory	Minor
		Consultancies; lecture fees	Minor
		Grants received or pending	Major
Purdue Frederick	Peloso	Grants received or pending	Major
Reed Group Ltd	Nordin	Grants received or pending	Major
Saskatchewan Government Insurance	Carroll	Grants received or pending	Major
	Cassidy	Grants received or pending	Major
Société de l'assurance automobile du Québec	Carroll	Grants received or pending	Major
	Cassidy	Grants received or pending	Major
	Cote	Honoraria	Minor
Surgifile Inc.	Haldeman	Equity ownership‡	Minor
Swiss Spine Institute	Nordin	Holding office§	
		Organizational benefits†	Minor
Synthes Spine	Carragee	Organizational benefits†	Major
Trygg-Hansa Insurance	Holm	Employment	Major
Workplace Safety Insurance Board of Ontario	Hogg-Johnson	Organizational benefits†	Major
	Guzman	Grants received or pending	Minor

\*Minor dollar value refers to \$250–\$10,000 annually; major dollar value refers to >\$10,000 annually.

†Organizational benefits are benefits received (or to be received) directed to a research fund, foundation, educational institution or other nonprofit organization to which the author is/has been associated. (e.g., endowments, equipment, biomaterials, discretionary funds, support of office or research staff, support of training such as fellowships, sponsorship of trips, other sponsorships).

‡Equity stock ownership or options (e.g., medical industry-related investments or other investments with companies that might have a vested interest in the NPTF outcomes).

§Holding Office refers to membership on the board of directors; advisory board; other office.

Insurance Bureau of Canada

Länsförsäkringar (Sweden)

#### Government and “Quasi-Governmental” Agencies

Ontario Ministry of Health–Occupational Health Study & Decision Analysis Study (Canada)

Government of Saskatchewan – Saskatchewan Health (Canada)

The Swedish Whiplash Commission

#### Industry and Foundations

Jalan Pacific Inc. (Brazil)

Amgen (USA)

Flinn Foundation, AZ, (USA)

#### Professional Societies

North American Spine Association

**Table 5. The Nature of Nonfinancial Relationships Between Task Force Members and Nonfinancial Sponsors**

Nonfinancial "Association Sponsors"	Researcher	Description of Relationship
American Back Society	Haldeman Cassidy	Member committee member committee chair president speaker Committee member
American College of Occupational and Environmental Medicine		
American College of Rheumatology	Peloso	Member
American Pain Society	Peloso	Member
American Physical Therapy Association		
Bone and Joint Decade 2000–2010	Haldeman Nordin	International ambassador Member
Canadian Arthritis Society		
Canadian Institute for the Relief of Pain and Disability	Haldeman Cassidy	Chairman, advisory council Committee member speaker
Canadian Rheumatology Association	Peloso	Member
European League Against Rheumatism	Peloso	Member
International Society of Physical and Rehabilitation Medicine		
Japan Spine Research Society	Haldeman	Speaker
North American Spine Society		
	Haldeman	Committee member Committee chair Past-president Speaker
	Cassidy	Speaker
	Guzman	Speaker
	Hurwitz	Speaker
	Nordin	Member speaker
	Carragee	Member speaker committee member
Spine Society of Europe	Haldeman Carragee Nordin	Speaker Speaker Member speaker
World Federation of Chiropractic	Haldeman Carroll Cassidy Guzman Cote Hurwitz	Member committee member committee chair speaker Speaker Member committee member Speaker Speaker Speaker

Japan Spine Research Society (Japan)  
Chiropractic Society of Saskatchewan (Canada)  
American Physical Therapy Association (USA)

#### **Disclosure of Additional Relationships Between Neck Pain Task Force Members and Funders**

Of 12 members of the Scientific Secretariat, 5 (42%) reported having additional relationships with the Neck Pain Task Force funders. Of these 5, 2 (15%) had additional relationships in which the dollar value was "major" (exceeding \$10,000 annually). Of 17 members of the Advisory Committee, 3 (18%) reported having additional relationships with Neck Pain Task Force funders. Of these 3 members, 2 (12%) had relationships defined as "major" (exceeding \$10,000 annually). Nine organizations funded the Neck Pain Task Force. No single funder had additional relationships with more than 3 of 30 (10%) individuals holding positions on the Scientific Secretariat and the Advisory Committee.

It is reasonable to conclude that the Neck Pain Task Force funders had no opportunity to influence the research outcomes given: the breadth of the funding group; that no single funder had relationships with the majority

of the Neck Pain Task Force; that no funder participated in the actual deliberations of the Task Force; and that universities were used as the funding agencies.

#### **Disclosure of Relationships Between Neck Pain Task Force Members and Other Interested Entities.**

Neck Pain Task Force members disclosed current, past, or anticipated relationships with entities that may have had an interest in the outcome of the Neck Pain Task Force. These disclosures covered the duration of the Neck Pain Task Force (2000–2007).

Members had relationships with 30 different entities including government, "quasi-governmental" organizations, private insurers, pharmaceutical companies, surgical manufacturers, nonprofit organizations, and trade associations. More than half of these relationships (57%) related to research grants (received and/or pending) and/or to organizational benefits (*i.e.*, benefits directed to a research fund, foundation, educational institution, or other nonprofit organization). About a half of the reported relationships (49%) were defined as "minor" (less than \$10,000 annually). Of the 30 entities mentioned, 8 (26%) had relationships with more than 1

member of the Scientific Secretariat; of these 8 entities, 1 had a relationship with 3 members, and the remaining had relationships with 2 members. The 30 entities described have widely dispersed interests in neck pain; no trend favoring a particular outcome could reasonably be discerned.

**Disclosure of Nonfinancial Relationships Between Neck Pain Task Force Members and (Nonfinancial) Association Sponsors**

The 15 nonfinancial Association Sponsors all have an interest in the topic of neck pain. Relationships between Neck Pain Task Force Members and these sponsors were well dispersed. Just 2 sponsors (the North American Spine Society and the World Federation of Chiropractic) had relationships with more than 2 members of the Scientific Secretariat.

As with the case of the financial sponsors, it is reasonable to conclude that the Neck Pain Task Force Association sponsors had no opportunity to influence the research outcomes given: the breadth of the Association sponsor group; that no Association sponsor had relationships with the majority of the Neck Pain Task Force; that no Association sponsor participated in the actual deliberations of the Task Force.

**Discussion**

There are many beliefs about systematic reviews and about how clinical, research, or policy recommendations emerge from this type of research. In the case of neck pain, concerns may exist about whether the research, including any recommendations, has been influenced by stakeholders such as insurance companies, government agencies, professional disciplines, lawyers, employers, insurers, or pharmaceutical companies. Some people will scrutinize relationships between researchers and these

stakeholders before accepting or rejecting the findings of the Neck Pain Task Force. In fact, it has recently been suggested that when authors of meta-analysis reports do not report their authenticity and potential financial conflicts of interest, such factors should be considered as possible explanations for the findings.<sup>4</sup>

In this study, we used direct observation, surveys, and disclosure forms to gain a greater awareness of the members of the Neck Pain Task Force. First, we asked members about their values and beliefs as scientists and clinicians. It was hoped that this process of reflection would uncover any areas of significant divergence of values and beliefs, which might need to be addressed. This process was also intended to provide a description of the Neck Pain Task Force for audiences, such that any potential conflicts of interest between Neck Pain Task Force members and stakeholders would be clear.

We hoped this transparency would reassure potential users of the Neck Pain Task Force’s findings that the conclusions and recommendations were not the result of any undue relationship between members, funders, and sponsors. Such concern is not without foundation. Bekelman *et al* reported an association between industry sponsorship and the outcome in original research, and that restrictions on publication and data sharing were sometimes an industry sponsorship requirement.<sup>3</sup>

An observer with no professional or financial interest in the outcome of the Neck Pain Task Force was engaged to conduct these observations and surveys and to report on her findings.

The exploration of values and beliefs yielded a set “guiding principles,” which were developed by the Scientific Secretariat as a tangible outcome of their reflections. The development of these guiding principles led the

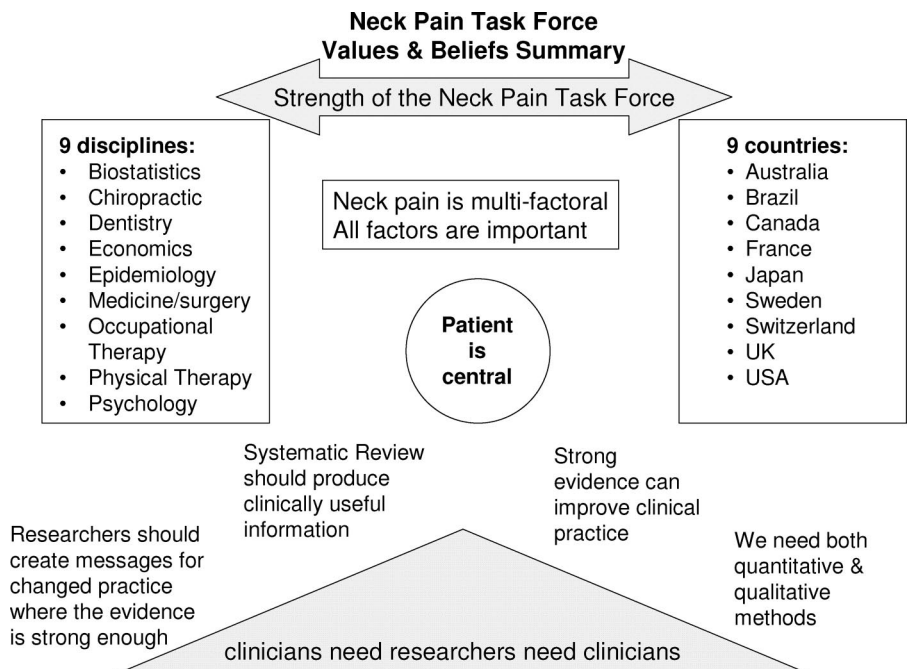


Figure 1. Values and beliefs summary. Bone and joint decade task force on neck pain and its associated disorders.

researchers to focus on the ultimate users of the research outcomes and to think beyond the publication of their report to how their findings might be used in the real world. This, in turn, shaped how the report was written. It also strengthened members' ongoing commitments to knowledge translation and implementation (see Figure 1 for a conceptual model of this process).

The process of completing this study has brought the researcher group to several conclusions and recommendations. We hope that they will be of interest to other task forces, guideline developers, and systematic reviewers.

It may be helpful, early in the process, for the research team to examine their individual values and beliefs (which are relevant to the topic and/or the project at hand). This process could flag potential problem areas and can be used to establish shared, value-based principles, which can be used as a "touchstone" as the work progresses. Conflict should be expected, and those involved should realize from the start that the rules and conventions designed to help grade and combine scientific evidence do not always produce clear results. Teams should expect that the evidence will not be clear and that this will lead to frustration. In anticipation of this, research teams should explore and create consensus mechanisms, which will help participants work through these unavoidable roadblocks. When convening a research team, include people from a range of disciplines who reflect your eventual audience and who can provide a balance of methodologic and clinical perspectives. Do not expect, however, that just because 1 person possesses both a clinical and a methodologic background, he or she holds a balanced view point. Including participants such as an observer or clinical and scientific advisors can be invaluable to the research team, providing insights, perspectives, and advice that they could not have achieved themselves. These roles must be clearly described and specific, with tasks and "deliverables" established and agreed to by all. Plan to deliver a detailed report on the relationships between researchers and funders and be-

tween researchers and other interested parties. Making these relationships transparent may help avoid unwarranted attacks on useful research.

### ■ Key Points

- The Neck Pain Task Force benefited from using a process to explore their values, beliefs, and potential conflicts of interest and used the outputs of the process to establish a common set of "guiding principles" to assist decision making.
- The Neck Pain Task Force was well served by including representation from multiple clinical disciplines, because they represent the eventual "audience" or "audiences" for the research results.
- Representation of clinicians and research methodologists was judged to be beneficial even though the tension between "utility and scientific rigor" was sometimes the source of conflict.
- Opportunities for conflict of interest were limited: fewer than 10% of Neck Pain Task Force members were found to have relationships with any single funder, professional association sponsor, or stakeholder group.
- Over the course of the research, it was observed that the values and beliefs of researchers played a greater role when the evidence was not clear and that this was a source of frustration. Prior agreement on mechanisms to handle these instances helped participants work through these unavoidable roadblocks.

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