During the “Presidential Address” at the Annual Meeting in Boston (before or after the microphone dropped from my belt, I cannot exactly recall), I purposely refrained from discussing NASS’s accomplishments from the previous 12 months. Alluding to them, I stated, “I think you know what we’ve achieved.” Then I proceeded on with my “therapy session,” confessing my insecurities, my yearning for more dependable results from spine care, and offering my opinion that predictive analytics will be a large part of optimizing outcomes. If only Michael Lewis were more interested in medical subjects than financial ones, we would all have read a book on how this will play out. Maybe it would be entitled, “Nostra Medicus.”

As revealed to me recently, the “President’s Message” for the NASS Annual Report is precisely where said accomplishments should be outlined. So, here it goes.

Near and dear to my heart is the Coverage Committee, an assemblage of devoted, hard-working, levelheaded, and intelligent folks. They decided to spend their free time to help guide insurance companies by developing reasonable, evidence-based coverage criteria for spine care procedures and diagnostics. While I had the honor of birthing this group, leadership has been superbly assumed by others who have shepherded the committee to write well beyond the “original thirteen” coverage recommendations. During the past year, the feedback from members, payors, industry, and manufacturers has been extremely positive. These groups would seem to have competing interests, but they have united behind NASS’ efforts. An unbiased, well-supported coverage recommendation translates to sound, reasonable insurance coverage criteria for both new and well-established interventions, which, recognized by our industry partners, can be respected and lauded.

NASS recognizes that if we are to provide the very best care for patients, an ongoing dialogue with industry representatives and those members involved in the development of new technologies is critical. To foster this dialogue and ensure that all voices are heard, NASS redoubled its efforts to provide meaningful opportunities for its members and industry to share information, interact and collaborate in 2016. We added two At-Large positions on the NASS board, which do not require divestiture of all industry ties. We also introduced an ongoing feature section in SpineLine to showcase new products and technologies.

As always, NASS hosts an annual Spine Executive Forum to engage with industry leaders about the state of spine care and research. NASS Board members and executives often meet with device manufacturers and other industry representatives to discuss ways to collaborate and provide education to our members that will benefit patients. Industry is also encouraged to provide feedback on NASS’ Coverage Recommendations. NASS offers many effective ways for industry to eduate our members about new technology and products, including Innovative Technology Presentations during the Annual Meeting. The success of the 2016 meeting in Boston marked a turning point from decreasing or stagnant in-person attendance to one of restored registration figures and a record number of company exhibits. Again, kudos to the NASS staffers who begin their work for the next meeting the day after the last one ends.

Although you might not have been cognizant of it, NASS officially changed its mission statement last year to include the word “global.” Furthermore, the NASS logo no longer has subtext explaining the presently widely recognized acronym. Instead, it reads, “Advancing Global Spine Care,” in accordance with the organization’s new mission. With hugely successful efforts to bring the highest quality educational programs well beyond North America, overseas editions of The Spine Journal, and a growing presence and level of participation of international members, it was high time that NASS’s outward face be reflective. This past year, NASS achieved many firsts (like the first cadaver and first spinal injection courses in some regions) in partnership with local hospitals and spine care leaders in Asia and the Middle East. These relationships will only grow stronger, firming up NASS’s position and responsibility as the premiere spine society in the world.

To reiterate feelings expressed throughout my presidential year and verbalized in my address, none of these accomplishments can I claim to be mine. They are the culmination of visions and efforts of all with whom I had the pleasure to serve, including Past Presidents, Board Members, and unparalleled NASS staff. I am excited to see what the future of this great organization will bring.

Christopher M. Bono, MD
NASS President 2015-16
Christopher M. Bono, MD
President

F. Todd Wetzel, MD
First Vice President

Daniel Resnick, MD
Secretary

Jeffrey C. Wang, MD
Treasurer

Heidi Prather, DO
Past President

Eeric Truumees, MD
Administration and Development Council Director

John Finkenberg, MD
Advocacy Council Director

Zoher Ghogawala MD, FACS
Clinical Research Development Chair

Alan Hilibrand, MD
Continuing Medical Education Chair

Edward Dohring, MD, MBA
Education Council Director

Donna D. Ohnmeiss, PhD
Education Publishing Chair

Jerome Schofferman, MD
Committee on Ethics & Professionalism Chair

Charles Cho, MD
Evidence Compilation and Analysis Chair

Mitchel Harris, MD, FACS
Governance Committee Chair

David O’Brien, MD
Health Policy Council Director

Joseph S. Cheng, MD, MS
Payor Policy Review Chair

Charles Reitman, MD
Research Council Director

David Rothman, PhD
NASS Ethicist

Norman B. Chutkan, MD, FACS
At-Large Member

Matthew Smuck, MD
At-Large Member

Eric J. Muehlbauer, MJ, CAE
Executive Director
At the conclusion of the 2016 membership year, NASS maintained a roster of 8,563 members in good standing, including 1,379 new members recruited throughout the year. Work by the Membership Committee included obtaining approval and launching a Commercial Affiliate Program for individuals not directly affiliated with patient care, research or advocacy who are not eligible for membership to the Society. The Commercial Affiliate Program launched in November 2016 and is now available on the NASS website.

**SPECIALTY/PROFESSION**
- Orthopedic Surgeon: 51%
- Neurosurgeon: 25%
- PM&R: 11%
- Anesthesiologist: 3%
- Radiologist: 1%
- Other Physician: 1%
- Physician Assistant: 2%
- Researcher: 1%
- Chiropractor: 1%
- PT/OT: 1%
- NP: 1%
- Other Nonphysician: 2%

**CATEGORY OF MEMBERSHIP**
- Active: 49%
- Associate: 7%
- In-Training: 11%
- Affiliate: 7%
- Emeritus: 8%
- International Tier 1: 16%
- International Tier 2: 2%
- Honorary: 0%
NASS Meeting Services managed approximately 14 meetings throughout the year, ranging from 10 to more than 6,500 participants in eight cities around the world, including Miami, San Diego, Chicago and Singapore. Meetings included the Annual Meeting, Evidence & Technology Spine Summit, Spine Across the Sea, Board/SIG meetings, instructional courses/workshops and various committee meetings.

Highlights:

**12th Annual Evidence & Technology Spine Summit**
- Park City, UT; February 24–27, 2016
- Meeting attendance increased by 18% from 2015
- Exhibiting company presence increased by four companies from 2015

**2016 Summer Spine Meeting**
- Miami, FL; July 20–23, 2016
- First time holding a cadaver course in conjunction with the meeting
- First time in Miami

**2016 Annual Meeting**
- Boston, MA; October 25–29, 2016
- First Annual Meeting held in Boston, MA
- Meeting attendance increased by 160 people compared to previous meetings.
- 66 countries represented; increase of seven companies compared to the 2015 Annual Meeting.
- Surpassed meeting attendance compared to 2015 (Chicago), 2013 (New Orleans), 2010 (Orlando)
- The Technical Exhibition featured 336 companies and educated more than 3,350 professionals on the latest developments in equipment, supplies and services available in the spine care field. Earning more than $3.6 million and covering 81,300 net square feet, the Technical Exhibition featured the Surgical Innovation Labs, where exhibitors could demonstrate their products on cadaveric specimens and hold training workshops, the Learning Place, featuring the ePosters and the exercise demonstration area for learning new exercise-based therapies and a Career Fair, where members could search for new career opportunities amongst the companies recruiting.
LUMBAR SPINAL INJECTIONS
The 2016 CME calendar began with the popular Lumbar Spinal Injections course January 22-23 at the Science Care facility in Phoenix. Benoy Benny, MD was the chair and David S. Levi, MD the co-chair.
  • 37 paid attendees (we capped attendance at 40); 35 on site in spite of the storm on the east coast, which resulted in one less faculty member.
  • The evaluation was completed by 36 participants
    » Attendee breakdown: 13 orthopedic surgeons; 13 neurosurgeons; 7 PM&R; 2 pain management; 1 general surgery;
    » 23 U.S. states plus Barbados, Brazil, Canada, Panama, Taiwan and Thailand represented;
    » 100% of course attendees indicated that the content was useful to their practice and participation in the course will help to improve their future professional effectiveness;
    » 100% would recommend the course to a colleague;
    » Faculty was highly rated with 91-100% top box score;

The majority of comments indicated that participants would begin incorporating the following strategies into their practices: adding injections to practice instead of referring those patients out, transforaminal epidural injections and SI joint injections.

12TH ANNUAL EVIDENCE & TECHNOLOGY SPINE SUMMIT
In its fifth year under NASS’ direction, the Evidence & Technology Spine Summit was held February 24-27 at the Canyons Resort in Park City, UT. Surgical, medical and joint sessions, as well as case presentations and debates, addressed the following topics:

Joint Sessions
• Complications
• Cervical Spine Technologies
• Pain in the Post-Opioid Era: Multimodal Management
• New Technologies in Spinal Cord Stimulation
• Pelvic vs. Discogenic Pain: SI Treatment
• Lumbar Degenerative Symposium
• Debating the Affordable Care Act
• Regenerative Medicine in the Spine

Medical Sessions
• Popular Exercises for Low Back Pain: Myths and Facts
• Diagnostic Tests
• Interventional Spine Complications and How to Reduce Risk
• How Will We Be Reimbursed in the Near Future?

Surgical Sessions
• Complex Cervical Case Smackdown
• Spine Controversies
  • MIS Symposium
  • Global Alignment Issues and Deformity

Featuring medical, surgical and joint didactic sessions as well as ePosters and a technical exhibition, the 12th Annual Evidence & Technology Spine Summit was attended by 130 participants, a number which does not include the faculty and exhibitors. There were more than 200 at the meeting. Attendees came from 37 U.S. states as well as Australia, Chile, Brazil, Argentina, Mexico and Serbia.

The attendee breakdown (based on the 82 who completed the evaluation) was: orthopedic surgery (34); PM&R (27); pain management/medicine (3); and neurosurgery (18)—which represented a large increase from the previous year’s total of three neurosurgeons in attendance. The attendees were pleased with the course, faculty and facility and the evaluations revealed that the objectives of the conference were met.

The 13th Annual Evidence & Technology Spine Summit will be held February 22-25, 2017 at the Canyons.

SECTION ON ROBOTICS AND NAVIGATION: IMPROVING ACCURACY AND EFFICIENCY IN NAVIGATED AND ROBOTIC SPINE SURGERY
This course, to be chaired by Chetan K. Patel, MD was canceled due to lack of company participation and attendance. The section is working on adding a hands-on lab module during the Specialty Section Day at the Annual Meeting in the Learning Place lab to take the place of this course and will gauge interest to determine if it should be scheduled again next year.

SPRING CODING UPDATE 2016: ESSENTIALS AND CONTROVERSIES OF SPINE CARE CODING
The Coding course was held April 8-9 at the Hotel Palomar in San Diego and chaired by Donna Lahey, RNFA.
  • This was the first spring Coding course since 2009.
  • Attendance was 66 with zero no shows;
  • The evaluation was completed by 47 participants
    » Attendee breakdown (only 28 participants completed this): 17 professional coders; 2 administrators; 1 PA; 8 other (administrator & prof coder, billing/AR manager, charge entry, CMC, CPC medical orthopedic coder, director revenue cycle, medical biller, RM)
    » 46 allied health professionals; 20 physicians
    » 19 U.S. states represented;
    » 93% of course attendees indicated that the content was useful to their practice and participation in the course will
help to improve their future professional effectiveness;
» 100% would recommend the course to a colleague;
» The faculty was highly rated with 89-96% top box scores.

CERVICAL SPINE SURGERY
The Cervical Spine Surgery hands-on course held on April 22-23 at SERC was co-sponsored by the Cervical Spine Research Society. The course was chaired by Thomas E. Mroz, MD on behalf of NASS and Wellington K. Hsu, MD on behalf of CSRS. We had 23 attendees and two companies participate in the lab sessions: DePuy and LDR Spine. Attendees noted that the course was informative and organized with experienced and knowledgeable speakers who all received high marks.

Attendee demographics included seven international attendees from Peru, Mexico, Australia, Jamaica, Spain and Poland. Ninety percent of course attendees indicated that the content was useful to their practice and participation in the course will help to improve their future professional effectiveness and 90% would recommend the course to a colleague.

OPTIMIZING VALUE AND OUTCOMES IN SPINE CARE: THE KEY ROLE OF PSYCHOLOGICALLY-INFORMED PRACTICE
The Section on Allied Health course (co-sponsored by the Rehabilitation Institute of Chicago), was postponed to October 28-29 in Boston, during the Annual Meeting. This course was chaired by Gregory Whitcomb, DC and co-chaired by Sherri Weiser, PhD. The course was approved for RN continuing education credit through AXIS Medical Education and ANCC.

FUNDAMENTALS OF SPINE SURGERY AND INTERVENTIONAL PAIN MANAGEMENT
This hands-on cadaver training course for residents and fellows was rescheduled from September 24-26 to October 28-29 in Boston, during the Annual Meeting. The chairs, Edward Dohring, MD and Donna Lahey, RNFA, along with the Annual Meeting chairs, agreed to this opportunity to tap into the numerous residents/fellow attendees within the Boston area. This course was sold out.

SUMMER SPINE MEETING
This summer meeting was held July 20-23 at the JW Marriott Marquis in Miami, FL. The chairs for this meeting were Wellington K, Hsu, MD, and Clinton Devin, MD.

The Deformity Hands-on Course was held at the Miami Anatomical Research Center (MARC) the day before the general sessions started, with 34 attendees. Five companies participated in the course, including: Medtronic, DePuy Synthes, Globus, Stryker and Zimmer Biomet. Twenty-three of the 34 attendees completed the evaluation, from the U.S. (10), Brazil (6), Slovenia (2), Chile (1), Australia (1), Iraq (1), Argentina (1), and Denmark (1). Specialties were split down the middle: neurosurgery (11) and orthopedic surgery (12).

• 90% of course attendees indicated that the content was useful to their practice and participation in the course will help to improve their future professional effectiveness;
• 95% would recommend the course to a colleague;
• The majority of comments indicated that participants would begin incorporating the various strategies into their practices, based on the variety of procedures taught during the course.

The general meeting had 92 attendees (last meeting in 2014 had 115). The evaluation was completed by 64 attendees: orthopedic
surgery (35); PM&R (5); and neurosurgery (24). The attendees were pleased with the meeting, faculty and facility and the evaluations revealed that the objectives of the conference were met.

Session topics during the meeting included: Biologics, Oncology, Cervical Myelopathy, Spine Injuries in Sports, Cervical Disc Arthroplasty, Adult Spinal Deformity, Minimally Invasive Spine Surgery and Navigation. The Brazilian Spine Society hosted an hour-long symposium focusing on several topics.

Unfortunately, the meeting did not do as well financially as budgeted due to hotel attrition charges. Attendees decided to stay outside the room block in Miami Beach instead of the downtown Miami location. While the hands-on course was successful with both attendees and corporate support, the expenses at the lab did not provide enough extra revenue to the meeting to help the bottom line.

Changes will be made to the program to ensure a viable meeting next year in San Diego, including adding abstract presentations back into the meeting, as well as bringing back the popular technique workshops. These workshops require minimal expenses and bring in additional corporate support and attendee revenue.

31ST ANNUAL MEETING
October 26-29, 2016, Boston, Massachusetts

The Annual Meeting continues to offer an outstanding educational experience and provide high-quality continuing medical education for its members. More than 1,000 abstracts were submitted for consideration. The scientific program offered more than 500 presentations, including symposia, Best Paper presentations, ePosters, innovative technology presentations, ePoster grand rounds with authors, instructional courses, hands-on courses, interdisciplinary spine forums, specialty track session programming and international programming in our Global Spine Forum. The Program Chairs were Alan S. Hilibrand, MD and Scott Kreiner, MD.

The Technical Exhibition featured 336 companies and educated more than 3,350 professionals on the latest developments in equipment, supplies and services available in the spine care field. Earning more than $3.6 million and covering 81,300 net square feet, the Technical Exhibition featured the Surgical Innovation Labs, where exhibitors could demonstrate their products on cadaveric specimens and hold training workshops; the Learning Place, featuring the ePosters and the exercise demonstration area for learning new exercise-based therapies; and a Career Fair, where members could search for new career opportunities amongst the companies recruiting.

31st Annual Meeting Abstract Awards:
- Best Papers: Cervical Myelopathy
- Best Papers: Biologics and Interventional Care
- Best Papers: Disc Replacement and Socioeconomics
- Value Abstract Awards
- Resident/Fellow Research Awards
- Best of Sections: Allied Health, Biologics and Basic Research, Minimally Invasive Procedures, Spine Motion Technology

ABSTRACT SUBMISSIONS/ACCEPTANCE 2016
12th Annual Evidence & Technology Spine Summit:
- 30 Abstracts submitted
- 28 ePosters accepted

Summer Spine Meeting:
- 31 Abstracts submitted
- 17 ePosters accepted

31st Annual Meeting:
- 1,068 Abstracts submitted
- 287 Podium presentations accepted
- 197 ePosters accepted

INTERNATIONAL EVENTS
In 2016, NASS extended its international reach by providing high-quality educational opportunities across the globe:
- 18 international programs
- Six international cadaver workshops
- Chinese and Brazilian Traveling Fellowship
- China’s first lumbar spinal injection and spinal cord stimulation cadaver workshop
- Fourth cadaver workshop in China
- Second cadaver workshop in Beirut
- First cadaver workshop in Dubai
- First cadaver workshop in Singapore
- First cadaver workshop in Indonesia
- First ultrasound guided procedures workshop
- The Spine Journal Chinese Edition 7th Issue
- Launch of Spinal News International partnership

Cadaver workshop in Beirut
## 2016 Annual Meeting Abstract Analysis

<table>
<thead>
<tr>
<th>Abstract Category</th>
<th>Total Submitted</th>
<th>Total Accepted</th>
<th>% Accepted Compared to Total Submitted</th>
<th>Total Number of Papers Accepted</th>
<th>% Accepted Compared to Total Submitted</th>
<th>Total Number of Posters Accepted</th>
<th>% Accepted Compared to Total Submitted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Science/Biologics</td>
<td>66</td>
<td>29</td>
<td>44%</td>
<td>19</td>
<td>29%</td>
<td>10</td>
<td>15%</td>
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<tr>
<td>Biomechanics</td>
<td>58</td>
<td>37</td>
<td>64%</td>
<td>23</td>
<td>40%</td>
<td>14</td>
<td>24%</td>
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<tr>
<td>Complications</td>
<td>153</td>
<td>76</td>
<td>50%</td>
<td>44</td>
<td>29%</td>
<td>32</td>
<td>21%</td>
</tr>
<tr>
<td>Diagnostics/Imaging</td>
<td>65</td>
<td>46</td>
<td>71%</td>
<td>25</td>
<td>38%</td>
<td>21</td>
<td>32%</td>
</tr>
<tr>
<td>Epidemiology/Etiology</td>
<td>32</td>
<td>20</td>
<td>63%</td>
<td>10</td>
<td>31%</td>
<td>10</td>
<td>31%</td>
</tr>
<tr>
<td>Exercise</td>
<td>1</td>
<td>1</td>
<td>100%</td>
<td>1</td>
<td>100%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Injections/Interventions</td>
<td>18</td>
<td>13</td>
<td>72%</td>
<td>6</td>
<td>33%</td>
<td>7</td>
<td>39%</td>
</tr>
<tr>
<td>Interdisciplinary Care</td>
<td>15</td>
<td>12</td>
<td>80%</td>
<td>9</td>
<td>60%</td>
<td>3</td>
<td>20%</td>
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<tr>
<td>Manual Therapy</td>
<td>0</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Motion Preservation</td>
<td>15</td>
<td>11</td>
<td>73%</td>
<td>9</td>
<td>60%</td>
<td>2</td>
<td>13%</td>
</tr>
<tr>
<td>Psychosocial/Behavioral</td>
<td>24</td>
<td>8</td>
<td>33%</td>
<td>7</td>
<td>29%</td>
<td>1</td>
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</tr>
<tr>
<td>Socio-Economics/Industrial/Ergonomics</td>
<td>35</td>
<td>21</td>
<td>60%</td>
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<td>43%</td>
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<tr>
<td>Spinal Deformity</td>
<td>215</td>
<td>51</td>
<td>24%</td>
<td>24</td>
<td>11%</td>
<td>27</td>
<td>13%</td>
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<tr>
<td>Surgery-Cervical</td>
<td>135</td>
<td>68</td>
<td>50%</td>
<td>43</td>
<td>32%</td>
<td>25</td>
<td>19%</td>
</tr>
<tr>
<td>Surgery-Thoracolumbar</td>
<td>204</td>
<td>70</td>
<td>34%</td>
<td>37</td>
<td>18%</td>
<td>33</td>
<td>16%</td>
</tr>
<tr>
<td>Trauma</td>
<td>32</td>
<td>21</td>
<td>66%</td>
<td>15</td>
<td>47%</td>
<td>6</td>
<td>19%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>1068</strong></td>
<td><strong>484</strong></td>
<td><strong>45%</strong></td>
<td><strong>287</strong></td>
<td><strong>27%</strong></td>
<td><strong>197</strong></td>
<td><strong>18%</strong></td>
</tr>
</tbody>
</table>

| Nonoperative                             | 314             | 187            | 60%                                    |                                 |                                        |                                  |                                        |
| Operative                                | 754             | 297            | 39%                                    |                                 |                                        |                                  |                                        |

### Annual Meeting Attendance by Specialty

![Annual Meeting Attendance by Specialty](image-url)
Annual Meeting 2016 Live Stream Stats
341 live views from 67 locations with a total of 354 hours of content viewed live from AM2016.

All OnDemand viewed during 2016
Including: Archives, Meetings, Presentations/Courses, Online education & Webinars
8,211 OnDemand Views from 520 users at 1,249 locations watching more than 2,293 hours of content.
ONLINE COURSE & WEBINAR OFFERINGS
A total of 31 online courses are currently available on the NASS website. Ten online courses were renewed in 2016. New courses are being created for release in 2017. We are now live streaming all conferences, in addition to offering the recordings as OnDemand CME. Conference recordings will be free to meeting attendees in 2017; non-attendees will be able to purchase recordings through the NASS online store. A new member benefit will be a series of videos called “Lifelong Learning Videos,” which will include short educational (non-CME) videos that include Ask the Experts, Case Studies, Conference Reviews/Continued Discussions and other types.

Live online CME offerings in 2016:
• Evidence-Based Medicine Online Training Program (will be presented live on November 29, 2016)
• 12th Annual Evidence and Technology Spine Summit (Presented live February 22-25, 2016)
• 31st Annual Meeting (General session room presented live October 26-29, 2016)

NASS currently offers 31 OnDemand courses on www.spine.org, including:
• Section on Radiology Webinar Series
  » MRI Essentials for the Spine Specialist: Anatomy, Systematic Approach and Other Modalities (Expires 5/30/2019)
  » MRI Essentials for the Spine Specialist: Cervical and Lumbar MRI (Expires 5/30/2019)
  » MRI Essentials for the Spine Specialist: Advanced MRI Techniques (Expires 5/30/2019)
• Section on Allied Health Webinar Series: Collaborative Concepts in Spine Care
  » Triage (Expires 7/17/2019)
  » Medical Necessity (Expires 7/17/2019)
  » An Integrated Model (Expires 7/17/2019)
• Section on Biologics & Basic Research Webinar Series
  » Infection Control (Expires 7/6/2019)
  » Osteoporosis and the Elderly (Expires 7/6/2019)
  » BMP: Risk Management Strategies (Expires 7/6/2019)
• ICD-10 Webinar (Expires 10/1/2017)
• Understanding and Developing Online Strategies for Growing Your Practice or Business (Expires 6/1/2018)
• Cervical Spine Degenerative Disorders and Management (Expires 7/1/2018)
• 2014 Evidence & Technology Spine Summit OnDemand (Expires 7/26/2017)
• 2014 Annual Meeting Symposia OnDemand (Expires 11/14/2017)
• 2015 Evidence & Technology Spine Summit (Expires 2/28/2018)
• 2015 Spine Across the Sea OnDemand (Expires 7/31/2018)
• 2015 Annual Meeting OnDemand (Expires 10/31/2018)
• Nothing to Hide: Disclosure and Professionalism for the Spine Care Provider (Expires 2/1/2019)
• How to Do a Quality Manuscript Review Webinar (Expires 5/1/2019)
• State-of-the-Art in Motor Control and Low Back Pain Online Course (Expires 5/15/2019)
• The Art & Science of the Physical Examination Online Course (Expires 5/31/2019)
• 2016 Evidence & Technology Spine Summit (Expires 3/1/2019)
• 2016 Spine Across the Sea OnDemand (Expires 7/26/2019)
• 2016 Annual Meeting OnDemand (Will be released on 11/10/2016)
• State-of-the-Art in Motor Control and Low Back Pain Online Course (Expires 5/15/2019)
• The Art & Science of the Physical Examination Online Course (Expires 5/31/2019)
• Optimizing Value and Outcomes in Spine Care: The Key Role of Psychologically-Informed Practice Online (Will be released on 12/1/2016)

Annual Meeting 2016 Live Stream Stats
• 341 live views from 67 locations with a total of 354 hours of content viewed live from AM2016.

OnDemand Viewing During 2016 (Archives, Meetings, Presentations/Courses, Online education & Webinars)
• 8,211 total OnDemand Views from 520 users at 1,249 locations watching more than 2,293 hours of content.
• OnDemand Views for 2016 Meetings (ETSS, Summer Spine, Annual Meeting): 2,832 views from 149 users at 271 locations watched more than 735 hours of content.
• (Hands On) Presentations/Courses viewed during 2016: 813 views from 201 users at 296 locations watched more than 252 hours of content.
• Online Education Views during 2016: 2,785 views at 435 locations watched more than 559 hours of content.
• Webinar views during 2016: 397 OnDemand views from 115 users at 178 locations watched more than 152 hours of content.
The NASS Video Department produces creative, dynamic content that informs viewers about courses/meetings, advocacy efforts and patient education initiatives, as well as spine procedures and techniques.

Some 2016 highlights:

- Produced Nothing to Hide: *Professionalism and Disclosure for Spine Care Providers* video with F. Todd Wetzel, MD.
- Produced a *Paths to Leadership* video addressing work/life balance of physicians. Interviewed multiple male and female physicians about balancing career and family.
- Completed a series of ten NASS 2016 marketing promotional video clips. The videos were used on the website and embedded in emails to promote the meeting.
- Produced first in the *Need to Know* video series, a patient education video with William J. Sullivan, MD about epidural steroid injections. Posted on knowyourback.org website.
- Advocacy Fly-in video with John Finkenberg, MD and members of Congress was completed. Photos also were taken to capture the event.
- Cervical surgery demos were recorded in lab and posted to the website.
- A membership recruitment video was produced. Staff developed a shot list and content outline; hired actor and make-up artist; recorded multiple scenes; completed post-production.
- Multiple video motion graphic elements were created for the Boston Convention and Exhibition Center marquee, video wall and display monitors promoting NASS, annual meeting activities and spine community.
- Interstitial video was created featuring NASS updates and highlighting accomplishments that played before and after general sessions during the annual meeting.
- Eleven *Ask the Experts* videos were recorded with 2-4 experts expressing professional opinion and available evidence in an open discussion format during the annual meeting. Topics addressed ACDF vs. cervical disc replacement, radiation exposure, and who is the ideal patient for SI fusion and who is not. These videos are free to members and available on the website.

Most of the video course content is available free to NASS members. Visit www.spine.org/ondemand or login to MyAccount.
As the primary voice for spine specialists on Capitol Hill, NASS advocacy continues to work with Congress to advocate for policies that: IMPROVE access to spine care for patients, PROTECT the practices of spine specialists and FUND spine research and prevention. NASS was successful on a number of advocacy fronts, and made significant progress in promoting the cause of spine specialists on Capitol Hill, as well as engaging the general membership into advocacy initiatives. Some of these activities include invitations to local town hall dinners with members of NASS’ Board of Directors, participation at local SpinePAC fundraisers and providing assistance to NASS members who host legislators at their sites of practice. Below are examples of the key accomplishments from 2016.

**NASS’ TOP ADVOCACY VICTORIES IN 2016:**

- As a result of intense congressional and stakeholder pressure, the Centers for Medicare and Medicaid Services (CMS) granted greater flexibility for providers to improve performance scores in the implementation of Medicare’s Quality Payment Program, which was required by the Medicare Access and CHIP Reauthorization Act (MACRA).
- A CMS proposal that would have required all providers of 10- and 90-day global surgical services to report newly-created G codes for every 10 minutes of postoperative service was reversed after intense lobbying pressure from Congress and several societies, including NASS.
- Responding to NASS comments and congressional pressure, CMS recently proposed to shorten the reporting period for returning participants of the Medicare and Medicaid Electronic Health Record (EHR) Incentive Program (Meaningful Use) from a full-year to 90 days.
- NASS sponsored medical liability legislation, H.R. 921, the Sports Medicine Licensure Clarity Act, passed the House of Representatives. The bill clarifies medical liability rules to ensure team providers are properly covered by their professional liability insurance while traveling with athletic teams in another state.
- The 21st Century Cures legislation was signed into law and included language to streamline interoperability requirements for Electronic Health Record (EHR) vendors and outlined the definition of a “clinician-led clinical data registry.” The package also included $1 billion in grants to fight the opioid crisis.
- CMS rescinded their proposed Part B payment model demonstration, due to strong congressional pressure. The model, aimed at reducing the rising cost of prescription drugs, was opposed by NASS for its nationwide-scope and potential to disrupt patient access to care.
- The Veterans Health Administration (VHA) reversed a proposal that would have allowed VHA-employed APRNs to practice without the clinical supervision of physicians and without regard to state law. The revised rule, strongly supported by NASS, preserved the existing physician-led model of anesthesia care in the VA setting.
- The House and Senate passed NASS-endorsed legislation, the Expanding Capacity for Health Outcomes Act (ECHO) Act. NASS endorsed the bill due to its applicability for rural spine care providers, who often don’t receive adequate logistical support to treat patients in remote geographic areas.

**INCREASED PRESENCE ON CAPITOL HILL:**

NASS’ annual Advocacy Conference was held on April 19 in Washington, DC. Several members of NASS’ Executive Committee, Advocacy, Health Policy and Research Councils heard from thought leaders about physician shortage issues, value-based payments, EHR Interoperability, Medical Innovation, and private contracting in Medicare. Special guest congressional speakers included, House Budget Committee Chairman Tom Price, MD (R-GA), Ranking Member of the Energy and Commerce Subcommittee on Health, Gene Greene (D-TX) and Senators Rand Paul, MD (R-KY) and Ben Sasse (R-NE).

In addition to hosting its own conference in Washington, NASS also participated in the Alliance of Specialty Medicine’s annual legislative conference in 2016. The “Alliance” is a coalition of 13 specialty medical societies including NASS, representing more than 100,000 U.S. physicians working together on advocacy, education and regulatory issues. This year’s fly-in focused on the U.S. Preventative Services Task Force (USPSTF), the Medicare Access and CHIP Reauthorization Act (MACRA), and health information technology (HIT) issues. The group attended 142 meetings on Capitol Hill, spreading the word about how these important issues affect specialists across the nation. NASS had nine participants at the fly-in who shared the impact these issue have on spine specialists.
EXPANDING INFLUENCE
NASS continued implementing a targeted advocacy campaign, building the NASS brand in Washington, DC and informing key legislative offices of NASS’ positions on issues impacting the spine care field. In 2016, NASS staff personally conducted more than 150 meetings with congressional offices and met with every member of Congress on key health care committees.

RECOGNITION
NASS Advocacy awarded Charles A. Mick, MD of Northampton, MA the “Spine Advocacy Award” at the 2016 NASS annual meeting in Boston, MA. The presentation of this award marked the second time a member of the North American Spine Society was recognized for making exceptional contributions to federal advocacy efforts on behalf of the society.

SPINEPAC
NASS’ advocacy efforts could not exist without the support of SpinePAC, the political action committee of the National Association of Spine Specialists. The SpinePAC continues to be the most effective means of accomplishing legislative success on behalf of spine specialists in Washington, DC. In 2016, SpinePAC had a record fundraising year, collecting a total of $106,376. Our total for the 2015-2016 cycle totaled $182,917, making it our third highest fundraising year in the PACs existence. Check out our 2016 Annual Report on the following page for further details and highlights.

SpinePAC Events
At the 2016 NASS Evidence and Technology Spine Summit in Park City, UT, Advocacy Chairman, John Finkenberg, MD hosted an exclusive dinner and wine tasting for high-level SpinePAC donors. The event generated $15,000 in donations to SpinePAC.

At the 2016 NASS Summer Spine Meeting in Miami, FL 40 supporters of SpinePAC, gathered together for an exclusive food and cocktail tour of South Beach. Participants visited five different cultural eateries and enjoyed authentic foods and beverages at each location. Many laughs were had, much food was consumed, and the PAC was able to raise over $10,000.

During the NASS 2016 Annual Meeting in Boston, MA, legendary Pulitzer Prize-winning journalist/author and Associate Editor of The Washington Post, Bob Woodward was on hand to sign copies of his latest book, The Last of the President’s Men, during an exclusive luncheon in honor of 2016 SpinePAC members.

SpinePAC is the primary mechanism through which spine specialists are able to support political candidates who champion the causes that are essential to the success of the spine care profession. If you would like to contribute to the PAC, please visit https://www.spine.org/Advocacy/SpinePAC/donate.

NASS TOWN HALL EVENTS
In an effort to meet the challenges of the constantly evolving world of spine care, NASS coordinated seven regional meetings across the country to discuss the effects state and federal coverage, payment and practice policies are having on spine specialists. The purpose of NASS ‘Town Halls’ is to learn more about how NASS as an organization can be more responsive to the needs of the spine care community and use this information to produce valuable resources for NASS members to be effective advocates on behalf of their patients and practices. Please be on the lookout for an event in your area. For more information, please contact Jordan Abushawish at jabushawish@spine.org.
A huge thank you to our PAC club members!

Diamond Club
$5,000
Jeffrey M. Epstein, MD
Guy R. Foglez, MD

Platinum Club
$2,500-$4,999
James Adkins, DC
Pat Tiberi (R-OH)

Gold Club
$1,000-$2,499
Donald DeGrange, MD

Silver Club
$500-$999
Sarah A. Adams, PAC

Friend
$1-$249
P. Merrill White, MD

$1,000-$4,999
James Adkins, DC
Pat Tiberi (R-OH)

$500-$999
Sarah A. Adams, PAC

$1-$249
P. Merrill White, MD

What an incredible year:
Fundraising in the 2015-2016 election cycle

We made a big difference in 2016:
Contributions to key Congressional leaders

House Energy and Commerce
$31,000
Brett Guthrie (R-KY)

Senate Education, Labor, and Pensions
$10,000
Bill Cassidy, MD (R-LA)

House Ways & Means
$7,000
Pat Toomey (R-PA)

$1-$249
Robert Reid, MD

$500-$999
Silver Club

$1,000-$4,999
Gold Club

$5,000
Jeffrey M. Epstein, MD

Congratulations to New Energy and Commerce Member – Rep. Raul Ruiz, MD (D-CA)

Rep. Ruiz, MD is a former emergency room physician, making him an incredibly important representative for the provider community. Dr. Ruiz is on numerous health care bills including IPAB repeal (H.R. 1190) and most recently a letter to CMS to support the nomination of a specialty physician to the MedPAC board.
COMMITTEE ON ETHICS AND PROFESSIONALISM (CEP)

The CEP continually strives to “raise the bar” for ethics not only within NASS but in the entire field of spine care; to that end, our policies are constantly being reviewed and strengthened. In 2015, the Committee revised and strengthened the Expert Witness Guidelines as well as the Code of Ethics, and the revisions were ratified by the Board of Directors.

The Board of Directors ruled in October 2011 to make financial disclosure information—in range format—available to the general public. The 2016 annual public index includes all member disclosure information provided to NASS after February 2012 and the disclosure information provided was current as of June 27, 2016. Review 2016 Index

The Committee finalized the physician brochure, “How to Have ‘the Talk’: Approaching a discussion with patients on your Industry relationships.” The brochure highlights the importance of disclosing Industry relationships to patients and recommends specific dialogue for that conversation. The brochure is available for free online.

2016 CEP* contributions to NASS publications:

- “Message to Physicians: Think Before You Tweet” Diulus, C. (SpineLine, March/April 2016)
- “Physician Burnout” Schofferman, J. (SpineLine Sept/Oct 2016)

PROFESSIONAL CONDUCT & ETHICS COMMITTEE (PCEC)

The PCEC weighed in on two matters during 2016. For each case, the PCEC reviewed the materials submitted by the parties and met in person to discuss the ethical questions presented. The PCEC is presently finalizing its decisions in these matters for presentation to the Board of Directors for its approval.

PROFESSIONAL COMPLIANCE PANEL (PCP)

The PCP monitored a sample of sessions during the Annual Meeting and found that the vast majority of our disclosure rules were followed. A couple of minor concerns were revealed and will be addressed in the future. The PCP also regularly monitors ethical issues in our field to determine if any further action or education as a society is warranted.

CONFLICT OF INTEREST REVIEW PANEL

In addition to the annual review of the Board of Directors’ disclosures and vetting of all new and reappointed committee chairs, eight reviews were completed (self-referred, vetting of new leadership members, etc.).
GRANTS

Each year NASS awards research grants to applicants with the highest-quality spine-related research. Research funding is available for research grants, young investigator grants and nontraditional, nonsurgical treatment grants. The 2016 research funding application solicitation resulted in 158 letters of proposal with 27 invitations to submit full grant applications.

NASS awarded four grants and two fellowships for a total of $136,479:

Grant (Clinical):
Comparative Effectiveness of Multi-Modal Pain Management Versus Standard Post-Operative Analgesia: Randomized Controlled Clinical Trial to Reduce Post-Operative Pain and Opioid Use Among Patients Undergoing Lumbar Spine Surgery
Primary Investigator: Richard Skolasky, ScD
Amount: $47,748

Grant (Clinical):
The Severity of Pre-Operative A1c and Predicting Postoperative Complications in Spine Surgery
Primary Investigator: Tomoko Tanaka, MD
Amount: $25,000 (Partial Funding)

Grant (Young Investigator—Basic)
Does Cartilage Endplate Permeability Impact Nucleus Pulposus Cell Function
Primary Investigator: Aaron J. Fields, PhD
Amount: $25,000 Funding Year One Only of a Two Year Grant (Partial Funding for Year One)

Grant (Young Investigator—Clinical)
Effects of Telemedicine Triage on Efficiency and Cost-Effectiveness in Spinal Care
Primary Investigator: Shari Cui, MD
Amount: $27,931

Research Traveling Fellowship
Nicholas Van Halm Lutterodt, MD
Keck Medical Center of USC, California
Amount: $5,000 (Reduced Amount of Funding)

Clinical Traveling Fellowship
Pallav Bhatia, MBBS, MS
Mount Sinai Medical Center; Rush University; NY Presbyterian Hospital
Amount: $5,800

RESEARCH COUNCIL

In 2016, the Research Council was directed by Drs. Charles Reitman, Zoher Ghogawala, and Charles Cho. The council integrates evidence-based medicine into NASS projects and the spine field where possible. It analyzes evidence to provide scientific spine care information and recommendations to NASS members as well as regulatory and policy bodies. The council conducts regular surveillance of the spine field, reviewing information from various government, quality and regulatory sources for issues of relevance, as well as from the American Medical Association and other specialty medicine-related groups. The council provides evidence-based medicine training, literature search services and article retrieval for the society at large. Council activities in 2016 included:

• Advocacy and Health Policy Collaboration. The Research Council collaborates with NASS Advocacy and Health Policy efforts, providing scientific input to NASS and the Alliance for Specialty Medicine. Issues include research, performance measurement, patient safety, regulation, and health care reform issues related to quality.

• Government and Other Comments to Support Spine Care. The NASS Research Council and its committees support spine care through various projects and comments submitted to government and other bodies. These comments can be viewed on the NASS website. The council performed the following reviews and submitted comments on the following in 2016:

  » Centers for Medicare & Medicaid Services’ (CMS) Draft Quality Measure Plan
CMS Merit-based Incentive Program (MIPs) and Alternative Payment Model (APM) Incentive under the Physician Fee Schedule and Criteria for Physician-Focused Payment Models

» 2017 Medicare Physician Fee Schedule Proposed Rule

» 2017 Hospital Outpatient Prospective Payment System (OPPS) and Ambulatory Surgical Center (ASC) Payment System Proposed Rule

» Medicare Program; Merit-based Incentive Program (MIPs) and Alternative Payment Model (APM) Incentive Under the Physician Fee Schedule and Criteria for Physician-Focused Payment Models: Final Rule with Comment Period

» Comments to the Measures Application Partnership regarding spinal fusion measures

» CMS Episode Grouper Request for Information

NASS also signed on to the following letters and comments:

• American Medical Association letter on 2016 PQRS Payment and Informal Review Process
• 2017 Alliance for Specialty Medicine comments on the Physician Fee Schedule Proposed Rule
• AMA letter expressing lack of support for the Hospital-Wide All-Cause Unplanned Readmission measures undergoing measure maintenance at the National Quality Forum.

• AAOS Clinician Scholar Development Program. Each year NASS sponsors a participant interested in pursuing a career as a clinician scholar. The workshop sessions focus on topics such as career timeline, collaboration with scientists, mentorship, academic promotion, grants and funding resources, working with specialty groups, and balancing it all with a fulfilling personal life. Sponsoring an individual makes a personal impact on the individual NASS sponsors. These participants write a SpineLine article to share their experience. In 2016, Norah Foster, MD, was sponsored by NASS.

• Food and Drug Administration (FDA). The Research Council, in conjunction with the Health Policy Council, is responsible for oversight and surveillance of FDA-related issues. NASS became an FDA Network of Experts organization to help provide expertise on solicited topics. In 2016, NASS also provided a letter of support to classify posterior cervical screw systems into class II (special controls) and to continue to require premarket notification to provide reasonable assurance of safety and effectiveness of the device.

• Patient Centered Outcomes Research Institute (PCORI). NASS continued to engage with PCORI on spine-related issues including participation in stakeholder calls for development of low back pain research questions. PCORI Executive Director, Joe V. Selby, MD, MPH, attended and spoke to the membership at the NASS Annual Meeting.

EVIDENCE-BASED CLINICAL GUIDELINES
NASS evidence-based clinical guidelines assist spine care providers in the diagnosis and treatment of spinal conditions. NASS uses a transparent, evidence-based methodology, incorporating levels of evidence and grades of recommendation in its guideline development. NASS’ volunteer guideline authors are trained in evidence analysis as a requirement of participation.

Seven guidelines are available for free download on the NASS Web site:

• Diagnosis and Treatment of Adult Isthmic Spondylolisthesis
• Diagnosis and Treatment of Degenerative Lumbar Spondylolisthesis (Revised 2014)
• Diagnosis and Treatment of Lumbar Disc Herniation with Radiculopathy
• Diagnosis and Treatment of Cervical Radiculopathy from Degenerative Disorders
• Diagnosis and Treatment of Degenerative Lumbar Spinal Stenosis
• Antibiotic Prophylaxis in Spine Surgery (Revised 2013)
• Antithrombotic Therapies in Spine Surgery

Additionally, work continued on Diagnosis and Treatment of Low Back Pain. The guideline work group is composed of seven sections, including Diagnosis, Imaging, Medical and Psychological Treatment, Physical Medicine and Rehabilitation, Interventional Treatment, Surgical Treatment and Cost-Effectiveness and will address 82 clinical questions in these areas. The guideline has 60+ volunteers and multi-society representation.

APPROPRIATE USE CRITERIA (AUC)
NASS continued work on appropriate use criteria using a modified version of the RAND method. Currently criteria on cervical fusion are available in hard copy and through the NASS mobile application. Development of an AUC on degenerative spondylolisthesis began in 2016.

NASS also had representatives participating in other AUC projects including the National Athletic Trainers’ Association project on Appropriate Care for the Spine-Injured Athlete and AUCs related to spine through the American College of Radiology.
PERFORMANCE MEASUREMENT

NASS is a member of the Physician Consortium for Performance Improvement (PCPI)—a multi-stakeholder community for the advancement of measurement science, quality improvement, and clinical registries. In this forum, NASS voices its position on issues related to performance measures and value-based purchasing that may affect spine care providers. NASS staff and physician representatives, Carlos Bagley, MD and John Easa, MD, represented NASS at the PCPI.

NASS held membership on various advisory committees related to performance measurement, including John Easa, MD, as NASS Representative on PCPI’s Measure Advisory Committee (MAC), Carlos Bagley, MD, as NASS Representative on the National Quality Forum’s (NQF) Musculoskeletal Steering Committee, and David Chandler, MD, as NASS Representative on the AAOS Board of Specialty Societies (BOS) Research Committee.

The NASS Performance Measurement Committee hosted two educational sessions at the 2016 Annual Meeting on MACRA 101-CMS Quality Payment Programs: MIPs and APMs. An article on MIPs was also published in SpineLine and an educational guide on the 2016 PQRS and Value Modifier programs was published on the NASS website.

EVIDENCE-BASED MEDICINE TRAINING

NASS offers interactive web-based training on the fundamentals of evidence-based medicine (EBM). The course combines recorded didactic presentations that may be watched OnDemand, with homework assignments and a live webinar to allow for practice in critiquing studies and assigning levels of evidence. It is intended for those who wish to develop skills in critically analyzing study methodologies and assigning levels of evidence to studies based upon how the studies are being used to answer a specific clinical question. Courses were held in February and November of 2016.

PATIENT SAFETY

The Patient Safety Committee continues to administer the NASS Spine Safety Notice Program, monitoring government resources for patient safety-related notices that may be useful to NASS members, and distributing them via e-mail and member publications. In 2016, the committee issued 33 notices, including 4 high impact spine safety alerts, 17 moderate impact spine safety warnings and 12 low impact spine safety cautionary notices of relevance to spine care and its providers.

NASS SPINE REGISTRY

The spine field continues to need evidence to support treatment of spine disorders and injuries. Research is needed to help prove or disprove the effectiveness of various spine treatments as well as their value. The NASS Spine Registry will collect data to enhance understanding of spine care treatments and their resulting patient outcomes, as well as examine the natural history of spine disorders. NASS will track patient care and outcomes, with the long-term potential goals of using the data to develop quality measures, for quality improvement purposes, best practices, to begin closing the gaps in medical evidence for spine care and for advocacy purposes. In 2016, the registry pilot was underway to test the platform and usage by sites.

NASS also is an active member of the Physician Clinical Data Registry Coalition, which advocates for policies that enable the development of clinical data registries and enhance their ability to improve quality of care through the analysis and reporting of these outcomes. NASS signed on to the following comments with the coalition:

• Comments on Draft Bipartisan Legislation to Improve Health Information Technology for Patients and Families
• Comments on MACRA/APMs
• CMS letter regarding qualified clinical data registry access to Medicare data and matching to the Social Security Master Death file
The Health Policy Council, under the direction of David R. O’Brien, Jr., MD, oversees NASS’ activities related to coding and reimbursement, regulatory affairs, coverage, and value. NASS provided expert comments on the proposed and final rules for the Medicare physician fee schedule as well as numerous other regulatory and legislative issues.

The Health Policy Division, encompassing the Advocacy, Health Policy, Research, and Clinical Care departments, continues to produce a monthly email publication, “Health Policy Review,” that provides members with timely and useful information for succeeding in today’s health care market, including:

- legislation and regulation affecting spine care and medicine as a whole
- research and clinical care
- practice management issues
- coverage issues
- coding and reimbursement

COVERAGE COMMITTEE

After releasing an initial 14 coverage recommendations in 2014, the Coverage Committee has continued to work on developing additional coverage recommendations for NASS to share with payors, patients and spine care providers. NASS coverage recommendations are developed to advocate for NASS’ positions on various clinical and practice issues to ensure continued provision of quality spine care. NASS will continue its efforts to advocate for fair and appropriate coverage decisions while promoting evidence-based medicine, and currently has 23 coverage recommendations published with an additional 15 in development.

The coverage recommendations published in 2016 are:

- Coccygectomy
- DNA-Based Scoliosis Test
- Electrical Stimulation for Bone Healing
- Facet Joint Interventions

Additionally, the Committee is working on the first round of revisions for some of the initial topics published in 2014. Currently, four topics require revision:

- Interspinous Fixation with Fusion
- Interspinous/Interlaminar Device without Fusion
- Cervical Epidural Injections
- Lumbar Epidural Injections

In October 2016, the Coverage eBook was divided into individual PDF chapters that were free to NASS members and available for $395 per chapter to others. The eBook was also made available by request to payors in the interest of encouraging more widespread adoption of NASS’ coverage recommendations. Along with leadership from other Health Policy Council committees, Coverage leadership met with various payors to discuss and collaborate on our combined coverage efforts, including Cigna, Humana, Blue Cross Blue Shield Association, Health Care Services Corporation, and the Centers for Medicare & Medicaid Services.

For more information on NASS’ coverage efforts and to view our anticipated list of topics, please click here.

CODING COMMITTEE

Under the leadership of R. Dale Blasier, MD and Scott Horn, DO, the Coding Committee continued to work closely with other specialties in the development, modification and valuation of CPT codes through the AMA’s CPT Editorial Panel and Resource-Based Relative Value Scale Update Committee (RUC). William Mitchell, MD, David O’Brien, Jr., MD, and Don Moore, MD represent NASS at the CPT Editorial Panel while Karin Swartz, MD, Kano Mayer, MD, and Charles Mick, MD represent NASS at the RUC.

Additionally, the Coding Committee responded to approximately 60 coding questions from members in 2016. The Committee updated Common Coding Scenarios for 2016 to reflect code changes and value adjustments, and developed new scenarios to assist in understanding appropriate coding.

The Coding Committee conducted two in-person coding courses to provide up-to-date coding and reimbursement information specific to spine care.
VALUE COMMITTEE
Under the leadership of Emily Karlen, MPT, the Value Committee developed and presented a breakout session entitled “Quality and Value in Degenerative Spondylolisthesis with Claudication/Radicular Pain” at the 2016 Annual Meeting. The Value Committee hosted a multi-stakeholder roundtable discussion on “Reducing the Burden of Spine-Related Disorders through Multi-Stakeholder Action” at the 2016 Annual Meeting, with NASS leadership and external representatives in attendance.

The Value Committee developed and published a series of value-focused articles in SpineLine and granted three value abstract awards at the NASS Annual Meeting:
• Cost-Effectiveness of Surgical Treatment of Adult Spinal Deformity: Comparison of Posterior-only Versus Anterior-Posterior Approach, Jeffrey Gum, MD
• A Comparison of Patient Centered Outcome Measures to Evaluate Dysphagia and Dysphonia after Anterior Cervical Discectomy and Fusion (ACDF), Alpesh Patel, MD, FACS
• Surgical versus Nonsurgical Treatment for Cervical Radiculopathy: A Cost-Effectiveness Analysis, Jeffrey Rihn, MD

PAYOR POLICY REVIEW COMMITTEE (PPRC)
PPRC members have reviewed a good number of coverage policy review requests from insurance companies this year and provided feedback. A list of 2016 topics reviewed by PPRC are:

• DNA-Based Testing for Adolescent Idiopathic Scoliosis
• Epidural Injections for Pain Management
• Facet Joint Injections, Medial Branch Blocks, and Facet Joint Radiofrequency Neurotomy
• Low Back Pain: Corticosteroid Injections
• Percutaneous Image-Guided Lumbar Decompression (PILD)
• Placement and Monitoring of Interstitial Device(s) in Bone for Radiostereometric Analysis (RSA)
• Trigger and Tender Points Injections
• Vertebroplasty, Vertebral Augmentation (Kyphoplasty)
  Percutaneous

Starting in 2016, NASS joined Blue Cross Blue Shield Association’s (BCBSA) new “Evidence Street” program as a way of reviewing and sharing feedback on their policies. NASS has been assigned and submitted comments on three topics thus far.
In 2016, the Exercise Committee created five member videos: Squats, Extension in Lying, Lumbar Nerve Flossing, Quadruped Exercises and Skydive to Superman to Swimmer. These videos were shown in the Exercise Booth at the 2016 Annual Meeting and will be used at all 2017 meetings. The videos can be found on the NASS YouTube Channel at: https://www.youtube.com/user/NASSspine/videos

The Governance Committee ensures that NASS has an effective governing board. The committee identifies future leaders of the society and strives to engage them in NASS activities. In addition, the Governance Committee educates new board and committee members about their duties, roles and responsibilities, and oversees new member orientation. The committee is responsible for recognizing NASS members for their efforts in the spine care field and ensures conditions are favorable for participation in NASS activities.

NASS hosted its 5th Leadership Development Program Course at the 2016 Annual Meeting. Course faculty included Mary Crane who taught on Communication & Self Awareness and David Dye who taught on Creativity & Development.

NASS hosted its 5th Committee Orientation Program Meeting at the Annual Meeting. All new committee members were invited and encouraged to attend this orientation meeting. F. Todd Wetzel, MD, Mitchel Harris, MD, FACS and Eric Muehlbauer discussed an introduction to NASS, the NASS organization and our committee evaluation improvement project.
The Spine Education & Research Center (SERC) is a cutting-edge training facility created to provide an optimal learning environment for advancements in care. The facility accommodates groups of all sizes and specialties for everything from educational events to product demonstrations to trainings.

With each passing year, more physicians and health care professionals return to SERC to enhance their skills and enjoy everything the state-of-the-art facility has to offer.

**2015 TOTALS**
- A record number of courses at SERC — 76
- 154 Inquiries received
- 49% of inquiries became confirmed courses
- Average number of stations per course: 3
- Average attendance per course: 30
- Approximately 2,000 attended events at SERC in 2016

**FIVE-YEAR BOOKING TRENDS**
SERC has stayed on a strong path year to year. SERC always receives high customer service and experience. Small variations in numbers year to year can be attributed to budget cuts, popular dates already being booked, and rotating course locations. The spine industry continues to show the strongest interest in utilizing the facility.

**NEW DEVELOPMENTS**
SERC received approval to change its name from Spine Education & Research Center to Specialty Education & Research Center in 2017. The new name is expected to bring a wider variety of groups to the facility.
THE SPINE JOURNAL

The Spine Journal (TSJ) remained the top-ranked scientific spine journal with an impact factor of 2.660, up from 2.426 the previous year. As the leading spine publication, the Journal continued to experience a high volume of manuscript submissions in 2016. The numbers began to stabilize after the TSJ Executive Board suspended “Images in Spine Care” and “Case Reports,” lessening the review burden slightly and allowing full focus on clinical studies, basic science and other original research. Competition for acceptance remains high, however, at a declining rate of 30% in 2016. Average time from submission to first decision was 39 days in 2016, down from an average of 47 days in 2015, and 85 in 2014.

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Capitalizing on their successful 2015 annual meeting CME program, The Spine Journal Deputy Editors presented a webinar on “How to Do a Quality Manuscript Review,” in April 2016. The webinar was recorded and continues to be available OnDemand to TSJ reviewers, authors and others—complimentary to reviewers and discounted for NASS members.

Complimentary CME Webinar

How to Do A Quality Manuscript Review

www.spine.org/Education/ContinuingEducation/OnDemand.aspx

Agenda & Content

- Life Cycle of a Manuscript
- What Makes a Good Manuscript? Using Quality Checklists
- Statistical Analysis, Interpretation and Presentation: What to Look (and Look Out) For
- Importance of Good Reviews (and How Bad Ones Impact the Process)
- Elements of a Good Review
- The Reader’s Perspective
- Ethical Guidelines for Reviewers

Reviewer Honor Roll

At the annual editorial board meeting held during the NASS annual meeting in Boston, the Executive Editorial Board recognized several reviewers for their consistently high-quality reviews throughout the year. The 2016 Reviewer Honor Roll included:

- Suhail Afzal, MD, FRCS
- Anton Bowden, PhD
- Allen Carl, MD
- Jens Chapman, MD
- Siavash Haghighi, DVM, PhD
- John Hipp, PhD
- Donna Ohnmeiss, PhD
- Charles Reitman, MD
- Michael Vives, MD

2016 Outstanding Paper Awards

The Spine Journal and NASS honored two winning papers and one runner up in the 2016 Outstanding Paper Awards competition. TSJ presented the awards during the NASS Annual Meeting in Boston and published the papers in the January 2017 issue of the Journal:

- **Outstanding Paper: Medical/Interventional Science**
  Modifiable Risk Factors for Chronic Back Pain: Insights Using the Co-Twin Control Design
  Pradeep Suri, MD, MS, Edward J. Boyko, MD, MPH, Nicholas L. Smith, PhD, Jeffrey G. Jarvik, MD, MPH, Frances M. Williams, MD PhD, Gail P. Jarvik, MD PhD, Jack Goldberg, PhD
Reflecting reader interests, Dr. Sullivan and the editorial board delivered relevant, multidisciplinary collections of commentary, clinical content, socioeconomic & political topics, as well as NASS news, in each issue throughout 2016. Examples include:

**Review Articles**
- Overview of Stakeholder Perspectives on Value
- Robotic Spine Surgery
- Pharmacological Therapy for Venous Thromboembolism Prevention in Spine Surgery
- Controversies in TFESIs
- Aspirin and Spine Surgery
- Postoperative Cardiac Complications in Patients Undergoing Spine Surgery: A Focus on Atrial Fibrillation and Cardiac Ischemia
- Contemporary Radiation Reduction Strategies for Spine Surgeries and Interventional Spine Procedures
- Does Surgery Have a Role in the Treatment of Patients with a Primary Complaint of Axial Low Back Pain?

**Spine in Sports**
- Approach to Running Injuries
- Common Cervical Spine Disorders in Sports and their Mechanisms
- Critical Questions for the Bicyclist with Low Back Pain

**Ethics**
- Physician Burnout
- Drugs and Device Reps in the OR: A Teachable Moment
- Message to Physicians: Think Before You Tweet
- Stigmatized by Obesity: New Studies Offer Intriguing Insight

**Socioeconomics & Politics**
- ICD-10 Implementation: How Did it Go? The Results of a NASS Member Survey
- MACRA 101: Understanding Medicare’s New Payment Reform (The Finances)
- Will Republicans Abandon ACA Repeal with New Administration?
- NASS Town Hall Update

SpineLine is a benefit of membership to all NASS members: all categories of membership receive a digital subscription; Active, Associate and Affiliate members receive print and digital subscriptions. Total circulation at the end of 2016 reached 8,957. Online reader stats for 2016 show 69,722 page views: 66% via the digital edition and 34% via the mobile app.

**SpineLine Circulation as of December 31, 2016:**
- Total member subscribers 8,957
- Print plus Digital: 4,906
- Digital only: 4,051

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To promote understanding of advances in spine research and care and NASS’ leadership role in the spine community, NASS issued 16 press releases to the news media in 2016. Throughout 2016 NASS provided consumer and trade media outlets with spokespeople to educate the public on spine-related topics. NASS spokespeople participated in interviews with many media outlets, including: Spinal News International, Spine Surgery Today, Becker’s Spine Review, Medical Device Daily, Orthopedic Design & Technology, The Advisory Board, Becker’s Pain Management Review, Orthoworld, The BackLetter, AAOS Now, Orthopedics Today, Orthopedics This Week, SpineUniverse, and the MedTech Strategist. In 2016, NASS was specifically mentioned in more than 6,575 news stories, reaching an estimated audience of more than 8.9 billion people.

SOCIAL MEDIA

NASS uses social media as a way to share relevant society news in real time with thousands of followers. In 2016, NASS’ Twitter presence (@NASSspine) grew to 5,189 followers, a 21% increase from the previous year. Twitter has become one of NASS’ key messaging platforms, allowing the society to share information on educational meetings, news articles, society happenings and more.

NASS’ Facebook platform (www.facebook.com/NASS.Spine) grew to 3,529 “likes” in 2016, a 14% increase from the previous year. For some, Facebook is still the go-to source for real time information and NASS maintains a steady presence on FB.
The member engagement website, SpineConnect, continues to be an exciting asset for NASS members. A site to share cases and other spine care related topics in a password-protected environment, SpineConnect had 781 posts by 216 contributors in 2016. There were also nearly 20,000 logins and 4,410 unique logins to the site during the year.

Case discussions continue to be the top feature, as members are taking advantage of the opportunity to get real-time advice and input from colleagues around the world. Many physicians post details of their cases along with X-ray images to give colleagues a well-rounded view of the patient.

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PATIENT EDUCATION
In 2016, the Patient Education Committee remapped the www.KnowYourBack.org website, connecting additional relevant content mentioned in each article for further patient reading. The committee conducted site review, identified missing content and began developing articles to provide more complete information for patients. The committee also posted new articles on the site on popular topics, including pinched nerves, muscle spasms, SI joint pain, spine imaging, artificial disc replacement, foam rollers, and disc bulge vs herniation.

The committee developed a NASS member-authored publication resource guide for www.spine.org. The team also worked with the Ethics Committee to develop a brochure that provides helpful guidance to spine care providers on discussing their industry relationships with patients.

The top www.KnowYourBack.org pages of 2016:
• Acute Low Back Pain
• Cervical Stenosis/Myelopathy/Radiculopathy
• Lumbar Discectomy
• Epidural Steroid Injections
• Spinal Fusion

In 2016, the Spine Foundation continued working on its goal to reduce spine-related disability. The Foundation had 84 individual donors, and 49 corporate sponsors in 2016. 2016 Events hosted by the Spine Foundation:
• Spine Foundation Biologics Course, Chaired by Dr. Wellington Hsu, Palm Beach Gardens, FL
• Flip Flops and Bow Ties Golf Tournament and Gala, Palm Beach Gardens, FL
• 2nd Annual Spine 10 x 25 Summit, Burr Ridge, IL

The Spine 10 x 25 Coalition Task Force was formed to help the Foundation accomplish the goal of reducing spine-related disability in the United State by 10% by the year 2025. The Coalition started with 46 members from various professional backgrounds, and has been working on setting various benchmarks and projects to help the Foundation reach its goal.

The Spine Foundation and the American Academy of Orthopedic Surgeons (AAOS) teamed up to produce a Veterans Public Service Announcement called #BackVetsUp. The PSA was seen on billboards in airports and in print material across the United States. The PSA was underwritten by a grant from the Texas Back Institute.
During its 31st Annual Meeting, NASS announced the winners of its prestigious 2016 Recognition Awards. To be considered for awards, honorees were nominated by their peers for outstanding contributions to NASS and the field of spine care. Three of the awards are named in honor of founding members of NASS who made significant contributions to the early success of the organization. The Spine Advocacy Award recognizes an advocate who makes contributions to federal advocacy efforts.

**Leon Wiltse Award: Keith Bridwell, MD**

To recognize excellence in leadership and/or clinical research in spine care.

Keith Bridwell, MD has been a prolific researcher on spinal deformity with over 300 peer-reviewed publications, 40 invited publications and 77 book chapters. His research has advanced spinal deformity surgery for the past 30 years and has culminated in a National Institute of Health R01 grant evaluating operative and nonoperative treatment of adult spinal deformity. Dr. Bridwell has been a champion for adult and pediatric patients with scoliosis and has advocated for his patients through numerous local and national leadership roles. Dr. Bridwell has dedicated his entire career to the advancement of spinal deformity surgery. This is clearly reflected in the volume of academic work he has contributed, for which he has been honored with many awards and of which perhaps the most notable would be the recently completed NIH-funded clinical trial of adult scoliosis patients who were randomized to either nonoperative treatment or surgery. His attention to detail and individualized care have resulted in many changed lives. As the Leon Wiltse Award seeks to recognize excellence in leadership and clinical research in spine care, we can’t think of another individual who deserves this award more than Dr. Keith Bridwell.

*Nominated by Samuel K. Cho, MD and Lukas P. Zebala, MD*

**David Selby Award: James B. Reynolds, MD**

To recognize contributions to the art and science of spinal disorder management through service to NASS.

Dr. Jim Reynolds has been an effective and important behind the scenes committee member for a number of years. He quietly has just done his job each year, never looking for any recognition, simply serving the society and doing it well. He has been involved in committees since 2003 starting with the Patient Safety Committee. He has been chair of the Practice Management Committee as well as Audit committee of NASS. NASS might not be in the strong financial position it is in today if it were not for committee members like Jim Reynolds who devote their time to provide invaluable guidance on critical financial matters. In addition, he has a perspective that truly represents the desires and concerns of the rank and file members. I have known him personally for many years and he is one of the members I seek out when I want to get input on an idea or board position. He always gives sound advice and counsel. He is truly a great representative of the general membership.

*Nominated by Eric J. Muehlbauer, MJ, CAE*

**Henry Farfan Award: Makarand V. Risbud, PhD**

To recognize outstanding contributions in spine related basic science research.

Dr. Makarand V. Risbud is a tenured Professor of Orthopedic Surgery and Professor and Director of Cell and Developmental Biology PhD Program at the Thomas Jefferson University in Philadelphia. Dr. Risbud’s research has been solely focused on understanding the underlying physiology and pathophysiology of intervertebral disc degeneration and alleviation of discogenic pain. His group has extensively investigated the importance of local micro environmental factors in regulating disc cell function. His pioneering work has discovered that a number of proteins including HIF-1alpha and TonEBP respond to the unique environment that characterizes the nucleus pulposus. More recently Dr. Risbud has been investigating mechanisms by which inflammatory cytokines promote disc degeneration. He actively collaborates with leading spine surgeons and clinicians with an ultimate goal to devise more comprehensive theory encompassing feed forward events triggering inflammatory events that promote disc degeneration and pain. His lab offers a rich environment for research training and has trained several physician scientists and graduate students. His work has been continuously funded by grants from the NIH/NIAMS. He has published more than 120 peer reviewed articles and in 2014 has co-edited the first book devoted to biology of the intervertebral disc. Dr. Risbud is a founding member of the Philadelphia Spine Research Society and is chair and convener of biennial International Philadelphia Spine Symposium held since 2011.

*Nominated by James D. Kang, MD, Irving Shapiro, PhD, Alexander R. Vaccaro, MD, PhD and Jill Urban, PhD*

**NASS Spine Advocacy Award: Charles A. Mick, MD**

To recognize members of the North American Spine Society who have made exceptional contributions to the federal advocacy efforts on behalf of patients and members of the society.

Charles A. (Charlie) Mick, MD has been one of NASS’ most passionate and thoughtful advocates on all levels of the organization, working through various committees at NASS to promote quality patient spine care. Dr. Mick has primarily lent his expertise to NASS by serving on the AMA CPT and RUC committee and has worked tirelessly on Capitol Hill and with federal agencies to expand NASS’ brand. Dr. Mick served on the Advocacy Council for six years (2005–2011) and was a founding member of the Spine Advocates program where he served three years (2006–2009) before becoming NASS President in 2013. Dr. Mick’s greatest attribute is his willingness to volunteer his time to NASS whenever he is called upon, no matter the issue.

*Nominated by the NASS Advocacy Council*
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## CONSOLIDATED STATEMENTS OF FINANCIAL POSITION

<table>
<thead>
<tr>
<th></th>
<th>2016</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cash and cash equivalents</td>
<td>$9,042,877</td>
<td>$9,561,955</td>
</tr>
<tr>
<td>Investments</td>
<td>4,849,297</td>
<td>4,381,034</td>
</tr>
<tr>
<td>Accounts receivable</td>
<td>337,927</td>
<td>306,451</td>
</tr>
<tr>
<td>Pledges receivable, net</td>
<td>-</td>
<td>8,000</td>
</tr>
<tr>
<td>Other receivables</td>
<td>181,735</td>
<td>74,197</td>
</tr>
<tr>
<td>Prepaid Expenses</td>
<td>297,705</td>
<td>365,523</td>
</tr>
<tr>
<td>Inventory</td>
<td>71,098</td>
<td>70,686</td>
</tr>
<tr>
<td><strong>Total Current Assets</strong></td>
<td>$14,780,639</td>
<td>$14,767,846</td>
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<tr>
<td>Long-term prepaid expenses</td>
<td>86,826</td>
<td>87,891</td>
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<tr>
<td>Net property and equipment</td>
<td>8,615,348</td>
<td>9,137,718</td>
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<tr>
<td>Notes receivable</td>
<td>-</td>
<td>200,000</td>
</tr>
<tr>
<td>Investments—permanently restricted</td>
<td>1,780,552</td>
<td>1,780,552</td>
</tr>
<tr>
<td><strong>Total Assets</strong></td>
<td>$25,263,365</td>
<td>$25,974,007</td>
</tr>
<tr>
<td><strong>Liabilities and Net Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Current Liabilities</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>$174,958</td>
<td>$104,433</td>
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<tr>
<td>Accrued expenses</td>
<td>527,318</td>
<td>509,036</td>
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<tr>
<td>Deferred revenue</td>
<td>2,400,842</td>
<td>2,536,479</td>
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<tr>
<td>Current portion of bonds payable</td>
<td>560,000</td>
<td>560,000</td>
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<tr>
<td><strong>Total Current Liabilities</strong></td>
<td>$3,663,118</td>
<td>$3,803,395</td>
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<tr>
<td><strong>Long-Term Debt</strong></td>
<td></td>
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<tr>
<td>Bonds payable, net of current portion and unamortized bond issue costs</td>
<td>6,505,728</td>
<td>7,054,488</td>
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<tr>
<td><strong>Total Liabilities</strong></td>
<td>$10,168,846</td>
<td>$10,764,436</td>
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<tr>
<td><strong>Net Assets</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unrestricted</td>
<td>12,308,127</td>
<td>12,553,098</td>
</tr>
<tr>
<td>Temporarily restricted</td>
<td>1,005,840</td>
<td>875,921</td>
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<tr>
<td>Permanently restricted</td>
<td>1,780,552</td>
<td>1,780,552</td>
</tr>
<tr>
<td><strong>Total Net Assets</strong></td>
<td>15,094,519</td>
<td>15,209,571</td>
</tr>
<tr>
<td><strong>Total Liabilities and Net Assets</strong></td>
<td>$25,263,365</td>
<td>$25,974,007</td>
</tr>
</tbody>
</table>
## CONSOLIDATED STATEMENTS OF ACTIVITIES

<table>
<thead>
<tr>
<th>Income</th>
<th>Unrestricted</th>
<th>Temporarily Restricted</th>
<th>Permanently Restricted</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dues and fees</td>
<td>$3,045,505</td>
<td>$ -</td>
<td>$ -</td>
<td>$3,045,505</td>
</tr>
<tr>
<td>Sales of publications and advertising</td>
<td>362,208</td>
<td>-</td>
<td>-</td>
<td>362,208</td>
</tr>
<tr>
<td>Contributions and sponsorships</td>
<td>1,609,782</td>
<td>128,174</td>
<td>-</td>
<td>1,737,956</td>
</tr>
<tr>
<td>Annual Meeting and educational programs</td>
<td>7,420,329</td>
<td>-</td>
<td>-</td>
<td>7,420,329</td>
</tr>
<tr>
<td>Investment income (loss)</td>
<td>218,646</td>
<td>121,647</td>
<td>-</td>
<td>340,293</td>
</tr>
<tr>
<td>Rental income</td>
<td>679,781</td>
<td>-</td>
<td>-</td>
<td>679,781</td>
</tr>
<tr>
<td>Royalties</td>
<td>331,333</td>
<td>-</td>
<td>-</td>
<td>331,333</td>
</tr>
<tr>
<td>Miscellaneous</td>
<td>145,309</td>
<td>-</td>
<td>-</td>
<td>145,309</td>
</tr>
<tr>
<td>Net assets released from restrictions—satisfaction of program restrictions</td>
<td>119,902</td>
<td>(119,902)</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Income</strong></td>
<td>13,932,795</td>
<td>129,919</td>
<td>-</td>
<td>14,062,714</td>
</tr>
</tbody>
</table>

## Operating Expenses

| Program services | Member services | - | - | 1,279,629 |
| Publications | 1,395,651 | - | - | 1,395,651 |
| Grants and awards | 167,920 | - | - | 167,920 |
| Research and scientific affairs | 610,218 | - | - | 610,218 |
| Annual meeting and education | 5,323,865 | - | - | 5,323,865 |
| Advocacy | 1,532,408 | - | - | 1,532,408 |
| Spine Education & Research Center | 1,001,274 | - | - | 1,001,274 |
| **Total program services** | 11,310,965 | - | - | 11,310,965 |
| Management and general | 2,093,006 | - | - | 2,093,006 |
| Fundraising and development | 53,276 | - | - | 53,276 |
| Foundation fundraising | 720,519 | - | - | 720,519 |
| **Total Operating Expenses** | 14,177,766 | - | - | 14,177,766 |

## Change in Net Assets

| | (244,971) | 129,919 | - | (115,052) |

## Net Assets, Beginning of Year

| | 12,553,098 | 875,921 | 1,780,552 | 15,209,571 |

## Net Assets, End of Year

| | 12,308,127 | 1,005,840 | 1,780,552 | 15,094,519 |
**CONSOLIDATED STATEMENTS OF CASH FLOWS**

<table>
<thead>
<tr>
<th>Cash Flows from Operating Activities</th>
<th>2015</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>Change in net assets</td>
<td>$ (115,052)</td>
<td>$ (691,421)</td>
</tr>
<tr>
<td>Adjustments to reconcile change in net assets to net cash provided by operating activities:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depreciation and amortization</td>
<td>789,014</td>
<td>874,762</td>
</tr>
<tr>
<td>Unrealized (gain) loss on investments</td>
<td>(212,383)</td>
<td>266,648</td>
</tr>
<tr>
<td>Bad debts expense</td>
<td>-</td>
<td>69,455</td>
</tr>
<tr>
<td>Loss on disposal of assets</td>
<td>-</td>
<td>376</td>
</tr>
<tr>
<td>Decrease (increase) in assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receivables</td>
<td>(131,014)</td>
<td>104,194</td>
</tr>
<tr>
<td>Prepaid expenses</td>
<td>68,883</td>
<td>26,279</td>
</tr>
<tr>
<td>Inventory</td>
<td>(412)</td>
<td>(10,543)</td>
</tr>
<tr>
<td>Increase (decrease) in liabilities</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Accounts payable</td>
<td>70,525</td>
<td>(213,826)</td>
</tr>
<tr>
<td>Accrued expenses</td>
<td>18,282</td>
<td>30,788</td>
</tr>
<tr>
<td>Deferred revenue</td>
<td>(135,637)</td>
<td>89,591</td>
</tr>
<tr>
<td><strong>Net cash provided by operating activities</strong></td>
<td><strong>552,206</strong></td>
<td><strong>546,303</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash Flows from Investing Activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Proceeds from sale of investments</td>
<td>1,681,209</td>
<td>2,265,394</td>
</tr>
<tr>
<td>Purchase of investments</td>
<td>(1,937,089)</td>
<td>(1,822,241)</td>
</tr>
<tr>
<td>Purchase of property and equipment</td>
<td>(255,404)</td>
<td>(17,623)</td>
</tr>
<tr>
<td><strong>Net cash provided (used) by investing activities</strong></td>
<td><strong>(511,284)</strong></td>
<td><strong>425,530</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Cash Flows from Financing Activities</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Payment on bonds</td>
<td>(560,000)</td>
<td>(560,000)</td>
</tr>
<tr>
<td><strong>Net cash used by financing activities</strong></td>
<td>(560,000)</td>
<td>(560,000)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Net increase (decrease) in cash and cash equivalents</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Cash and cash equivalents, beginning of year</td>
<td>9,561,955</td>
<td>9,150,122</td>
</tr>
<tr>
<td>Cash and cash equivalents, end of year</td>
<td>9,042,877</td>
<td>9,561,955</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Supplemental Information</th>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Unrelated business income taxes paid</td>
<td>20,843</td>
<td>8,612</td>
</tr>
<tr>
<td>Interest paid</td>
<td>79,378</td>
<td>68,588</td>
</tr>
</tbody>
</table>