The Empowerment of People With Neck Pain: Introduction

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

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Most people can expect to experience some degree of neck pain in their lifetime. In many cases, this will amount to nothing more than mild discomfort which does not require treatment and which has no major impact on work or other activities. However, some people will go on to develop prolonged or repetitive episodes of neck pain—sometimes associated with headaches and/or arm pain and, on occasion, more serious neurologic symptoms such as arm weakness, numbness, and/or sensory deficits—which may become persistent and debilitating.

Although the individual risk of developing persistent and disabling neck pain is low, the number of affected persons in the general population is of concern. Debilitating neck pain not associated with serious pathology or systemic disease can be very frustrating, both for sufferers and for those who are asked to treat them. Opinions vary widely on what causes neck pain and how best to manage it. Treatment is often not very effective in reducing pain and disability, and the costs to those who pay for care—patients, insurers, governments, and employers—can be high.

Opinions on what causes or exacerbates neck pain often depend more on the training and experience of the treating clinician than on any scientific studies or consensus. This can lead to conflict and confusion. For example:

• People with neck pain, who seek treatment often consult multiple clinicians in some attempt to get relief. They are often willing to consider prolonged or invasive treatment if it is recommended by the clinician they happen to be seeing at the time.

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- Clinicians who treat patients with neck pain often order multiple tests, hoping to uncover a pathologic source for the pain. Findings from these tests may be contradictory. In an effort to help their patients, clinicians may give more credence to those tests which are consistent with a treatment approach they favor, whether or not these tests can be justified by the available evidence.
- Faced with paying for expensive diagnostic tests and treatments, which seem to be ineffective in reducing symptoms and disability, governments and private payer organizations often become frustrated. This may lead to delays in authorizing reasonable and justifiable patient care or to outright refusal to pay for treatment.
- Confusion about neck pain typically leads to blaming behavior, as people seek to assign responsibility or fault. Often the blame is assigned to a motor vehicle crash or other event, and sometimes to job-related or leisure activities. If the person with neck pain does not respond to treatment, and particularly when there is no obvious cause for neck pain, assumptions may be made that he or she is not being truthful about the presence and nature of their pain, or is exaggerating symptoms for financial gain.

The problem of neck pain and associated disorders is not unique to developed nations. As noted in the preceding preface by Dr. Lars Lidgren, chairman of the International Steering Committee of the Bone and Joint Decade 2000–2010, musculoskeletal injuries related to motor vehicle crashes, industrial mishaps, and armed conflict are becoming a major cause of disability throughout the world. The cost of treatment for musculoskeletal disorders (MSDs), including neck pain, is increasing rapidly and consuming an ever-growing percentage of healthcare resources in both industrialized and developing countries.

In a bold move to gain some control, both of the human suffering and the economic impact related to MSDs, the World Health Organization proclaimed that the years 2000–2010 would be the Decade of the Bone and Joint. This global initiative, involving World Health Organization, the United Nations, and the governments of 60 countries, aims to achieve several goals:

- To raise awareness of the growing burden of MSDs on society.
- To empower patients to participate in their own care.

- To promote cost-effective prevention and treatment.
- To advance our understanding of MSDs through research, which will yield improvements in prevention and treatment.

■ A Neck Pain Task Force Is Born

As the 1990s ended, there was growing awareness that neck pain and certain related conditions (referred to here as "associated disorders") were becoming a serious burden. Patients, clinicians, payers, and researchers agreed on 2 points: that neck pain was not well understood and that, in many cases, it was difficult to manage.

This awareness, combined with the global push for improving knowledge about MSDs provided by the Bone and Joint Decade, led to the formation of The Bone and Joint Decade 2000–2010 Task Force on Neck Pain and Its Associated Disorders (Neck Pain Task Force).

Early on, the Neck Pain Task Force Secretariat confronted a vital question: who would be the primary audience for its findings and recommendations? Members of the Scientific Secretariat were all too aware that information produced by such an initiative might be taken out of context or misinterpreted. For example:

- Clinicians often look at the results of guideline recommendations to see whether their own favored treatment approach has been approved or is rated low in usefulness; they are also interested in finding new interventions which might be useful in the their practices.
- Those who pay for health care and social support have a natural tendency to pay for the most costeffective care. They are also interested in finding evidence that supports increasingly effective care and at the same time reduces costs, payments, and time lost to disability.
- Attorneys and their expert witnesses commonly use task force reports and other "learned documents" to bolster their legal cases surrounding issues of causation and responsibility.

But what about the person with neck pain whose symptoms are affecting both life and livelihood? What about someone who has recovered once, but who worries about future episodes of debilitating neck pain?

With the person with neck pain firmly in mind, members of the Neck Pain Task Force chose to focus on the second stated goal of the Bone and Joint Decade: "To empower individuals to participate in their own care." They believed this type of patient-focused approach would yield the greatest positive impact on neck pain among the broadest array of stakeholders:

Among Persons With Neck Pain

• People who understand what behaviors and environment factors are likely to increase their risk for neck pain may be better able to modify their habits and environs.

- Understanding the factors involved in recovering from neck pain and in preventing future episodes may help people adopt new behaviors or change their environment—for example, in the workplace or during leisure activities.
- Reliable information about the natural course of neck pain would help patients and their families understand what the future may hold. This should reduce anxiety and increase their ability to cope with neck pain if it occurs or reoccurs.
- People who understand the relative benefits and risks of treatment options for neck pain may make better decisions about whether or not to seek health care. Those who choose to seek care may feel more confident in selecting providers. They may be better equipped to ask the right questions when considering their treatment options.
- An informed public may be better able to influence government and other policy makers, both in terms of providing access to effective diagnostic tests and treatment, and also in efforts to prevent neck injuries and associated disability. This may help avoid unnecessary and expensive testing and treatment.

Among Clinicians

- Knowing the relative value of tests commonly used to diagnose the source of neck pain and its severity—or to determine the likelihood of successful treatment—will give clinicians much needed evidence-based guidance. This should enable them to educate their patients about neck pain, which in turn should reduce patient demands for unnecessary, expensive, and often painful diagnostic tests.
- Reliable information about the natural course of neck pain should help clinicians understand what the future may hold, and this may help them provide better counsel to patients.
- Clinicians who treat neck pain, or who are asked for advice by people with neck pain, may find it easier to discuss risk factors and prognosis with greater confidence, and to appropriately reassure and counsel patients. This includes presenting the relative risks and benefits of various treatment approaches and providing advice that goes beyond their individual specialty or area of training.

Among Other Stakeholders

- Insurance carriers and other payers who understand the science behind various approaches to treating neck pain may make more informed decisions on the reasonableness of diagnostic and treatment requests. This may help ensure that appropriate treatment is delivered quickly and efficiently.
- Greater consensus about neck pain causes, treatments, and prognosis may be useful to attorneys—and their clients—who are involved in litigation after injuries that result in neck pain. The existence of reliable information should help them to resolve issues of fault



Table 1. A Brief Timeline and History of the Neck Pain Task Force

1995	The Québec Task Force (QTF) on Whiplash-Associated Disorders (WAD) releases its scientific monograph as a supplement in the journal <i>Spine</i> . This leads to the creation of the first evidence-based patient guidelines for acute WAD care. Scientific evidence concerning neck pain in the general population and in the occupational setting is not considered. The authors of the QTF recommend that a second task force be initiated by the year 2000
1995–1999	Since the release of the QTF's whiplash recommendations, awareness of neck pain and its impact on society continues to grow. The result is a marked increase in both the quantity and quality of published studies. In particular, findings from multiple new prognostic studies and randomized controlled trials on the treatment of neck pain are published
1999	A formal proposal to establish a new task force on neck pain is developed and a search for funding begins
2000–2002	In 2000, the Neck Pain Task Force is formed. Its working title is: "The WHO Collaborating Center Task Force on Neck Pain and Its Associated Disorders." The group is specifically affiliated with the World Health Organization Collaborating Center for Neurotrauma at Karolinska Institutet in Stockholm, Sweden. Invitations are sent out to prospective members who will make up two key groups: the Scientific Secretariat and the Advisory Committee. A number of original research studies and projects are developed, and the Scientific Secretariat begins the enormous task of reviewing the scientific literature for studies on neck pain
	Several of professional associations and other interested organizations from around the world agree to become sponsors of the Neck Pain Task Force and to send observers to the meetings. Observers are not, however, permitted to actively participate in the activities of the Task Force or to influence its results
	By 2002, it is evident that the global Bone and Joint Decade represented the broadest, most powerful opportunity for countries and communities to tackle to challenges and costs of musculoskeletal disorders. It becomes clear that this is the ideal forum for the Neck Pain Task Force. With permission from the Bone and Joint Decade Steering Committee, the Task Force changes it name. Its official new title is: "The Bone and Joint Decade 2000–2010 Task Force on Neck Pain and Its Associated Disorders" (referred to hereafter as the Neck Pain Task Force)
2005	Although the all-important review of the scientific literature has been underway for several years now, it becomes evident that the literature has been expanding much more quickly than anticipated. The 5-year mandate of the Neck Pain Task Force is thus extended by a year. Additional funding to complete the work is sought and obtained
2006–2007	The final meeting of the entire Neck Pain Task Force is held in October 2006, and the findings are presented to the Advisory Committee for discussion. The Neck Pain Task Force completes its research and prepares to publish its Proceedings in 2007

and future costs of treatment and to avoid dependence on the opinions of experts who often disagree with one another.

• Researchers and public health practitioners need to focus on population level strategies to prevent and control neck pain and its associated disorders. Ultimately, this will empower the general public and those with neck pain to assume greater responsibility for the prevention and management of these conditions.

This supplement contains the best, most current evidence, and consensus regarding neck pain and its associated disorders. It is the culmination of 7 years of hard work and relentless focus, involving more than 40 international researchers, clinicians, consultants, research associates, and graduate students. A brief history of the Task Force is given in Table 1.

Their overarching goal has been to collect and share information which will yield the most valuable outcome possible: an informed and empowered public who will change attitudes and beliefs about neck pain diagnosis, treatment, management, and prevention.

■ How the Neck Pain Task Force Is Organized

The Neck Pain Task Force consists of a 5-member Administrative Committee, a 12-member Scientific Secretariat plus a research librarian, a 17-member Advisory Committee, and a support staff consisting of secretarial and scientific graduate student support. The Neck Pain Task Force relied on a number of highly qualified researchers and consultants who assisted in compiling the original research information and in conducting the final review of the scientific data.

The Administrative Committee

The 5-member Administrative Committee was responsible for:

- Obtaining funding for the Neck Pain Task Force.
- Assuming financial responsibility for the Neck Pain Task Force.
- Organizing meetings and coordinating specific Neck Pain Task Force activities.

All funds were given as unrestricted research grants to the universities and research institutions of the two Scientific Secretaries of the Task Force.

Collaborating Institutions

Seven academic institutions with faculty members participating in Neck Pain Task Force activities agreed to become affiliated as collaborating centers. As such, these institutions (Table 2) gave permission for their names and logos to appear on the Neck Pain Task Force letterhead.

Table 2. Collaborating Institutions

The Karolinska Institutet and The WHO Collaborating Center for Neurotrauma at Karolinska Institutet, Stockholm, Sweden The University of Alberta, Edmonton, Alberta, Canada The University Health Network, Toronto, Ontario, Canada University of Toronto, Toronto, Ontario, Canada Center for Research Expertise in Improved Disability Outcomes, Toronto, Ontario, Canada The UCLA School of Public Health, Los Angeles, California, USA New York University, New York, New York, USA The Institute for Work and Health, Toronto, Ontario, Canada The University of Bordeaux, Bordeaux, France



The Scientific Secretariat of the Neck Pain Task Force

This key group was responsible for the following tasks:

- Establishing the scope for the literature review and the criteria for the best evidence synthesis of the literature.
- Screening all the scientific abstracts.
- Carrying out detailed reviews of the articles that were considered.
- Developing the evidence tables which formed the basis for the Neck Pain Task Force conclusions and recommendations.
- Conducting original research; when necessary, in collaboration with other scientists.
- Collating and integrating all data collected over the 6 years of active research.
- Developing a new and relevant model for neck pain.
- Developing a set of "key messages" on neck pain based on Neck Pain Task Force findings.
- Writing a series of articles and recommendations to be developed into proceedings published in this supplement of *Spine*.

To accomplish their complex and wide-ranging tasks, members of the Scientific Secretariat attended three, 4-day meetings each year for most of the 6 years. Throughout the 6-year period, members of the Scientific Secretariat took part in telephone meetings (lasting 2 to 3 hours each) to discuss the review of scientific studies. This does not include the time it took for members to review 31,878 abstracts and the 1203 relevant articles drawn from the scientific literature and to conduct original research studies.

These Proceedings are the result of the expertise and dedication of the Scientific Secretariat that was unflagging over half a dozen years.

The Advisory Committee of the Neck Pain Task Force

The contributions of the 17-member Advisory Committee were crucial to the success of the Neck Pain Task Force. Members were invited to participate, based on their areas of expertise. It was also important to ensure that there was an international and interdisciplinary representation (Tables 3, 4).

• Advisory Committee members were asked to attend 4 meetings where details of the literature re-

Table 3. National Representation of the Neck Pain Task Force Members

The United States (California, Texas, Arizona, New York, Michigan, Virginia, New Hampshire, Hawaii)
Canada (Ontario, Alberta, Saskatchewan, British Columbia)
Sweden
Switzerland
France
England
Australia
Japan

Brazil

Table 4. Professional Backgrounds of Neck Pain Task Force Members

Clinical: Neurology, Orthopedic Surgery, Chiropractic, Physical Therapy, Psychology, Rheumatology, Internal Medicine, Pain Management, Physical Medicine and Rehabilitation, Dentistry Scientific: Epidemiology, Biostatistics, Health Economics,

Neurophysiology, Pathology, Anatomy, Psychology, Sociology Patient Advocacy

Business and Public Administration

view and the original research were presented for their consideration.

- Their input resulted in extensive revisions to the original research protocols and also to the literature review process.
- When a dispute or concern arose over a particular issue under consideration, the Scientific Secretariat could ask members of the Advisory Committee to review pertinent material and give their advice.
- In addition to these responsibilities, certain members of the Advisory Committee were active as coinvestigators in many of the original research projects.

Neck Pain Task Force Observers

Each Professional Association Sponsor (Table 5) and each Financial Sponsor (Table 6) of the Neck Pain Task Force was invited to send an observer to attend the 4 meetings of the full Neck Pain Task Force (full Neck Pain Task Force meetings included members of the Scientific Secretariat, the Administrative Committee, and the Advisory Committee).

As important stakeholders, the observers were permitted to provide scientific articles which they felt were important for the Neck Pain Task Force to review. The goal was to help ensure that no important scientific data were missed.

The observers were not permitted to participate in any of the Neck Pain Task Force deliberations or to provide input to the Task Force Proceedings.

■ The Objectives and Scope of the Neck Pain Task Force

The Neck Pain Task Force has 5 primary objectives:

Table 5. Professional Association Sponsors (Nonfinancial) of the Neck Pain Task Force

The Bone and Joint Decade 2000–2010
The Canadian Arthritis Society
The North American Spine Society
Japanese Society for Spine Surgery and Related Research
The Spine Society of Europe
The American Physical Therapy Association
The World Federation of Chiropractic
The American Back Society
The Canadian Institute for the Relief of Rain and Disability

The Canadian Institute for the Relief of Pain and Disability Chiropractors' Association of Saskatchewan

The International Society of Physical and Rehabilitation Medicine The American College of Occupational and Environmental Medicine American Academy of Osteopathy

Table 6. Financial Sponsors of the Neck Pain Task Force

Insurance companies

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

State Farm Insurance Company (USA)

Insurance Bureau of Canada

Länsförsäkringar (Sweden)

Government and public-private partnerships

Ontario Ministry of Health—Occupational Health Study and 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, Arizona (USA)

Professional societies

North American Spine Society

Japan Spine Research Society (Japan)

Chiropractors' Association of Saskatchewan (Canada)

American Physical Therapy Association (USA)

- 1. To complete a systematic search and critical review of the scientific literature on neck pain and its associated disorders, including the epidemiology, diagnosis, prognosis, economic costs, and treatment of neck pain and its associated disorders.
- 2. To identify the risks associated with the treatment of neck pain and its associated disorders.
- 3. To complete original research using decision analysis to examine patient preferences for various treatment options.
- 4. To collate the above evidence, using best evidence synthesis methodology, into recommendations for the control and management of neck pain and its associated disorders.

The scope of the Neck Pain Task Force was limited to neck pain and its associated disorders (Table 7). Studies on neck pain that resulted from destructive and progressive pathologies affecting the neck such as fractures and dislocations, myelopathy, infections, rheumatoid arthritis, and other inflammatory systematic diseases and tumors were excluded for several reasons. These conditions occur much less frequently within the population than more common types of neck pain and their management is often less controversial. Also, given the time and expertise of the Neck Pain Task Force, it would be impossible to adequately address these more severe neck pathologies. However, diagnostic and assessment studies related to ruling out fractures and dislocations in neck

Table 7. Symptoms Included Within the Scope of the Neck Pain Task Force

Neck pain

Arm pain originating from the neck

Thoracic pain associated with neck pain and originating from the neck Headaches associated with neck pain and originating from the neck Generalized symptoms originating from the neck

pain were included in the scope of the Neck Pain Task

The Neck Pain Task Force's conclusions were based on the results of the best evidence synthesis and on the original research carried out over the group's 6-year mandate. Although clinical experience is of vital importance in interpreting much of the evidence, independent clinical opinions and experience without primary supporting scientific evidence did not form the basis for conclusions. Instead, the Neck Pain Task Force relied on a nominal group process for all decisions, including interpretation of the synthesized data. Fortunately there was unanimous agreement within the Scientific Secretariat regarding most of the data, as well as the Task Force's final recommendations.

■ Statement of Potential Bias and Conflicts of Interest

The members of the Scientific Secretariat recognize that there is a potential for bias in any research. When it comes to interpreting research findings, the possibility of bias may be even greater. Such concerns were discussed and addressed right from the start:

- Because the primary goal was to conduct original research about neck pain and to review the literature for scientific validity, the Neck Pain Task Force decided it was essential that all members of the Scientific Secretariat have a strong methodologic background and proven scientific track records.
- It was also vital that scientists trained in the clinical care of patients with neck pain were represented on the Neck Pain Task Force. This ensured that adequate content expertise would be available during deliberations.
- When members of the Advisory Committee were chosen, special consideration was given to those with senior research experience and reputations. It was also important to include members from clinical disciplines that were not represented within the Scientific Secretariat.
- A patient advocate (Ms. Saundra Johnson) was appointed to sit on the Advisory Committee. This was done to ensure that the patient's point of view would always be considered and would never be overlooked by the Neck Pain Task Force during its many discussions and deliberations.

In order to determine and document potential biases among Task Force members, an independent observer (Ms. Rhoda Reardon) was consulted. She was asked to help the Scientific Secretariat and the Advisory Committee consider what impact their individual training, experience, and opinions might have on their opinions and deliberations.

■ Publication and Dissemination of Neck Pain Task Force Findings and Conclusions

The main work of the Neck Pain Task Force—specifically the original research projects, and the litera-



ture reviews—were completed in 2006. The results and a set of preliminary conclusions were presented at a full meeting of the Neck Pain Task Force held in October 2006 in Thousand Oaks, CA.

The input from this meeting allowed for some "fine tuning" of findings and conclusions. This input was taken up by members of the Scientific Secretariat and was used to prepare a finished product that was submitted for publication in June 2007.

Dissemination of the Neck Pain Task Force findings and conclusions will proceed as follows:

- The results of the Neck Pain Task Force will be presented in a series of articles that is being published as a supplement in the international journal *Spine*. This publication is considered to have the greatest impact and readership in the area of spinal disorders (which includes neck pain).
- Members of the Scientific Secretariat have been invited to present their findings at multiple professional and scientific meetings. These meetings will allow for input and questioning on the part of interested parties and also for clarification of the findings where necessary.

There is considerable interest in dissemination of the Task Force findings on neck pain, including formalized knowledge transfer and exchange proposals. The members of the Task Force, are dedicated to widespread and accurate dissemination of the report and in productive and stimulating exchanges of knowledge and ideas. As a group and as individuals, members of the Task Force will assist these endeavors as much as possible. However, given that Task Force members cannot participate in every such undertaking, and recognizing that there will be various applications of this work, the Task Force recommends caution when considering such interpretations and will only "endorse" those efforts in which the Task Force members are directly involved.

■ Thoughts on the Impact and Utilization of Neck Pain Task Force Recommendations

It is difficult to predict the impact of the work done by the Bone and Joint Decade 2000–2010 Task Force on Neck Pain and its Associated Disorders. Some of the sponsoring professional associations may endorse the findings and recommendations or incorporate specific recommendations into their own guidelines for clinical practice.

Other professional groups or advocacy groups may feel that the findings of the Neck Pain Task Force are not compatible with their own perceptions regarding neck pain. One might look back at what happened in 1995 immediately after the publication of similar task force findings—specifically those from the Quebec Task Force on Whiplash Associated Disorders and from the Agency for Health Care Policy and Research on Acute Low Back Pain. These publications prompted considerable discussion and also some controversy over recommendations and conclusions. It is expected that government and insurance companies will take into account the recommen-

dations of the Neck Pain Task Force when considering public policy decisions. However, these recommendations should not be considered prescriptive. Nor should they be interpreted in isolation by those determining such issues as reimbursement or public health policy.

■ General Considerations

The Neck Pain Task Force did not consider studies in the field of biomechanics or injury prevention unless they were population-based studies of outcome from preventative programs. The literature review also excluded studies of many severe pathologies that may be associated with neck pain such as spinal cord injury, tumors, infections, inflammatory and systemic diseases, and fractures.

No absolute approach exists to treat every person with neck pain. The individual needs of such patients, how they respond to treatment, and the impact of specific environmental factors may not be consistently or adequately reflected in clinical and epidemiologic research.

In its report, published nearly 12 years ago, the Quebec Task Force on Whiplash-Associated Disorders recommended that a subsequent task force on neck pain be established by the year 2000 to review new evidence and produce up-to-date patient care guidelines.

This recommendation planted the seed for the current Neck Pain Task Force. Now a new seed must be planted. Inevitably, the Neck Pain Task Force has identified gaps in neck pain research which must be filled. As new studies are designed, carried out and published, it will be important to re-examine the evidence regarding neck pain risk factors and management within the next 5 to 10 years

One consequence of a task force such as this is to focus interest and train the researchers who will participate in future studies on neck pain and its associated disorders. During its course, the Scientific Secretariat served as a mentorship resource for graduate students and young scientists with specific interest in neck pain. Some of these young researchers obtained advanced degrees during the course of the Task Force. They also gained experience in reviewing and interpreting the scientific literature and/or participated in the original research projects.

The Neck Pain Task Forces hopes and expects that clinicians and scientists will be intrigued and motivated by the findings in this report. But the key targets for this new information on neck pain are the many millions of people currently suffering from neck pain, not to mention the majority of the population with neck pain in their future.

This is consistent with a key goal of the Bone and Joint Decade 2000–2010: to empower patients to participate in their own care. If this is achieved, even to a small extent, the time and effort devoted to the research and preparation of this supplement over the past 6 years will have been well spent.