SPORTS NEUROLOGY SECTION STRATEGIC PLAN

I. INTRODUCTION
A. Definition of the subspecialty. Sports neurology represents the neurological discipline that it is concerned with sports medicine issues. This concern is fourfold:
   1. The study and management of sports related neurological injuries that may develop as a result of participation in athletic activities;
   2. The safety of participation in sports and athletics by patients with neurological conditions;
   3. The understanding of neuropsychiatric sequelae of sports injury and its impact on both performance and daily living;
   4. The understanding of neurological benefit that occurs as a result of exercise, including the neurophysiology of peak performance in sport.

Traditionally, sports medicine physicians have included primary care physicians, orthopedic surgeons, and many sub-specialties of traditional and alternative medicine, including podiatry and chiropractic. As the central and peripheral nervous system may be substantially exposed to either risk or benefit through exercise and sport, it is the neurologist with experience in sport who is best trained and best qualified to treat athletes with neurological conditions, and to be at the forefront of addressing sports-related neurological issues.

B. Conditions and procedures.
Conditions manifest in the brain, spinal cord, peripheral nerves and muscles as a result of participation in sport. Examples of such conditions include: concussion, acceleration and deceleration injuries to the brain, and neurobehavioral sequelae of these injuries; post-traumatic migraine; intracerebral hemorrhage and direct penetrating trauma; cerebral vascular accident secondary to carotid or vertebral dissection as a result of neck injuries, and secondary to emboli from rapid decompression in diving; acute mountain sickness and/or cerebral edema, spinal fracture and secondary quadriparesis or paraparesis; peripheral nerve injury either through direct trauma or repetitive microtrauma; muscle imbalance with pain and dysfunction secondary to muscular maladaptation and repetitive microtrauma; metabolic derangement including heat illness, with secondary heatstroke, syncope, rhabdomyolysis or confusional state. Conversely, participation in sports may have an impact on previously established neurological conditions, including epilepsy, cerebral vascular disease, neurodegenerative disorders, demyelinating disease, and migraine and other headache conditions.

Procedures: The most important procedure for the sports neurologist is the on-field and off-field clinical examination. Depending on the nature of the condition, multiple procedures may be relevant including, but not limited to: brain MRI including diffusion tensor imaging studies; spine MRI; EMG, nerve conduction velocity and somatosensory evoked potentials; electroencephalogram; sleep studies; diagnostic ultrasound; therapeutic injection, including trigger point injections, epidural and transforaminal injections, facet blocks, and Botulinum toxin injections; detailed mental status
examinations including neuropsychological evaluation; blood work including muscle enzymes.

C. Overview of interaction with other specialties. The success and development of sports neurology is tied to multiple other neurological specialties. This includes behavioral neurology, with an emphasis on neurobehavioral sequelae of sports injury, diagnosis and management of chronic traumatic encephalopathy, and cognitive rehabilitation; child neurology, with an emphasis on safety parameters for children who participate in sports; clinical neurophysiology, for interpretation of sports related peripheral nerve and spinal injuries; epilepsy, for the development of guidelines for patients with epilepsy and seizure disorders who wish to participate in sports; headache and facial pain, for the development of guidelines for patients who suffer with migraine and other headache conditions who wish to participate in sports; multiple sclerosis, for development of guidelines for patients who suffer with multiple sclerosis who wish to participate in sports; neural repair and rehabilitation, especially after injuries to the brain, spine and peripheral nerve; neuro-epidemiology, especially as it pertains to incidence and prevalence of neurological injuries in sports; neural imaging, for the development of appropriate imaging guidelines, specifically as it pertains to concussion; spine, especially as it pertains to spine injuries and the high prevalence of back pain and back injuries in sports; neuroendocrinology and women’s issues in neurology, especially with regard to neuro-endocrine issues that develop in female athletes, specifically the female athlete triad.

In addition to other specialties within neurology, the Sports Neurology Section must interact with other medical and scientific disciplines of sports medicine, with appropriate non-neurological specialties such as orthopedic surgery and physiatry, with neuropsychologists, and with appropriate government agencies such as the Centers for Disease Control, in order to help lead the way for providing oversight and guidance in the field of sports neurology. One mechanism to ensure this is for the Sports Neurology Section to actively take the lead role in organizing task forces for creating multi-disciplinary practice guidelines, similar to what has been done for brain trauma.

D. Purpose of the document. Although neurological injuries are commonplace in sport, neurologists have not been at the forefront of providing oversight and guidance in sports related neurological injuries. Furthermore, neurologists have not been in the forefront of providing oversight and guidance for safe participation of neurologically impaired patients in sports, and in developing research and education for the neurological benefits of exercise. Concussion is the most visible aspect of sports neurology, and sadly, neurologists have not been leading the discussions in managing this disorder, nor in developing universally accepted oversight and guidelines for this condition. Whereas many coaches and athletes tended to undertreat sports related concussion, it has become increasingly clear that such a culture presents a danger to the individual in particular, and to sport in general. Thus, it is critical for the Sports Neurology Section to take the lead in providing management guidelines for concussion. Furthermore, all aspects of neurological injury and safe participation in sport for the neurologically impaired must be addressed by neurologists, who have particular expertise in doing so.
E. **Mission statement.** The mission of Sports Neurology is (1) to promote and develop an increased awareness of neurological injuries in sport; (2) to further the understanding of the diagnosis, pathophysiology, and management of the neurobehavioral sequelae of sports related neurological injury; (3) to develop guidelines regarding how to manage neurological injuries in sport; (4) to develop guidelines for safe participation of neurologically impaired patients in sport; and (5) to promote and develop a better understanding of neurological benefit from exercise.

II. **BACKGROUND AND HISTORY OF SPORTS NEUROLOGY**

A. **Milestones.** Although sports neurology dates to 1768, with the publication by Percival Pott of sports related head trauma, it has only been during the last three decades that there has been a consolidated movement to develop the discipline of sports neurology. The 1989 publication of *Sports Neurology* by Jordan, Tsairis and Warren led to a much more public and academic recognition of this discipline. However, it is only more recently that neurologists have become more active participants in diagnosing and managing neurological injuries in sport.

B. **Growth of the subspecialty to current status.** The first and second edition of *Sports Neurology*, in 1989 and 1998, respectively, represent the major hallmarks of the development of the subspecialty. There have been many guidelines that have been published to assist physicians and other clinicians in determining the readiness of athletes to return to play after concussion. These include the Cantu Guidelines from 1986, which have been adopted by the American College of Sports Medicine; The Colorado Medical Guidelines in 1991, which have been adopted by the National Collegiate Athletic Associates; the American Academy of Neurology Guidelines, published in 1997; and the Zurich Guidelines from 2007. There are numerous other concussion guidelines available, but guidelines developed by neurologists have not been universally accepted. There is now an increasing awareness of the need for neurologists to become better educated in sports medicine, and to take the lead in promoting and developing management guidelines for concussion and other sports related neurological injuries.


D. **Current board certification.** At present, Sports Neurology is not recognized from the United Council for Neurologic Subspecialties (UCNS). Sports medicine fellowships are recognized and available for both orthopedic surgeons and primary care physicians/emergency physicians. A minimum of five sports neurology fellowships are required in order to apply for UCNS Accreditation. The University of Michigan began training a sports neurology fellow in July, 2012. UCLA has a current fellow in pediatric
brain injury that is focusing on sports. Other institutions have also expressed interest and have plans to establish a sports neurology fellowship program.

E. Other professional and disease-related organizations relevant to the subspecialty. There are many organizations devoted to sports medicine issues, including the American College of Sports Medicine; American Medical Society for Sports Medicine; National Academy of Sports Medicine; American Osteopathic Academy of Sports Medicine; Sports Medicine Committee of the International Olympic Committee; and others. All of these organizations address sports neurology issues.

III. CURRENT STATE OF THE SUBSPECIALTY

A. Patient care/practice. In the acute setting, most sports injuries are managed by non-neurologists. Team physicians and/or individual physicians covering sporting events are usually sports medicine physicians who have primary training in orthopedic surgery, internal medicine, family medicine, neurosurgery, or emergency medicine. Indeed, even the acute management of concussion is handled by general sports medicine physicians and/or certified athletic trainers, and it is only more recently that sports neurologists have become vital members of the sports medicine team. In the hospital setting, acute management of neurological injuries is covered by both emergency medicine physicians and neurological consultants. Such consultants invariably are general neurologists, who may or may not have an expertise in sports medicine in general, or in understanding the sport in which the individual was injured in particular. In the outpatient setting, neurologists are often called to render decisions about sports related injuries. The neurologist in these cases is usually a general neurologists as well, who may or may not have any specific training or awareness of sports medicine or the neurobehavioral sequelae of sports related injuries. Thus, at present the primary care provider to patients who suffer neurological injuries in sport is from the general neurologist, or other physicians with sub-specialty interest in sports medicine.

B. Research. At present, the majority of research in sports neurology is performed by individuals who have training in sports medicine. There is no pharmaceutically driven research interests in sports neurology per se, although interest in biomarkers for diagnosing brain injury have opened opportunities in diagnostic testing research. There are independent foundations that promote research and/or educational forums in sports neurology, such as the Seeing Stars Foundation, whose mission is to promote research and education on sports related concussion and sports related neurological injuries. Other independent foundations such as the Brain Trauma Foundation, the Brain Injury Association, and the International Brain Injury Association promote outreach and education in brain injury, including injury from sports participation. There are opportunities to work with the National Football League, which is funding concussion research, and with the National Collegiate Athletic Association, which is developing a National Center of Excellence that will address sport concussion and other neurological injuries in sport. The American Brain Foundation can help support a Sports Neurology Fund for Category II Awards and endowed fellowships. The University of Michigan began training a sports neurology fellow in July, 2012. UCLA has a current fellow in pediatric brain injury that is focusing on sports. Kerlan-Jobe Orthopaedic Clinic offers
fellowship training in Sports Neurology. Other institutions have also expressed interest and have plans to establish a sports neurology fellowship program. Academic research by neurologists is sparse. The NINDS has created the Neurologic Emergencies Treatment Trials Network with 17 "hubs" and 150 "spokes" to facilitate clinical trials in neurological emergencies; this network provides a potential base to facilitate research in sports neurology. The NINDS has also created K12 funding opportunities for research in neurological emergencies, which opens another avenue for federal funding in sports neurology.

C. **Education.** Although most neurologists are competent to diagnose concussion, the majority does not have the skill set to manage an athlete who has developed neurobehavioral sequelae after traumatic brain injury. Indeed, there is little formal training in sports neurology per se. The majority of conditions that can develop as a result of sports injury, including concussion, spinal cord injury, peripheral nerve injury, and metabolic derangement, are understood in their various parts, but not in relationship to the physical and physiological demands of sport and exercise. With the development of the Sports Neurology Section, there is a new emphasis on the importance of understanding and managing sports related neurological conditions, and the safety of exercise and sport in those with a neurological condition. A major goal of the Sports Neurology Section is to broaden its educational impact. This will include formal training in medical school and in neurology residencies, and a broad outreach to the neurological community in particular, and the medical community in general. In addition, we must target the sports community and the general population regarding how to prevent neurological injury in sports. A future goal is to propose and to develop a sports neurology fellowship. The University of Michigan began training a sports neurology fellow in July, 2012. UCLA has a current fellow in pediatric brain injury that is focusing on sports. Other institutions have also expressed interest and have plans to establish a sports neurology fellowship program.

D. **Medical economics issues.** Sound epidemiology must go hand-in-hand with medical economics. It should not be viewed as acceptable that sports neurology injuries are managed by internists and orthopedic surgeons. The subspecialty/cognitive nature of such management must be emphasized, and this should translate into fair and reasonable reimbursement. Once the importance and impact of sports neurology becomes more widely recognized, this can become an attractive subspecialty for neurologists. This includes management and oversight of children and adolescents who participate in sports, extending to the elite professional level. Sports neurologists can be viewed as both primary care providers, for example in managing athletes who have suffered permanent neurological conditions as a result of sports injury, or in neurological patients who wish to compete long-term. In addition, sports neurologists can serve as valuable consultants in managing acute and subacute sports related neurological injuries. As more of these issues surface, a broader range of E & M code may need to be developed.

E. **Legislation issues.** Sports neurologists must become active in driving legislation and oversight to protect athletes. For example, in 2007, the American Academy of Neurology created a Physician Statement on sports that include intentional trauma to the
brain. Such physician statements need to be widely distributed, and the Sports Neurology Section needs to be viewed as the leader in enacting legislation and oversight that protects athletes. This does not only include sports that allow intentional trauma to the brain, but must also include a proper management of concussion in general. The Sports Neurology Section is taking the lead in developing new concussion guidelines with a multidisciplinary panel that includes experts from neurology, neurosurgery, sports medicine, psychiatry, emergency medicine, and neuropsychology. Publication is expected in the beginning of 2013. As this section becomes more visible, we need to request direct funding from the NIH and CDC; sports neurologists must have a leading voice in developing research and providing management guidelines for sports related neurological injuries. We also need to partner with other sports organizations such as The American College of Sports Medicine to help understand safety and physiological issues of neurological patients who wish to exercise or compete in sports.

IV. SWOT ANALYSIS

A. Patient care.

1. **Strengths.** Neurologists are the most qualified physicians to manage patients who have suffered with neurological complications of sport, and to manage neurologically impaired patients who wish to participate in sport and exercise. Patient care opportunities extend from children and adolescents, to the geriatric patient who continues to exercise or compete, to the most elite athletes.

2. **Weakness.** Sports neurology is not, generally speaking, a widely recognized subspecialty. Furthermore, neurologists have not taken the lead in developing management guidelines for sports injuries. Most neurologists are not well educated in exercise physiology and sports medicine. Thus, there is a steep learning curve for sports neurology to be a commonly recognized subspecialty of neurology.

3. **Opportunities for growth.** Once neurologists take the lead in developing management guidelines for neurological complications of sports injuries, the opportunities for growth are considerable. This not only includes legislation and political opportunities, but also opportunities for meaningful satisfaction in day-to-day patient care.

4. **Threats to achieving goals.** The major threats to achieving the goal of advancing patient care in sports neurology are inaction on the part of neurologists, coupled with poor reimbursement for developing this cognitive discipline in day-to-day clinical care.

B. Research.

1. **Current strengths.** Although there is some research being done in sports neurology, much of this is driven by non-neurological organizations. As neurologists take the lead in promoting a subspecialty as sports neurology, research opportunities should abound.

2. **Weaknesses.** There is little funding from the NIH and CDC for sports neurology research. There needs to be a considerable legislative, political and organizational approach to fund important sports neurology research, especially with regard to
concussion and its neurobehavioral sequelae, and epidemiology of sports neurology injuries. Compounding the weakness is a lack of sound data and evidenced-based material to serve as the springboard for research.

3. **Opportunities for growth.** As sports neurology becomes increasingly recognized, and as the importance of proper management of neurological injuries in sport becomes more widespread, there should be considerably increased research opportunities in sports neurology.

4. **Threats to achieving goals.** The biggest threat to achieving research opportunities goals is for neurologists to continue to allow non-neurologists to take the lead in developing and promoting sports neurology diagnosis and management issues.

5. **Current status of AAN.** The AAN is supportive of developing policies and guidelines. There is no direct AAN input to research in sports neurology per se.

C. **Education.**

1. **Current Strengths.** There are currently many educational forums for sports neurology issues, especially with regard to concussion. Thus, the Sports Neurology Section can join and then begin to lead these many forums.

2. **Weaknesses.** Neurologists have not taken the lead in educating other physicians and the public with regard to sports neurology issues, including concussion and its neurobehavioral sequelae. Furthermore, neurologists in general are poorly educated regarding exercise physiology and its interaction with the nervous system.

3. **Opportunities for growth.** There is enormous opportunity for growth in education at the academic, professional, and community levels. This is especially so if the neurological community in general, and the Sports Neurology Section in particular, align themselves with the numerous other sports medicine educational forums.

4. **Threats to achieving goals.** The two biggest threats to achieving educational goals are apathy and attempting to reinvent the wheel. Sports Neurology should humbly and confidently begin to align with other sports medicine voices and organizations.

5. **Current status of AAN.** The AAN has been supportive of educational issues for sports neurology, especially as it pertains to concussion. We need to expand this support to all areas of sports neurology.

D. **Economics.**

1. **Current strengths.** There is an interest and some general funding available for sports neurology issues, especially with sports medicine organizations. Perhaps more importantly, federal agencies such as the Department of Defense, and leagues such as the National Football League, have prioritized research in brain injury, thereby creating funding opportunities. The Centers for Disease Control Injury Division has prioritized head injury in sports through their "Heads Up" campaign; funding opportunities exists through collaboration with them.

2. **Weaknesses.** Neurologists have not taken the lead in obtaining funds for performing research in sports neurology issues, and have left this to more general sports medicine communities.

3. **Opportunities for growth.** Although we remain in difficult fiscal times, there is a thirst for more knowledge about concussion and neurobehavioral sequelae in particular, and for safety issues in sport in general. We can tap into this thirst for funding.
4. **Threats to achieving goals.** The current economic crisis is a major threat for obtaining more research money, as is lack of initiative and support by the neurological community for becoming a leading voice in sports neurology issues.

5. **Current status of AAN.** The AAN has not taken a stance with regard to economic issues for sports neurology.

F. **Legislative**

1. **Current strengths.** Sports Neurology, in conjunction with the AAN and others, is redefining concussion parameters for sport. This is a great opportunity to capture the attention for more legislative work in sports neurology/safety issues in sport.

2. **Weaknesses.** Neurologists have been passive in working on legislative issues as they pertain to sports neurology/safety issues in sport. Legislative bodies are accustomed to hearing other sports medicine voices.

3. **Opportunities for growth.** There is growing concern and public/legislative issues in how professional and amateur football have undertreated concussion, and there is a demand for more transparent and neurologic-specific guidelines.

4. **Threats to achieving goals.** Only apathy and failure to lead threaten this wide-open opportunity.

5. **Current status of AAN.** The AAN is supportive of developing neurological guidelines in sport, especially with regard to concussion.

V. **Specific Vision, Goals and Objectives for the Sports Neurology Section**

A. **Short Term.**

1. **Specific defined goals and targets**

   a. **Patient Care**

      i. Become the leading voice in emphasizing that neurologists are the best equipped and best trained physicians to manage neurological conditions in sport.

      ii. Increase patient care opportunities of sports neurology to the neurological community.

   b. **Management Guidelines**

      i. Provide definitive management guidelines for the management of neurobehavioral sequelae after traumatic brain injury in sport.

      ii. Develop management guidelines for spinal cord and peripheral nerve injury in sport, including acute spinal cord and brachial plexus injury.

      iii. Develop management guidelines for safe participation in sport for patients with neurological conditions, including epilepsy, multiple sclerosis, and spinal cord damage.

      iv. Partner with other societies to develop guidelines and become part of the multi-disciplinary community involved in caring for sports injuries; by doing so, establish collaborative initiatives that ensure dissemination of information to AAN members that is being developed by other groups, e.g., the CDC.

      v. Develop a regional referral network of sports neurologists that will be available to professional, college, amateur and international sports organizations.
vi. Develop CME courses for neurologists that will provide “Certificate of Completion" in Sports Neurology.

c. Education
   ii. Develop yearly educational seminars at the AAN. Develop educational seminars in conjunction with other sports medicine organizations.
   iii. Start a community-based pilot lecture series on Sports-Related Concussion, including recognition, management and safe return to play.
   iv. Utilize television, internet, magazines, journals and newspapers to promote AAN Guidelines on sports related concussion and other sports neurology issues.

v. Work to integrate sports neurology curricula into Neurology Residency programs. Communicate directly with the Neurology Residency Review Committee about the importance of this topic with emphasis on concussion management. Attempt to get concussion/MTBI listed as part of the Milestone project for Neurology. Work with committee members to develop educational materials and tools for programs to achieve these goals.

d. Research Funding
   i. Develop independent research grant money that may fund Sports Neurology Research
   ii. Work with the American Brain Foundation to develop future funding for sports neurology programs and research.

e. Legislative Issues
   i. Finalize Sports Concussion Position Statement in conjunction with the Center for Health Policy. The Ethics, Law and Humanities Committee is in the process of refining a draft of its sports- concussion position paper. The committee hopes to have the board approval of the paper in the coming months and then publish and then publish it in Neurology by next fall.
   ii. Develop a Helmet Position Statement. The Academy recently approved a policy regarding the development and revision process for its official statements and papers. Academy staff will adapt the current version of the helmet position statement that the Sports Neurology Section approved to fit the new template for position statements outlined in the policy. Academy staff will then route the position statement to the relevant committees and subcommittees for input and seek AAN board approval.
   iii. Continue to work with congress on HR 1347.
   iv. Lobby pertinent professional sports organizations and player associations to ensure that neurologists are a key component of committees and task forces that address concussion, and help ensure that neurologists take the lead in establishing such committees or task forces.
2. **Operational strategies to achieve goals**
   a. **Patient Care**
      i. Develop position statements and enhance educational forums at AAN and other Sports Medicine meetings.
      ii. Increase awareness of sports neurology opportunities through educational forums at the AAN.
   b. **Management Guidelines**
      i. Approve concussion guidelines. Updated document is expected in early 2013.
      ii. Obtain suggestions for spinal cord and peripheral nerve injury guidelines for the sports neurology community and section.
      iii. Obtain suggestions for safe participation in sport in conjunction with relevant AAN Sections.
   c. **Education**
      i. Submit educational seminars for AAN Annual Meetings; submit fun activities for Annual Meetings with an educational tennis, e.g., Run/Walk for Brain Research and morning Cardio Tennis in conjunction with the United States Tennis Association.
      ii. Target the American College of Sports Medicine, the American Medical Society for Sports Medicine, and similar organizations for joint presentation at annual and regional meetings.
      iii. Develop a working relationship with the National Collegiate Athletic Association (and professional sports organizations?)
      iv. Survey the section members who may be interested in performing lectures in their community and develop select Power Point presentations.
      v. Request to the Neurology Residency Review Committee to add “Sports Neurology” to the diagnostic Categories for Neurology Residency patient management involvement. Work has begun on this project, as noted above.
   d. **Research Funding**
      i. Work with the American Brain Foundation to develop funding ideas for Sports Neurology.
      ii. Work with the AAN to pursue non-profit corporation strategies, partnerships or sponsorships for Sports Neurology.
   e. **Legislative Issues**
      i. Concussion position statement is in final stages of draft for approval.
      ii. Helmet position statement is in final stages of draft for approval.

3. **Specific action items for each goal**
   a. **Patient Care**
      i. Concussion and helmet positions statement are in final draft stage, ready for approval.
      ii. Continue the process for developing comprehensive sports neurology programs at AAN Annual Meetings and obtain suggestions from the sports neurology community.
iii. Submission for fun-related activities at 2011 AAN annual meeting, with a dual emphasis of increasing sports neurology awareness.

b. Management Guidelines
i. Submit concussion guidelines for final approval.
ii. Submit for suggestions of guidelines for spinal cord and peripheral nerve injuries and develop appropriate ad-hoc committees.
iii. Present the first draft for safe participation in sport for various neurological conditions at the 2013 Annual Meeting in the Sports Neurology: Non-Concussion course.

c. Education
i. Promote and develop educational ideas for future AAN Annual meetings.
ii. Reach out to American College of Sports Medicine, the American Medicine Society for Sports Medicine, and other sports medicine societies/organizations for combined seminar ideas.
iii. Contact section members to recruit for the community lecture series.
iv. Develop and promote Grand Rounds presentations for the neurological and medical community.
v. Develop and promote pertinent Power Point presentations, which will be placed in a password-protected section of the Seeing Stars Foundation website.
vi. Formally propose “Sports Neurology” as a Diagnostic Category for Neurology Residency patient management involvement.

d. Research Funding
i. Discuss with AAN Executive Members foundation opportunities.

e. Legislative Issues.
   i. Submit for approval of concussion guidelines.
   ii. Submit for approval of helmet guidelines.

4. Role of AAN in achieving goals
The AAN has recognized the importance of developing a Sports Neurology Section, and will be critical in supporting all sports neurology issues. Short-term, our section needs to self-promote within the AAN in order to increase awareness of our mission and goals.

5. Benefit to AAN and sub-specialty in achieving goals
Sport is an essential component of our culture. As the Sports Neurology Section develops better patient care, management guidelines, education, research and legislative awareness, the AAN will become viewed as the primary umbrella for all sports neurology concerns, which will enhance the status of the AAN. The Sports Neurology Section will benefit by positioning itself as the leading voice in promoting and developing sports neurology concerns.

6. How will Sports Neurology assess and address success/failure for each goal/area?
The Sports Neurology Executive Committee members will assess and rate short-term visions, goals and objectives at least bi-annually.
B. Long Term

1. Specific defined goals and targets
   a. Patient Care
      i. Continue work to increase the number of Sports Neurology fellowship programs.
   b. Management Guidelines
      i. Develop and re-assess management guidelines for concussion and other sports neurology conditions.
      ii. Develop and re-assess management guidelines for safe participation in sport for patients with neurological conditions.
      iii. Develop and re-assess position statements for improving neurological safety in sport.
   c. Education
      i. Increase the number of Sports Neurology Fellowship program, with the goal of achieving board certification in Sports Neurology.
      ii. Enhance AAN annual meeting sports neurology seminars/programs/poster presentation.
      iii. Enhance sports neurology presence at other sports neurology forums.
      iv. Develop a national community based lecture series on sports concussion and sports-related neurological issues.
      v. Develop different levels of certification courses in Sports Neurology.
      vi. Partner with the Consortium of Neurology Program Directors to create relevant Sports Neurology educational material that can be used by Adult and Child Neurology residency programs.
   d. Research Funding
      Explore with the AAN, the American Brain Foundation, and other related organizations the best way to maximize the potential for research funding.
   e. Legislative Issues: Establish AAN Sports Neurology Section as the leading voice of promoting, developing and assessing legislation as it pertains to sports neurology issues.

2. Operational strategies to achieve goals
   a. Patient Care: Work with the United Council of Neurological Subspecialties to develop a sports neurology fellowship once we obtain 5 Sports Neurology Fellowship programs.
   b. Management Guidelines: Work within the Sports Neurology Section in conjunction with the AAN to develop and assess guidelines.
   c. Education: As per patient care; Encourage Sports Neurology Section members to promote and assess all educational vehicle opportunities.
   d. Assess the Seeing Stars Foundation fundraiser for summer 2010 and enhance its presence for future events; Work with the AAN Executive Committee to develop Sports Neurology-specific foundation opportunities.
   e. Develop ties with key members of the electorate.
3. **Specific action items for each goal:** The Sports Neurology Executive Committee will address each long term goal, with input from its members, and put into place a management plan for each goal noted.

4. **Role of AAN in achieving goals:** The Sports Neurology Executive Committee will reach out to pertinent AAN staff and members to facilitate the execution of noted goals.

5. **Benefit to AAN and Sports Neurology Section in achieving goals:** Achievement of the noted goals will enhance AAN as a leading voice in promoting and developing sports neurology issues, and the Sports Neurology Section will become known as the foundation of this voice.

6. **How will the Sports neurology Section assess and address success/failure for each goal/area?** The Sports Neurology Executive Committee will assess all noted goals at least bi-annually to assess the section effectiveness for achieving each goal.

**VI. Summary/Concluding Statement**

1. **Summary of mission/vision/values for Sports Neurology Section**

The *mission* of Sports Neurology is (1) to promote and develop an increased awareness of neurological injuries in sport; (2) to further the understanding of the diagnosis, pathophysiology, and management of the neurobehavioral sequelae of sports related neurological injury; (3) to develop guidelines regarding how to manage neurological injuries in sport; (4) to develop guidelines for safe participation of neurologically impaired patients in sport; and (5) to promote and develop a better understanding of neurological benefit from exercise.

The *vision* of Sports Neurology is to become the leading voice in promoting and developing sports neurology issues across the broad spectrum of patient care, management guidelines, education, research, and legislative action.

The *core values* for Sports Neurology include: leadership; excellence; teamwork; accountability; professionalism; inclusiveness; patient compassion.

2. **Global conclusion and assessment of Sports Neurology’s place within the larger scope of AAN, other specialties, neurology in general, and related fields.**

For too long, neurologists have not taken the lead in sports-related neurological issues. Concussion guidelines are not uniform, and many have been developed by non-neurologists. Orthopedic surgeons and internists commonly manage neurological problems of athletes. Sports medicine organizations have developed management and educational guidelines for sports neurology issues without the input of the AAN. Sports medicine training provides only general training for common neurological issues.
The sports community, the AAN, and many others have become aware that the voice of the neurologist must become the leading voice in promoting and developing sports neurology issues. Because neurologists are uniquely trained in assessing and managing neurological conditions, and because such assessment and management is critical to assuring good outcomes, neurologists must lead the way for all sports neurology issues, including patient care, management guidelines, education, research and legislative matters. By doing so, we will help assure improved safety in sport, improved health for neurological patients, and greater respect for the neurological community and AAN through sorely needed leadership.