California Medicine in the News
Randall W. Smith, M.D. - Editor

Last month we commented on new medical schools in Pasadena (Kaiser) and the UC Riverside School of Medicine. Javed Siddiqi, MD, CANS 1st Vice-President, points out that there is a third new allopathic med school called "California University of Science & Medicine School of Medicine", also known as "Cal Med".

The new school is based at Arrowhead Regional Medical Center and matriculated its first class of 60 students last July. Javed is on the faculty as a full Professor and chair of the Surgery Department and is also Chief of the Neurosurgery Division.

It will be interesting to see if and when these new schools start neurosurgical residencies.

Speaking of medical schools, Becker's HOSPITAL REVIEW recently noted the following in which CA med schools showed quite well:

U.S. News & World Report released its rankings for the best medical schools in the U.S. for research and primary care on March 12. The annual rankings are part of U.S. News' Best Graduate Schools rankings. For the medical school-related lists, 152 medical schools fully accredited by the Liaison Committee on Medical Education and 33 osteopathic medical schools accredited by the American Osteopathic Association in 2018 were surveyed during fall 2018 and spring 2019.

Of those 185 schools, 120 responded to the survey and provided data for U.S. News to calculate the research and primary care rankings. The research list is based on a weighted average of eight indicators, while the primary care rankings are based on seven indicators.

Here are the top 10 best medical schools for research, including ties:

1. Harvard Medical School (Boston)
2. The Johns Hopkins University School of Medicine (Baltimore)
3. Stanford (Calif.) University School of Medicine
3. Perelman School of Medicine at the University of Pennsylvania (Philadelphia)
5. UC San Francisco School of Medicine
6. Columbia University Vagelos College of Physicians and Surgeons (New York City)
6. David Geffen School of Medicine at UCLA (Los Angeles)

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Here are the top 10 best medical schools for primary care, including ties:

1. UNC School of Medicine (Chapel Hill, N.C.)
2. UW School of Medicine (Seattle)
3. UC San Francisco School of Medicine
4. Baylor College of Medicine (Houston)
5. David Geffen School of Medicine at UCLA
6. OHSU School of Medicine (Portland, Ore.)
6. University of Michigan Medical School (Ann Arbor)
8. University of Nebraska Medical Center College of Medicine (Omaha)
9. UC Davis School of Medicine (Sacramento, Calif.)
10. University of Minnesota Medical School (Minneapolis)
10. Perelman School of Medicine at the University of Pennsylvania

On the flip side, 24 CA hospitals got a 1-star (poor) rating from the CMS.

Antelope Valley Hospital (Lancaster)
Doctors Medical Center (Modesto)
Emanuel Medical Center (Turlock)
Hemet Valley Medical Center
Hollywood Presbyterian Medical Center (Los Angeles)
Kern Medical Center (Bakersfield)
LAC+USC Medical Center (Los Angeles)
Lompoc Valley Medical Center
Madera Community Hospital
Memorial Hospital of Gardena
Mercy Hospital (Bakersfield)
Mercy Medical Center (Merced)
Mercy Medical Center Redding
O’Connor Hospital (San Jose)
Oroville Hospital
Parkview Community Hospital Medical Center (Riverside)
Regional Medical Center of San Jose
Rideout Memorial Hospital (Marysville)
Riverside University Health System-Medical Center (Moreno Valley)
Santa Clara Valley Medical Center (San Jose)
Sierra View Medical Center (Porterville)
St. Bernardine Medical Center (San Bernardino)
Victor Valley Global Medical Center (Victorville)
Zuckerberg San Francisco General Hospital and Trauma Center

The 2019 Main Residency Match celebrated its largest in history, with a record 38,376 US and international applicants listing program choices for 35,185 positions, the National Resident Matching Program (NRMP) announced.
The number of available first-year (PGY-1) positions rose to 32,194, an increase of 1962 (6.5%) over 2018. The influx of positions is due, in part, to the increased numbers of osteopathic programs that joined the Main Residency Match as a result of the ongoing transition to a single accreditation system for graduate medical education programs, the NRMP noted. The results of the Match provide insight into the competitiveness of specialties, as measured by the percentage of positions filled overall and the percentage filled by senior students in US allopathic medical schools. Among the highlights this year:

The specialties with more than 30 positions in which all available positions were filled were integrated interventional radiology (categorical and advanced), otolaryngology, physical medicine and rehabilitation (categorical), integrated plastic surgery, surgery (categorical), and thoracic surgery.

The specialties with more than 30 positions in which more than 90% were filled with US allopathic seniors were integrated plastic surgery, neurologic surgery, orthopedic surgery, otolaryngology, and thoracic surgery.

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**Brain Waves**  
Deborah C. Henry, MD, Associate Editor

Did you catch the mistake that I made in last month’s Brain Waves? I was off by a factor of a thousand! It is only 2mg (yes that is 0.002 grams) of fentanyl that can kill you. So it is time to analyze that mistake. Why did I make it? One part may be due to the image of a vial containing the lethal fentanyl dose shown at the DEA conference I attended last month. The vial takes up the entire slide. There is nothing to compare it to. It reminds me of all those pictures of disc herniations and tumors taken in the OR without a scalpel handle nearby. (Wasn’t ingenious to put a ruler on the handle?). Who knows how big that herniation actually was?

About a year ago, my son found this really big eraser. He laid it on the floor and took a picture of it. I mentioned that no one would be able to tell how big it was, hence the picture to your left. Sometimes comparisons are everything.

Another factor played into my mistake and that was failure to write the amount down. I googled the information, put it in my reverberating circuits and wrote the article. My pen did not touch paper. As I grow older and my penmanship seemingly poorer, I am less likely to write things down and thus am more prone to the failure of short-term retention errors.

How about errors in the OR? For me the biggest factor leading to an error was distraction. Getting beeped in the OR as one is starting a case is almost like getting text messaged on the freeway. One night, I had a Spanish-speaking horse-trainer come in to the ER with a chronic left subdural hematoma. I often drained subdurals under local anesthesia preferably with sedation in the OR. As I was setting up the case, I
went to answer a page. In the meantime, the anesthesiologist positioned the awake patient’s head to the left in the donut. I came back from the call and began shaving a small patch of hair and luckily realized the right side was facing up. I mumbled something about making his hair look symmetrical then continued on with an uneventful case. In an article on wrong-site craniotomies, Cohen et al (JNS Sept 2010) found four areas that contributed to this: communication breakdown, inadequate preoperative checks, technical factors and imaging, and human error. Two volumes later, David Cochrane writes an interesting Letter to the Editor where he mentions that 9% of the population (including 9% of medical students) has significant difficulty discerning left from right. He concludes that the best ways to avoid wrong-side surgical errors is through teamwork, including using checklists, time-outs and playbooks. Personally being in the same operating room every time was immensely helpful with determining right and left. Operating in different environments required significant effort on my part especially when you add turning the patient to the prone position.

Dealing with small units is always a bit disturbing to me. The smallness of pediatric doses did more to keep me out of pediatrics than any other single item. There is comfort in being able to write 1 gram of an antibiotic or 500mg of an analgesic for an adult patient and not worry about being off by a factor of 10. For the longest time in my youth, I never really appreciated how many red blood cells exist in a cubic millimeter of our blood until I looked at the units and realized that RBCs are reported at $10^6$/mm and everything else is reported at $10^3$/mm. Perhaps this is why I stress units so much in my teaching now. I want students to appreciate the difference when they calculate a cardiac output of 500 ml versus 5000ml.

One of those patients is near death. Sometimes being off by a factor of 10 or 100 or 1000 is a really big mistake.

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**Miracles and Responsibility**

*Moustapha Abou-Samra, MD, Associate Editor*

O ur youngest daughter Patty blessed our family with a gorgeous baby, her second daughter. The baby was born on March 18; it was a miracle. I’ve always been in awe of the entire pregnancy and delivery process and I always considered giving birth as a miracle. I still do.

Lamia Elise was born, a perfect angel with an unlimited potential. She might become the President of the US, a Supreme Court Justice, a Nobel Laureate or one of the few women to win the Fields Medal in mathematics. She might develop a permanent cure for cancer or figure out a way to eradicate hunger from this world. She might choose to become a celebrated soprano or a prima ballerina. She might consider becoming a world class pianist, a sought-after symphony conductor or a world class athlete. She might become a poet or a writer whose books are read and treasured for generations to come. Her choice might be to become a physician healer, a neurosurgeon. She might be interested in teaching or advocating for the less privileged. Or she might simply wish to become a full-time mother who raises children to become good people ... thus contributing to making our community better.

And she would hopefully accomplish this, mostly with her own talent and hard work, but also with some help from her family and her community.
What kind of help?

Not the kind that a group of misguided parents provided their children when they bribed their way to assure college admission to select universities, thinking that by doing so they’d guarantee them a bright future. Such help would harm the children/young adults by giving them the worst possible example. Can you imagine how a child would feel if and when he or she realizes that their acceptance to their Alma Mater was not granted because of merit? Shame. Loss of their self-respect and damage to their self-image - negative emotions that we should try to shield our children from experiencing.

What they need is really simple, and every parent in a functioning society should be able to provide.

A child like Lamia needs to be surrounded by unconditional love. All children need to be taught to have faith and hope. And they need to be taught the value of hard work, fair play and the respect for others. They need to understand their self-worth and their unlimited potential. But they won't be able to do that if they are shown double standards.

There is really nothing new about this. Over the years many cultures and religions taught these simple rules.

The Golden rule: treating others as you’d wish to be treated, was codified by Hammurabi, the Babylonian from Ancient Mesopotamia in about 1750 BC.

In 1 Corinthian 13 of the Bible’s New Testament, Paul the Apostle spoke about Love, Faith and Hope. He added that of the three, Love in its pure and unselfish form is the most important. How true!

I realize that all parents, myself included, make mistakes and at times they choose to take short cuts. But if we were to stop and think: what would our precious child learn by watching us do this or that, or by witnessing this kind of behavior or that? It is never too late to correct our short-comings. And I do fervently hope that no parent would consider doing anything remotely similar to what the folks involved in the college admission cheating scandal did.

As to education, it is crucial to show a child that we value education. Having a lot of books of all kinds around the house is a good start and gives a positive signal to a growing child that is absorbing all signals we give, no matter how subtle. Speaking about education as not only a tool for success, but also to improve one’s self and to add enjoyment to life is helpful. We are fortunate that we have the best universities in the world, both private and public. There is a university out there that would meet the need of any student, no matter how specialized.

It is the responsibility of Lamia’s family and her community at large, to see to it that she grows in a world of love, fairness and peace. And by community, I don’t only mean friends and extended family, but also our American community and, yes, the World community.

It is indeed an awesome responsibility, but one that we should accept readily as we welcome the miracle of the birth of a child!
On March 15th, I met with the other 50 members of the CMA Council on Legislation (COL) in Sacramento to discuss legislation put forward both in the State Assembly and Senate. The take-home message was that the climate in California is good! Well, we all know this but more specifically the healthcare climate since Gov. Newsom came into office. According to the legislators and lobbyists present, his style invokes enthusiasm and he prioritizes healthcare in a way that is refreshing and reassuring. Furthermore, the state budget is in a good place and we stand a chance to build instead of cut healthcare initiatives and services. The discussion during the COL meeting was lively at times and ultimately, we were able to put forward our recommended positions that will be presented to the CMA Board of Trustees on April 25.

As you might expect, there were no specific bills that related to Neurosurgery but definitely most of the legislation stands to affect our patients and how we practice medicine in California.

For example:

**AB 149** allows patients to resume filling prescriptions for controlled substances by delaying the implementation of new requirements on security prescription pads. That requirement will now go into effect on July 1st, 2020 and there is even a 6-month grace period to use existing script pads until January 2021. This was a relief to my office as we haven’t even received our new pads yet and are still getting used to the increased time required filling prescriptions using the CURES database.

**AB 1268** requires health plans and insurers to regularly review the list of medical services that are subject to prior authorization requirements and report to the appropriate regulator the rates at which those procedures are approved, denied, modified, or delayed. This regular review could help identify services that no longer warrant prior authorization, including those with low variation in utilization or low prior authorization denial rates. For example, that annual CAT you order to follow an asymptomatic aneurysm or MRI surveillance in brain tumors may not require prior authorization.

**SB 441** would enact the California Interoperability Enforcement Act, which would establish the Office of Interoperability Enforcement to regulate electronic health record vendors operating in California. This regulatory structure will ensure actual enforcement and oversight of EHR vendors. Finally, our patient records from different institutions and providers will have to be readily accessible and streamlined. I already see how this decreases the administrative burden in my office as it used to require many phone calls and faxes to get this accomplished.

In summary, there were over 200 bills discussed and in many cases our physician testimony altered the position taken which may affect if legislation is passed or not. It really demonstrated to me that our voice does matter! So, if any of you feel very strongly about a topic that affects your patients or your neurosurgical practice in California, please let me know. There is very likely already some legislation in the works or we can craft our own resolutions to address this and they will be heard. Questions or comments can be directed to harraher@stanford.edu.
CANS MISSION STATEMENT

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Tidbits

IN MEMORIAM:

CANS has lost two senior Sacramento members who have been part of our band of brothers for decades.

James A. Yarrow MD, though a mid-westerner where he got his MD and did his residency, served as a neurosurgeon in the military in Viet Nam and at March AFB in California where he got the golden state bug and after finishing his military service, he settled in Sacramento in 1972 and practiced there for 34 years. Jim died on February 1st at age 81 among family and friends at Roseville hospital where he had practiced for decades.

Edward O. Gamel MD, another mid-westerner by origin, got his MD from Howard in DC and after a stint in the Air Force, completed his neurosurgery residency at the Long Beach VA. He then went into private practice in Sacramento in 1964 for the next 32 years. Ed went on to enjoy 23 years of retirement and died at age 89 on February 4th.

Both Ed and Jim were the kind of CANS members you never hear about. They paid their dues religiously, came to some of the annual meetings, never were a disturbance and I suspect trusted CANS to look out for their interests. I hope they were not disappointed—Ed.

The Feds are into the opioid issue for Medicare patients

The CMS has introduced new Medicare Part D opioid safety policies to reduce prescription opioid misuse while preserving medically necessary access to these medications. The new opioid policies include improved safety alerts at the pharmacy for Part D beneficiaries who are filling their initial opioid prescription or who are receiving high doses of prescription opioids. Medicare drug plans will perform additional safety checks by sending pharmacies an alert to review certain opioid prescriptions before they are filled. Safety alerts may cover situations like:

- **Possible unsafe amounts of opioids.** The pharmacist or Medicare drug plan may need to perform a closer safety review of the prescription with the prescribing doctor if a Part D beneficiary receives opioid prescription(s) that exceed a certain amount.

- **First prescription fills for opioids.** Part D beneficiaries may be limited to a 7-day supply or less for acute pain if they haven’t recently taken opioids (such as within the past 60 days). The limit is based on medical best practices that show that the risk of developing an opioid use disorder increases after 7 days of use. This policy is not intended for current users of prescription opioids.

- **Use of opioids and benzodiazepines at the same time.** These medications can be dangerous when taken in combination.

If the prescription can’t be filled as written, including the full amount on the prescription, the pharmacist will give the beneficiary a notice explaining how they or their doctor can contact the plan to ask for a “coverage determination” (a decision about whether the plan will cover the drug). The beneficiary or their doctor may also ask the Part D plan for an exception to its rules.
before the beneficiary goes to the pharmacy, so they know in advance whether the prescription is covered.

It’s important to note that these new policies are not “one size fits all,” and are deliberately tailored to address distinct populations of Medicare Part D prescription opioid users. These interventions do not apply to residents of long-term care facilities, beneficiaries in hospice, palliative, or end-of-life care, and beneficiaries being treated for active cancer-related pain.

CA rules for the practice of medicine—the good (AB149), the bad (AB 2760) and the OK

#1: **AB 2760** Requires a prescriber to offer a prescription for naloxone or another drug approved by the Food and Drug Administration (FDA) for the complete or partial reversal of opioid depression, if the prescription dosage for the patient is 90 or more morphine milligram equivalents of an opioid medication per day, or if an opioid medication is prescribed concurrently with a prescription for a benzodiazepine, or if the patient presents with an increased risk for overdose, including a patient history of overdose, a patient with a history of substance use disorder, or a patient at risk for returning to a high dose of opioid medication to which the patient is no longer tolerant. Requires a prescriber to provide education to a patient, or the patient’s parent or guardian, or designee, on overdose prevention and the use of naloxone or another similar drug approved by the FDA. Lastly, this bill specifies that a prescriber who fails to offer a prescription or provide education, as required by this bill, must be referred to the appropriate licensing board solely for the imposition of administrative sanctions deemed appropriate by that board.

#2: **AB 2487** Allows physicians licensed after January 1, 2019, to opt to complete a one-time mandatory 12-hour CME course on the treatment and management of opiate-dependent patients, which must include eight hours of training in buprenorphine treatment or other similar medicinal treatment for opioid use disorders, in lieu of the existing required CME on pain management. Physicians are required to take one of these two CME courses.

#3: **AB 149** was signed into law by the Governor on March 11, 2019 and takes effect immediately. This bill allows for a transition period, until January 1, 2021, before the new requirement becomes effective that prescription forms for controlled substances include a uniquely serialized number. This bill allows DOJ to extend this period for no longer than six additional months if the supply of compliant security prescription forms is inadequate. This bill specifies that the uniquely serialized number shall not be a required feature in the printing of new prescription forms produced by approved security printers until a date determined by the Department of Justice (DOJ), which shall be no later than January 1, 2020. This bill also sets requirements for the serialized number, which shall be established by DOJ.

#4: Effective January 1, 2020, medical school graduates, regardless of where they graduated from medical school, will need to complete 36 months of postgraduate training before licensure in California. In the 1960’s, all it took was an internship.
Also, CANS has signed on in support of **AB 1268** which would require medical insurance companies to divulge their pre-authorization (PA) history. The goal is to make transparent how the companies operate and to identify which procedures almost always get approved (and hopefully force them off the PA list) and which ones are consistently denied so pressure can be brought to change such behavior.

Finally, Sacramento pediatrician **Richard Pan, MD**, member of the California Senate and previous recipient of the CANS award for meritorious service by a public official, has authored a new bill (**SB 276**) that would tighten the state’s childhood immunization law, already one of the strictest in the nation.

Children in California must be fully vaccinated to attend public or private schools, unless a doctor says they have a medical reason not to have all their shots. But since California’s tough inoculation law was passed in 2015 (authored by Dr. Pan), the number of children with medical exemptions has grown, while physicians have been accused of excusing children from immunizations for questionable reasons such as for having asthma or diabetes or of manufacturing an exemption for a fee.

The new bill, SB 276, would address this loophole by requiring the state health department to vet each medical exemption form written by physicians. The department would also maintain a database of exemptions that would allow officials to monitor which doctors are granting the exemptions.

**Neurosurgeons speak out for some change and more info**

The bi-annual meeting of the Council of State Neurosurgical Societies will occur April 12-13 at the San Diego Marriott Marquis. CANS will be sending its 9-member delegation to debate and vote on the following resolutions:

**RESOLUTION I**

**Title: Reducing Physician Annual Training Burden Through Streamlining and Establishing Consistency, Interchangeability and Joint Recognition Among Hospital Web-Based Annual Training Instruments**

Submitted by: Mark Linskey and the CSNS Medical Practices Committee

**WHEREAS**, the volume of annual mandatory web-based hospital training for physicians has been rapidly growing; and

**WHEREAS**, this mandatory training includes, but is not limited to topics including:

- Fire safety training
- Chemical and chemical spill training
- Biohazard safety training
- Radioactivity safety training
- Restraint training
- Isolation categories and precaution training
- Antimicrobial stewardship training
- Device and Surgery-Associated infection training
- Ventilator assisted device training
- Healthcare-Vendor relationship training
- Privacy and Security Training – HIPAA
- Documentation and billing compliance training
- Central line insertion assessment (CLISA) training
- Cybersecurity security awareness training
- Sexual violence and sexual harassment prevention training
- Workplace violence prevention
- Among others...; and
WHEREAS, this volume of activity now involves a significant portion of physician practice time which is not compensated; and
WHEREAS, this training is usually required by each hospital where a physician has privileges; and
WHEREAS, these training instruments are not uniform and/or standardized across healthcare and/or healthcare systems; and
WHEREAS, most hospitals and/or healthcare systems only recognize their own training platforms and training completion certificates and do not usually recognize equivalent training already completed for that year through another hospital and/or healthcare system; therefore
BE IT RESOLVED, that the CSNS petition the AANS and CNS to submit a resolution through the AMA pointing out this issue and its negative repercussions for physicians; and
BE IT FURTHER RESOLVED, that the CSNS petition the AANS and CNS to include in this resolution submitted through the AMA a request that mandatory physician annual training modules be made uniform and streamlined across hospitals and/or healthcare systems wherever possible; and
BE IT FURTHER RESOLVED, that the CSNS petition the AANS and CNS to include in this resolution submitted through the AMA a request that standardized, uniform, and streamlined mandatory physician annual training modules be accepted as valid and sufficient to meet annual training requirements across hospitals and/or healthcare systems wherever possible.

RESOLUTION II
Title: Assessment of Neurosurgical Ergonomics
Submitted by: Raghav Gupta, B.S., Nitin Agarwal, M.D., Neil Majmundar, M.D., Robert F. Heary, M.D.
WHEREAS, musculoskeletal discomfort and postural-related strain is prevalent amongst surgeons and imposes a significant burden1-5; and
WHEREAS, overexertion and overuse in the operating room are two of the most common causes for injury to surgeons leading to missed workdays1; and
WHEREAS, neurosurgery procedures are often lengthy, complex, and multi-faceted, thereby enhancing the potential for injury due to poor workplace ergonomics; and
WHEREAS, there is currently no data identifying the prevalence of surgery-related discomfort and pain amongst attending and/or resident neurosurgeons; therefore
BE IT RESOLVED, that the CSNS conduct a survey study which is distributed to attending and resident neurosurgeons across the country to assess the prevalence, severity, and frequency of work-related musculoskeletal pain as well as any prior ergonomics training in an effort to guide future interventional studies in this area.

RESOLUTION III
Title: International Neurosurgical Resident Rotations
Submitted by Catherine Mazzola, MD, FAANS; David Bauer, MD, FAANS; Brandon Roque, MD, FAANS Michael Scott, MD, FAANS; A. Leland Albright, MD, FAANS
WHEREAS, there is a need for neurosurgical care in many third world nations; and
WHEREAS, telemedicine capabilities exist that would facilitate communication with local neurosurgeons and follow up; and
WHEREAS, there are several, well-established programs for neurosurgeons interested in providing care to these populations; and
WHEREAS, organized neurosurgery should encourage, promote and support global health as it relates to neurosurgery; and
WHEREAS, there are multiple benefits realized when neurosurgery residents are allowed or encouraged to spend several months on an international rotation of their choice; therefore
BE IT RESOLVED, that the Council of State Neurosurgical Societies (CSNS) suggest that the American Board of Neurological Surgeons (ABNS) and Senior Neurosurgical Society (SNS) and The Foundation for International Education in Neurological Surgery (FIENS) work together in order to develop a few international rotations that would be vetted and recognized by the ABNS; and
BE IT FURTHER RESOLVED, that the ABNS and SNS be requested to work with FIENS to develop international residency rotations which would allow residents to count international cases and follow up with the local teams/ patients after their international rotations.

RESOLUTION IV
Title: A Move Towards Disability Placard Prescription Guidelines
Submitted By: Luis Tumialán, MD; Jake Godzik, MD
WHEREAS, disability placards exist to provide for ease of access for patients with reduced ambulatory capacity; and
WHEREAS, states are increasingly reporting growing number of disability placard issuances—approximately a 66% increase over a 6-year period. This has resulted in significant limitations in disability parking access and resulted in legislative efforts to restrict time allotment and access across multiple states; and
WHEREAS, the eligibility for handicap parking placard “includes inability to ambulate more than 200 feet” or due to “arthritic, neurological or orthopedic conditions.” These two criteria cumulatively represent 84-90% of both temporary and permanent disability placards; and
WHEREAS, no clear framework exists to guide disability placard allotment to neurosurgical patients by neurological providers; therefore
BE IT RESOLVED, that CSNS encourage its parent bodies to develop a set of guidelines for distribution of temporary or permanent disability placard prescription for the neurosurgical patient population.

RESOLUTION V
Title: Medicare for All—A Neurosurgery Perspective - “Survey on Neurosurgeon Perspective on Medicare for All”
Submitted By: Jake Godzik, Jay Nathan, Clemens Schirmer, John K. Ratliff, Joseph Cheng and Luis M. Tumialán on behalf of the Coding and Reimbursement Committee
WHEREAS, recent estimates forecast that American health-care expenditures will rise at an average of 7.4% per year and the Congressional Budget Office has estimated Medicare spending with enrollment beginning at 65 will grow to 1.5 trillion by 2029, and
WHEREAS, medical expenditures have brought increased federal and public scrutiny to the long-term affordability of health care in the United States, and
WHEREAS, 11 U.S. presidential candidates have endorsed current legislation that would adopt universal expansion of Medicare enrollment, commonly called “Medicare for All”, and
WHEREAS, the impact that the universal enrollment in a “Medicare for All” strategy would have an undefined effect on the practice of neurosurgery,
BE IT RESOLVED, that the CSNS leadership work with its parent organizations to conduct a survey to systematically assess neurosurgeons’ perspectives regarding the potential impacts on neurosurgical
specialty care—specifically assessing the impact on patient care, patient access, reimbursement and early retirement that may occur in the United States with adoption of a single payer system.

**RESOLUTION VI**

**Title: Evaluating Neurosurgical Residency Training and Preparedness for Practice**

Submitted by Neil Majmundar, M.D., Owoicho Adogwa, M.D.M.P.H, Raghav Gupta, B.S., Nitin Agarwal, M.D., Catherine Mazzola, M.D., Robert F. Heary, M.D., Karin Swartz, M.D.

WHEREAS, a 2008 and follow-up 2013 CSNS surveys of resident education led by Mazzola et al., identified significant need for improvement of resident training in the areas of socioeconomic and medicolegal education; and

WHEREAS, from 2009 to 2017 there have been major additions in terms of the number of trainees and training programs, with 27 new neurosurgery residency positions and 10 new ACGME accredited neurosurgery programs added; and

WHEREAS, after 2020 there will be an influx of applicants and increase in residency positions due to the ACGME accreditation of the AOA-accredited residency programs; and

WHEREAS, with a changing residency training paradigm it is important to analyze the effect of any curriculum changes, changes in employment trends, as well as any persistent knowledge gaps in the areas of socioeconomic and medicolegal education; therefore

BE IT RESOLVED, that the CSNS work with the AANS and CNS to re-survey graduating neurosurgery residents to assess resident education from the perspective of readiness to practice; and

BE IT FURTHER RESOLVED, that the results of this survey evaluation be presented during a CSNS plenary session in Spring 2020.

**RESOLUTION VII**

**Title: Incorporating Augmented and Virtual Reality Platforms for Training in Neurosurgical Residency**

Submitted By: Jake Godzik, MD; Luis M. Tumialán, MD

WHEREAS, resident education is crucial for educating an independent and quality workforce capable of meeting the medical needs of a growing population and aging society; and

WHEREAS, regulations and political climate are increasingly limiting surgical autonomy and demanding higher quality outcomes, which creates an environment where resident education has the potential to be at odds with patient care and outcomes; and

WHEREAS, cadaveric-based learning remains the gold standard and fundamental basis for educating the three-dimensional anatomy of cranial and spinal anatomy. Yet, cadaveric-based learning remains logistically challenging and fiscally demanding; and

WHEREAS, virtual and augmented reality platforms are growing into a staple form of education, both in flight simulation, military training, and facilitating biofeedback for physical rehabilitation and pain control for post-trauma patients; and

WHEREAS, the costs of virtual education platform are nearly 1/10th the cost of a single cadaver course. However, no cranial or spinal anatomy virtual reality platform exists; therefore

BE IT RESOLVED, that CSNS encourage its parent bodies to begin a transition to virtual reality and augmented reality-based learning platform aimed towards enhancing and transforming neurosurgery resident education and training; and

BE IT FURTHER RESOLVED, that the CSNS develop the first virtual reality “cadaveric course” and present it to its parent bodies in the spring of 2020.

**RESOLUTION VIII**

**Title: An examination of the peer review process for practicing neurosurgeons**

Submitted by Kurt Yaeger, Kris Kimmel, and the CSNS Patient Safety Committee
WHEREAS, the healthcare peer review process is an official, documented examination of an adverse event or unusual outcome, and may be reported to the federal government; and
WHEREAS, the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) mandates hospitals and medical practices conduct internal peer reviews to improve the overall quality of care; and
WHEREAS, medical quality control was further established by the Health Care Quality Improvement Act (HCQIA), passed by Congress in 1986, which protects physicians who partake in the peer review process from medicolegal discovery; and
WHEREAS, despite these aforementioned legislative efforts, there is no standard format to which to adhere for the peer review process, resulting in inconsistent investigative and reporting efforts; and
WHEREAS, the goal of the peer review process is to hold clinicians accountable and improve the overall quality of medical care, yet the inconsistent process lessens the impact on healthcare quality and may in fact have negative effects on individual providers; and
WHEREAS, in contrast to academic medical centers, where peer review is adjudicated through departmental morbidity and mortality conferences, in many community hospital settings there is not as robust and transparent peer review process; and
WHEREAS, in some hospitals and health care systems there may be inherent, and significant, conflicts of interest that compromise the integrity of peer review, especially as it affects neurosurgeons, who are a smaller specialty dealing with highly complex patient care issues; therefore
BE IT RESOLVED, the CSNS develop a survey of practicing neurosurgeons to gauge their experiences of peer review in their local health care settings, with particular attention paid to adverse experiences, lack of standardization, and conflicts of interest; and
BE IT FURTHER RESOLVED, that the CSNS develop educational materials for neurosurgeons that provide a better understanding of the peer review process, including their rights, and that the CSNS advocate to provide a more robust and standardized peer review process for neurosurgeons, to benefit both patient care and surgeons.

RESOLUTION IX
Title: Creation of a Task Force for Development of Guidelines for Implementation of Safe Neurosurgical/Spine Programs
Submitted by Kristopher Kimmell, Jeremy Amps, Tyler Schmidt
WHEREAS, a significant shift is occurring in the neurosurgical workforce with increasing numbers of employed neurosurgeons being integrated into healthcare systems and hospital-based practices; and
WHEREAS, this shift has led to the development of neurosurgical/spine programs by healthcare systems/hospitals without previous experience in providing efficient, cost-effective, and safe care for neurosurgical patients; and
WHEREAS, little guidance exists from organized neurosurgery regarding recommendations for level of care, nursing levels and training, unit and OR capabilities, and ancillary support for neurological patients. Subsequently significant heterogeneity in care patterns exists with external forces shaping these decisions sometimes without regard for best clinical practices; and
WHEREAS, therefore neurosurgeons frequently come into conflict with hospital administration for increases in level of patient care and equipment as these decisions carry significant economic impact for the hospital/healthcare system and potentially expose neurosurgeons to medicolegal liability as a consequence; therefore
BE IT RESOLVED, that the CSNS supports the decision making of physicians to determine the care pathway for neurosurgical patients; and
BE IT FURTHER RESOLVED, that the CSNS recommend the development of a task force coordinated with parent organizations and cooperating with the AANN (American Association of Neuro Nurses) to develop guidelines for neurosurgical/spine programs and units for hospital/healthcare systems.
RESOLUTION X
Title: CSNS Fellowship Advocacy Initiative
Submitted by Tyler Schmidt, Kristopher Kimmell, Patient Safety Committee
WHEREAS, the CSNS fulfills an important role in the neurosurgical community educating its members and neurosurgeons at large on socioeconomic principles of practice while serving as a grassroots organization for change within organized neurosurgery; and
WHEREAS, healthcare is a dynamic industry with many forces driving change that may or may not be within the best interest of neurosurgeons further cementing the urgency for advocacy for our profession from both future neurosurgeons (residents) and current practicing neurosurgeons; and
WHEREAS, the CSNS is frequently exploring ways to expand its footprint in organized neurosurgery and the neurosurgical community at large; and
WHEREAS, CSNS fellowship awardees provide an educated and motivated subset of neurosurgical residents with access to neurosurgical programs across the country; therefore
BE IT RESOLVED, that the CSNS supports advocacy by its CSNS fellows through a requirement as part of the fellowship award to complete one form of advocacy at their respective program during the course of their fellowship; and
BE IT FURTHER RESOLVED, that this advocacy can be in the form of a presentation during academic day, press release in hospital or community media, grand rounds presentation, social media, or other form at the discretion of the fellow detailing the role of the CSNS and opportunities to effect change.

RESOLUTION XI
Title: Understanding the Practice Referrals, Surgical Volume, and Academic Productivity for Adolescent Idiopathic Scoliosis
Submitted by Richard Menger MD MPA, Griffin Baum MD, Simon Morr MD, Joseph Osorio MD PhD, Piyush Kalakoti MD, Anthony Martino MD, Richard Anderson MD, and Jeffrey Mullin MD MBA
WHEREAS, historically surgery for adolescent idiopathic scoliosis (AIS) was within the realm of pediatric orthopedic surgeons. It is still largely in the domain of orthopedic surgeons. It represents a significant portion of spinal surgery generally absent from neurosurgical spinal practice and neurosurgery residency curricula; and
WHEREAS, neurosurgical and orthopedic spinal training is cross-pollinating there exists a need to investigate the referral patterns, surgical volume, academic productivity, training emphasis, and the impact of the different organized neurosurgical and orthopedic bodies on driving the treatment of adolescent idiopathic scoliosis. Doing this by investigating surgical volume databases, academic leadership/productivity, residency curricula, and regional referral patterns will provide neurosurgical insight for the delivery of surgical care for adolescent idiopathic scoliosis; therefore
BE IT RESOLVED, that the CSNS research to understand the current landscape by comparing four cohorts of surgeons surrounding adolescent idiopathic scoliosis: spine fellowship trained neurosurgeons, spine fellowship trained orthopedic surgeons, pediatric orthopedic surgeons, and pediatric neurosurgeons; and
BE IT FURTHER RESOLVED, that the CSNS investigate the impact of specialty training on academic productivity, journal citation, academic leadership, surgical volume, and clinical referral patterns surrounding AIS and look to quantify the different emphasis on AIS among the varied organized neurosurgical and orthopedic entities.

RESOLUTION XII
Title: Locum Tenens Neurosurgery
Submitted by Devon Lefever MD, Sharon Webb MD, Bharat Guthikonda MD
WHEREAS, locum tenens neurosurgery is becoming more and more common throughout the United States as health care continues to drastically change and the physician’s autonomy is decreased more and more; and
WHEREAS, locum tenens neurosurgeons are typically not represented or acknowledged as an entity in organized neurosurgery, including the CSNS; and
WHEREAS, there is very little published information regarding locum tenens neurosurgery (in fact, a pubmed search for “locum tenens neurosurgery” yields 0 results); and
WHEREAS, the reasons why neurosurgeons choose to work locum tenens as well as the need for locum tenens has not been specifically studied in the United States; therefore
BE IT RESOLVED, that the CSNS create a pathway to membership designated specifically for locum tenens neurosurgery; and
BE IT FURTHER RESOLVED, that the CSNS evaluate the prevalence of locum tenens neurosurgery and the agencies that are widely used to facilitate these arrangements; and
BE IT FURTHER RESOLVED, that the CSNS evaluate the reasons behind why neurosurgeons choose to do locum tenens, where is the geographical need, and what are the common compensation models.

RESOLUTION XIII
Title: Assessing the Mentorship Needs of Medical Students Without a Home Residency Program
Submitted by Samuel B. Tomlinson, B.A., Robert Gramer, B.S., Christopher S. Graffeo, M.D., Jeremiah N. Johnson, M.D., Nitin Agarwal, M.D.
WHEREAS, early mentorship provides invaluable guidance for medical students interested in neurosurgery; and
WHEREAS, the availability of early mentorship is pivotal for attracting the best medical students to neurosurgery; and
WHEREAS, students lacking a home neurosurgery residency program have limited access to early mentorship; therefore
BE IT RESOLVED, that the CSNS conduct a study based on residency match data obtained by the AANS to analyze the adjusted effect of a home residency program on match success, in order to assess the mentorship needs of medical students lacking a home neurosurgery program.

RESOLUTION XIV
Title: Increase Adoption of Enhanced Recovery After Surgery (ERAS) Protocols in Neurosurgery
WHEREAS, Enhanced Recovery After Surgery (ERAS) protocols have been implemented at some neurosurgical centers but are still limited in the field1, 2; and
WHEREAS, implementation of ERAS protocols at select neurosurgical centers has resulted in superior postoperative patient outcomes and decreased acute care costs compared with conventional perioperative management3, 4; and
WHEREAS, adoption of ERAS protocols can help combat the opioid epidemic by significantly decreasing opioid use after neurosurgery5; therefore
BE IT RESOLVED, that the CSNS research the specific details and components of existing ERAS protocols at neurosurgical centers (e.g. University of Pennsylvania, University of Miami); and
BE IT FURTHER RESOLVED, that CSNS compose a white paper on the current state of ERAS protocols in neurosurgery and the steps that institutions must take to implement them; and
BE IT FURTHER RESOLVED, that CSNS work with its parent bodies to develop a targeted promotion campaign to disseminate the above white paper and raise awareness about the positive effects of ERAS protocols on patient outcomes and opioid use.

RESOLUTION XV
Title: Reducing the Financial Burden on Medical Students Associated with Attending Neurosurgery Meetings
Submitted by Nitin Agarwal, M.D., Raghav Gupta, B.S., Prateek Agarwal, A.B., Robert F. Heary, M.D.
WHEREAS, obtaining a residency position in neurosurgery is an extremely competitive and costly endeavor, with recent data indicating the mean cost of the components of the application process incurred on medical students, to be over $10,000; and
WHEREAS, research productivity is an important component of the neurosurgery residency application process; and
WHEREAS, the American Association of Neurological Surgeons (AANS) and Congress of Neurological Surgeons’ annual meetings serve as the most important forums for medical students interested in neurosurgery to present and discuss their research work as well as to network with neurosurgical faculty and residents; and
WHEREAS, there is currently a substantial registration fee ($200-300) for either member or non-member medical students for attending the AANS and CNS annual meetings, which can serve as a strong deterrent from attendance amongst this cohort, particularly amongst those with limited financial means; therefore
BE IT RESOLVED, that the CSNS consider petitioning the CNS and AANS for the removal of registration fees to their annual meetings for both non-member and member medical students.

RESOLUTION XVI
Title: Neurosurgical Resident Independent Surgical Training
Submitted by Mick Perez-Cruet MD, MS, Eric Zager MD, Richard G. Fessler MD, PhD., Fernando Diaz MD, PhD
WHEREAS, most neurosurgical residencies have been extended to 7 years in response to restrictions in resident weekly work hours; and
WHEREAS, neurosurgical resident training should require independent surgical exposure to gain surgical competency; and
WHEREAS, the current medical liability environment has made hospitals establish policies to prevent and or limit independent neurosurgical resident operative experiences; and
WHEREAS, neurosurgical residents not exposed to independent surgical training might complete their residency without the confidence and or necessary skills and competence needed to preform neurosurgical procedures independently, potentially putting patients at risk; therefore
BE IT RESOLVED, that our parent organizations (AANS/CNS) provide a position statement encouraging and supporting independent neurosurgical residency training experience.

Quotation of the Month:

Nature abhors a vacuum.  
So does my dog.
Any CANS member who is looking for a new associate/partner/PA/NP or who is looking for a position (all California neurosurgery residents are CANS members and get this newsletter) is free to submit a 150 word summary of a position available or of one’s qualifications for a two month posting in this newsletter. Submit your text to the CANS office by E-mail (emily@cans1.org) or fax (916-457-8202)—Ed.

The assistance of Emily Schile and Dr. John Ratliff in the preparation of this newsletter is acknowledged and appreciated.

- To place a newsletter ad, contact the executive office for complete price list and details.
- Comments can be sent to the editor, Randall W. Smith, M.D., at rws-avopro@sbcglobal.net or to the CANS office emily@cans1.org.
- Past newsletter issues are available on the CANS website at www.cans1.org.
- If you do not wish to receive this newsletter in the future, please E-mail, phone or fax Emily Schile (emily@cans1.org, 916-457-2267 t, 916-457-8202 f) with the word “unsubscribe” in the subject line.

Meetings of Interest for the next 12 months:

CSNS Meeting, April 12-13, 2019, San Diego, CA
AANS: Annual Meeting, April 13-17, 2019, San Diego, CA
NERVES Annual meeting, April 11-13, 2019, San Francisco, CA
Neurosurgical Society of America: Annual Meeting, June 16-19, 2019, Banff, Alberta, Canada
California Neurology Society: Ann. Meeting, March 1-3, 2019, Cupertino, CA
CSNS Meeting, October 18-19, 2019, San Francisco, CA
Congress of Neurological Surgeons: Annual Meeting, October 19-23, 2019, San Francisco, CA
International Society for Pediatric Neurosurgery: Annual meeting, October 20-24, 2019, Birmingham, UK.
Western Neurosurgical Society: Annual Meeting, November 8-11, 2019, Scottsdale, AZ
AANS/CNS Joint Pediatric NS Section: Ann. Meeting, December 6-8, 2019, Scottsdale, AZ
CANS, Annual Meeting, January 17-19, 2020; Fairmont Sonoma Mission Inn, Sonoma, CA
AANS/CNS Joint Cerebrovascular Section: Ann. Meeting, 2020, TBA
AANS/CNS Joint Section on Pain: Annual Meeting, 2020, TBA
AANS/CNS Joint Spine Section: Annual Meeting, March 5-8, 2020, Las Vegas, NV
AANS/CNS Joint Pediatric Section: Annual Meeting, March 11-13, 2020, New Orleans, LA
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