

California

DO

The Journal of the Osteopathic Physicians & Surgeons of California

Inside this Issue:

New Direct-Acting Antivirals for the Treatment of Hepatitis C Virus Page 11

MSK POCUS Page 13

EMR
Security Series
Wrap-Up
Page 10



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PRESIDENT’S MESSAGE:

Legacy 2

EDITOR’S REPORT:

What Advances In Medicine Do You Seeing Coming? 3

EXECUTIVE DIRECTOR’S MESSAGE:

“A Week in the Life ...” 4

LEGISLATIVE UPDATE:

Summer Legislative Update 5

Legislator Profile: Assembly Member Jim Wood 9

FEATURES:

EMR Security Series Wrap-Up 10

New Direct-Acting Antivirals for the Treatment of
Hepatitis C Virus 11

MSK POCUS 13

MEMBERSHIP:

DO You Know? 17

Spreading Knowledge 17

2016 Legislative Reception 18

Welcome New Members 19

DO Leader Highlight: Harley Goldberg, DO 20

COLLEGE UPDATES:

Student DO Highlight: Zachary Anderson 21

Touro Dean’s Report 22

Touro Students’ Report..... 23

Western U/COMP Dean’s Report 24

Western U/COMP Students’ Report 25

Poster Competition Results 26



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Legacy

► Abraham Pera, DO, President OPSC

I have been thinking about Legacy. Specifically what will be of a lasting significance from the activities we have been involved in our life. Our family and our personal life should obviously be most important. Next is our career and work involvement.

In our profession we have many opportunities to speak into and have a lasting effect in our patients' lives. Further, because we have a relatively small number in our profession, we often have the opportunity to be involved in decision making that directly affects our practices and our patients. Some of us are leaving soon to represent California DOs at the AOA House of Delegates (HOD). Here we will not only be voting for new leadership for the AOA but for or against many resolutions brought before the House. I would recommend to our members to go to the HOD if the opportunity presents itself.

I have been asked how one qualifies to be involved at this level. The answer is the same as in any organization that operates with a representative model. One volunteers to be on committees at the state level. Then as one becomes involved opportunities arise to become a leader in these areas. So one's involvement begins at the committee level. Because of our structure at the OPSC, the influence of these committees is great. We are presently reformatting one of these major committees.

At its May meeting, the Board of the OPSC approved recommendations of the CME task force for reformatting the Education Committee. This committee has responsibility for all of the educational content of the conferences we have in the fall and spring. We have had excellent evaluations for the educational offerings; however we feel that we need a more proactive plan to offer the best and most consistent programs for our membership.

We will therefore be generating a three-year cycle of topics within which system review will occur at least once per cycle. In addition, academic threads such as preventative medicine, OMM, and pain management should be pursued at every conference. The Committee itself will be restructured so that the Chair and four subject leaders will have oversight of the entire conference. Individuals interested in participating as a subject leader in the Educational Committee should have either a passionate interest or experience in medical education and process. The position would require excellent networking, organizational and communication skills, and a team spirit. Interest in the educational process, not necessarily expertise in a specific subject matter is the most valued personal trait of a subject leader.

So for those who have ever felt that improvements were needed in the educational programs, or who wish to have a legacy of having made a difference, and who wish to have the opportunity to move forward in the OPSC and the AOA, please let us know if you have an interest in being involved at this level. We would be happy to have you and would do all we could to make your involvement a successful and fulfilling experience. ■

What Advances In Medicine Do You See Coming?

► David Canton, DO, MPH, JD, Managing Editor

Recently, by chance, I had the opportunity to ponder the advances in medicine over the last fifty to one-hundred years. For example, things we see as common place such as hip and knee replacement were unheard of fifty, seventy-five, or one hundred years ago.

If we consider advances in recent times, I believe the first successful hip replacement was done in the 1950s. Likewise, the first successful open heart surgery was done in the 1960s. These advances did not come into existence until after my grandfather had passed away. (Lest some of you think I am very senior in years, I will mention that there were several decades of difference between the ages of my grandfather and grandmother. That is a story unto itself which I will be happy to share with those interested over drinks at the next Monterey conference.)

So what did people do “back in the day” if they got to the point of bone on bone and were in need of a new hip or knee? I suppose they lived in pain. Perhaps their pain was somewhat reduced by doses of opioids. They were probably confined to a wheelchair or crutches but, given the nature of existence fifty to one hundred years ago, they may have found it very difficult to survive without family to provide for them. Their limited ability to ambulate would have precluded their ability to work a field to grow a crop or hunt for food which would have been a standard requirement of the day.

Fortunately, or unfortunately, most people probably did not have to deal with the issue. In most cases they probably succumbed to some infection such as influenza or strep before getting to the point of needing a new joint. My recollection is that antibiotics did not come into use until the 1940s, even though penicillin was discovered around 1928. Thus, without antibiotics, most did not live long enough to suffer the ailments of old age and overuse.

Vaccinations have been another development that has impacted health in modern times. While smallpox inoculations occurred in the era of the Revolutionary War, influenza vaccine was not developed until the 1930s. These days, thanks to the polio vaccine, polio is almost unheard of worldwide, though we may still deal with patients who suffer with post polio syndrome. However, those patients are becoming more rare. Even though we have had recent outbreaks of measles, how many recent graduates could identify a case of measles today if it were to present in their clinic? The widespread use of immunizations

have greatly reduced or eliminated diseases that would have killed thousands and thousands of people fifty to one hundred years ago.

In my lifetime, we have seen the advent of MRI, CT, arterial stents and vascular stents, just to name a few technological developments. When I was a resident, patients who had undergone coronary angiogram via femoral access had to stay absolutely still for hours with ten pound sand bags on the site to prevent bleeding and experienced a several day hospitalization. Today, the same procedure is done as an outpatient.

With all these advances is there anything left to be done in medicine today? Unfortunately, yes! We are still working on a cure for cancer, despite moving breast cancer from a death sentence to a survivable diagnosis. Likewise, HIV has gone from being a death sentence to a chronic disease, but we still don't have a cure. Our treatment of mental illness is woefully lacking, as is our ability to successfully treat Substance Use Disorder. Thus, there is still much work for the future physicians to do!

It will be interesting to see what advances the graduates of today will witness and be talking about in twenty-five, thirty or fifty years from now! No doubt, the editor of the *California DO* in the year 2040 will be able to write about advances we haven't yet envisioned!

The editors of the *California DO* would like to hear from you. What advances do you see coming in medicine? What advances would you like to see? Where do you think we'll be in 15, 20, or 25 years? Submit your thoughts to publications@opsc.org or by mail at 2015 H Street, Sacramento, CA 95811 (Attention: Karl Baur) and we'll share a selection of submissions in a future issue. ■



“A Week in the Life...”

► Kathleen S. Creason, MBA, Executive Director

Following is a sample of activities undertaken during a representative week in the life of OPSC's Executive Director.

Monday

Well *this* is not an average Monday morning for me! Having worked all weekend, I would normally be taking today off to reenergize. However, our fabulous new public relations consultant, Jane Einhorn, has arranged for a local television station to interview past OPSC Board member Randall West, DO this morning. Dr. West's office is conveniently located mere blocks away from my home in Folsom (you know, the town with the... lake...), so the 6:45 a.m. start time isn't as painful as it could be. The TV station is focusing the morning's show on sleep and relaxation, so Dr. West will be performing a cranial sacral technique during the first of two segments. Since the interview will be taking place before office hours, I'll be serving as the "patient." As it turns out, television is much like the military – hurry up and wait. The TV crew finally comes rushing in at 7:30, sets up the camera, and shortly thereafter goes live on the air. Dr. West does a terrific job describing the technique in easy to understand terms, and he manages to work into the discussion an explanation of osteopathic medicine. We had provided the station with the phone number to call to "Find a DO," so a banner with this information displays during the interview. Between segments, Dr. West manipulates the reporter, who becomes an immediate fan. The second segment is longer. Dr. West performs HVLA on an actual patient, who talks about how he was unable to find relief from pain before discovering osteopathic medicine. Overall, the experience is a huge success. I later learn that the number of calls from patients seeking a DO jumped after the show. [The interviews are available for viewing on OPSC's YouTube channel, "OPSC01."] This effort compliments the terrific radio interview that OPSC President Abe Pera, DO did several weeks earlier. Our investment in public relations is really starting to reap benefits. Now that the TV crew is gone, I take the rest of the day off to recharge!

Tuesday

This morning our legislative advocate, Jennifer Snyder, has arranged meetings with the offices of Senator Ben Allen and Assemblyman Richard Bloom. We're there to request letters of support for a California DO, Scott Howell, who has been nominated for a MedPAC appointment. MedPAC is an important committee that makes rec-

ommendations to Congress about Medicare payment. Both legislators ultimately agree to support this outstanding candidate. After the meetings, I review the summary of the OPSC CME Task Force decisions. This group recently held a day-long meeting to establish a three-year strategic CME plan. So impressive. Not only did they identify all anatomical systems and themes to be addressed over a rolling three-year period, they also assigned weights to each area to meet the expressed needs of attendees. Mid afternoon, I participate in a conference call with the CMS Region IX administrator to hear the latest updates on the evolving Medicare payment structure. That evening, I join a conference call of the OPSC Resolutions Committee during which the group agrees on the three resolutions for California to submit to the 2016 AOA House of Delegates.

Wednesday

Wednesday is a regroup day, much of which is spent addressing pending member requests and other issues that come in via e-mail and phone. One of the inquiries comes from a graduating Resident who is unsure whether he needs to report a juvenile incident on his DEA application. OPSC enjoys a cooperative relationship with a lawyer experienced with physician issues, so a quick call to him results in an answer. Later that day, Jennifer Snyder and I have a conference call with a Touro student who is looking for help in planning an elective policy rotation. He's done a great deal of groundwork; the program sounds intriguing. Jennifer agrees to participate by making several presentations. That evening, I attend a legislative reception of Republican leaders. We've had the pleasure of developing relationships with a number of legislators, and it's enjoyable to interact with them and remind them of the value of osteopathic medicine in California. After the reception, I rush to a phone so I can participate in a conference call of the OPSC Legislative Committee. There are a number of controversial bills this year – including one which would require physicians to notify every patient in writing of allegations which led to probationary status. The group has robust, thoughtful discussions. Finally, at 8:30 p.m., this workday comes to conclusion.

Continued on page 28 ►

Summer Legislative Update

► Jennifer Snyder, Capitol Advocacy

Legislative deadlines, budget negotiations, and the primary election made for a hectic past several weeks in Sacramento. June 3 was the Legislature’s House of Origin deadline, the date by which all bills had to pass out of their original houses in order to remain alive. Many bills failed, so the number still eligible for consideration has been significantly culled. Policy committee hearings have resumed to hear bills in their second house and legislators will work through the end of June to move remaining policy bills through the process. The Legislature breaks for a month-long summer recess on July 1, and will return August 1 to finish its work in the 2015-16 Legislative session.

Legislature Passes State Budget Deal – Governor Approves

After reaching an agreement with Governor Brown on June 9, the Legislature passed the 2016-17 Budget late in the afternoon on June 15, which was the constitutional deadline for lawmakers to do so without losing their pay. Total approved General Fund spending is \$122 billion, which is a decrease of \$454 million from the budget proposed in January but in line with the Governor’s May Revision. The approved plan contains \$(173.1) billion in total state spending and projects a net increase of \$3 billion in General Fund revenues compared to the 2015-16 Budget. The budget also retains the \$2 billion in spending for the State’s Rainy Day Fund, which continues to be one of Governor Brown’s top priorities.

Although the approved budget does not increase spending compared to the May Revision, several Democratic priorities are receiving new funding, including preschool and child care, higher education, and affordable housing. Republicans opposed the Budget plan because of these new funding commitments, which include over \$220 million to put an end to a controversial, decades-long rule that prohibited families on welfare who have more babies from receiving additional assistance.

Lawmakers passed the main budget bill on June 15 but waited until the following days and weeks to pass several trailer bills, so-named because they “trail” the budget and are needed to implement various aspects of the plan. Part of the main budget bill was an allocation of \$100 million in 2016/17 for the Song Brown Program, which OPSC supported. A substantial portion of the \$100 million includes funds to cover the loss of over \$40 million in grant funds from the federal government to the Program. OPSC worked collaboratively with the

California Medical Association and other physician groups to keep the Song Brown Program afloat and enhance its funding to provide additional dollars for residency programs in the state. As part of negotiations with the Brown Administration, the new Song-Brown funding will be contingent on federal approval of an extension of the Hospital Quality Assurance Fee. Because this is an existing fee that hospitals assess on themselves in order to receive federal Medi-Cal funding to pay for uncompensated care, the federal government is expected to approve it, as it has done multiple times in the past.

Specifically, the Song-Brown budget augmentation is broken down as follows:

- \$62 million to be spent over six years in support of existing primary care residencies
 - Funds will be available for YHC and non-THC residency programs
 - Likely includes OSHPD administrative costs (\$1 million per year)
- \$10 million to be spent over six years to support new primary care residency programs
 - Funding will be used to incentivize and partially support new primary residency programs by providing grants to programs that are contingent upon accreditation by the combined accreditation system of the ACGME after July 1, 2016.
 - Funds will be redirected over a period of three years for new residency slots at existing programs if not utilized as determined after the first three years
- \$10 million to be spent over six years
 - Funding will be used to augment the 2014 appropriation to create new residency slots
- \$17 million to be spent over six years for existing Teaching Health Center (THC) primary care residencies
 - Funding will be used to support THCs that are not receiving enough support through the federal THC program
 - Should not replace fund supporting current THC residency programs under Song-Brown
- \$1 million for the State Loan Repayment Program (SLRP)

Consistent with the Governor’s emphasis on fiscal vigilance, Health and Human services spending has not increased since the May Revision. As expected, the approved Budget does not include any restoration of Medi-Cal provider reimbursement rates. The budget was signed by the Governor prior to the July 1 deadline. ►

Summer Legislative Update

Continued from page 5

2016 Political Update

Outside the Capitol, the June 7 primary election produced surprise results in some races, while maintaining the status quo in many others. With record voter registration, the contests for November have been narrowed for everything from the presidency and the U.S. Senate to Congress and the State Legislature. Most of the results are in, but hundreds of thousands of absentee ballots have yet to be counted, so the results may shift in some races. Although Republicans defeated four incumbents in the Legislature in 2014, Democrats came back to the polls this year and proved that California is a deep shade of blue. Within the Legislature, Democrats will face each other in 12 of the open, contested races in November. And, for the first time in history, two Democrats are vying for a U.S. Senate seat - Attorney General Kamala Harris and Rep. Loretta Sanchez will compete to succeed Barbara Boxer, who is retiring.

Because the June 7 election was a presidential primary, statewide and constitutional officers were not up for consideration. A law enacted in 2011 prohibits initiatives from being placed on the June Primary ballot (except those sent by the Legislature), so the only ballot measure up for consideration was Prop 50, which voters approved on a four-to-one margin. Introduced by lawmakers in response to recent corruption scandals involving former state senators, Prop 50 will allow the Legislature to suspend fellow legislators' without pay by a two-thirds vote. Currently legislators can be suspended by a majority vote, but they continue to receive their pay.

The Legislature was the real battleground, with millions of dollars being spent in several contested races. Business interests, labor unions and education groups were among the interests that spent heavily, and although it is too soon to tell the outcome of some contests, business-backed candidates seemed to prevail in the majority of the Democrat, intraparty battles. One such example is Democrat and former Assemblyman Raul Bocanegra, who was surprisingly ousted by newcomer Patty Lopez in 2014. Bocanegra will face off against Lopez again in November after winning nearly 46% of the vote on June 7 versus Lopez's 27%. In the Senate, Democrat Assemblyman Bill Dodd will compete against Democrat and former Assemblywoman Mariko Yamada to succeed termed out Democrat Senator Lois Wolk in representing Napa, Yolo and Solano counties. Dodd received substantial support from the business community.

Several swing seats are in play this year, the outcomes of which could reduce Republican legislative representation and shore up Democrats' numbers, potentially even returning one or both houses to Democrat supermajorities. Democrats currently hold 25 seats

in Senate and would need to pick up two Republican seats to get to a 27-seat supermajority. In the Assembly, there are 52 Democrats, two shy of the 54 seats needed for a supermajority. Most Republican incumbents in swing seats failed to take the lead in the primary, trailing by several percentage points to Democrat challengers. Surprisingly, Republican Assemblywoman Catharine Baker was the exception - she took 53.8% of the vote against Democrat challenger Cheryl Cook-Kallio, who received 46.2%. She will still face a strong challenge given that Assembly Speaker Anthony Rendon has publicly stated that reclaiming Baker's seat for Democrats is his top priority.

Some incumbents in safe Republican seats led by slim margins on June 7, which could have also been a side effect of the turnout for Bernie Sanders/Hillary Clinton's victory. Notably, Assemblyman Travis Allen, representing parts of Orange County, received 50.9% of the vote against two Democrats, who split the other 49%.

Voters across the state seemed to have an appetite for tax and bond measures, with at least 70 of the 89 measures passing. In Sacramento, former Senate Pro Tem Darrell Steinberg was elected mayor, succeeding Kevin Johnson.

In some close races, it could take up to a month for all ballots to be counted.

OPSC'S 2016 Legislative Issues

OPSC has been significantly involved in a number of key legislative issues in 2016 that impact osteopathic physicians and their patients. Key issues are as follows:

Scope of Practice

Three key bills that OPSC opposed in 2015 have finally been defeated. The nurse practitioners bill (SB 323), the naturopathic doctors bill (SB 538), and the optometrists bill (SB 622) all died in committee due to lack of votes.

CURES

OPSC is opposing SB 482 (Lara), which places new requirements on health care practitioners with respect to the Controlled Substance Utilization Review and Evaluation (CURES) database. SB 482 was significantly amended on June 7 to require health care providers authorized to prescribe, order, administer, furnish, or dispense a controlled substance to consult CURES no sooner than 24 hours prior to prescribing Schedule II, III, or IV controlled substance for the first time, and annually thereafter. Prescribers who fail to do so would be subject to administrative sanctions by their licensing board, except in certain circumstances that are exempt from the reporting

requirement (e.g. emergency room visits, clinics licensed under the Department of Public Health, outpatient settings). SB 482 passed out of the Assembly Business and Professions Committee on June 14 and now goes to Appropriations. OPSC will remain opposed to SB 482 unless it is amended to make several clarifying changes, as well as changes to the reporting and disclosure requirements.

SB 1195 and SB 1033 Stopped in Senate

SB 1195 (Hill), which would have given the director of the Department of Consumer Affairs unilateral authority to overturn the decisions of any full board under the DCA, is dead. Specifically, SB 1195 would have given the DCA the authority to review decisions and other actions by the boards it oversees in order to determine if those actions “unreasonably restrain trade.” It would have also required the Office of Administrative Law to perform additional reviews of regulations proposed by DCA boards. This bill is based on a 2015 Supreme Court ruling that, because the majority of the board members on the North Carolina State Board of Dental Examiners were dentists, that board was not acting as a state agent in its regulation of dentistry. This opened that board up to legal action for engaging in unfair restraint of trade. After successful lobbying by OPSC and others, SB 1195 was not brought up for a vote on the Senate floor ahead of the House of Origin deadline. However, the author – Senator Jerry Hill – has stated he will try to revive the bill in the Assembly sometime prior to the end of the Legislative Session.

SB 1033 (Hill), which would have required physicians and surgeons, podiatrists, chiropractors and naturopathic doctors to notify patients when they are practicing on probationary status, failed on the Senate floor and is dead for the year. After successful lobbying by OPSC and other physician and provider groups, Senator Hill failed to obtain enough votes for passage of the bill out of the Senate ahead of the House of Origin deadline. The reporting requirement in SB 1033 would have served as a deterrent for physicians to voluntarily seek resolution through probation.

2016 Bills of Interest to OPSC

A number of bills are moving through the legislative process that OPSC is supporting, opposing or watching very closely for amendments. These bills are as follows:

AB 1306 (Burke) Healing arts: certified nurse-midwives: scope of practice.

Would require an applicant for a certificate to practice nurse-midwifery to provide evidence of current advanced level national

certification by a certifying body that meets standards established and approved by the Board of Registered Nursing. This bill would also require the board to create and appoint a Nurse-Midwifery Advisory Council. **Status:** *In the Senate – set for hearing in Senate Business, Professions & Economic Development Committee.* **Position:** *Oppose*

AB 2086 (Cooley) Workers’ compensation: neuropsychologists.

Current law requires the Administrative Director of the Division of Workers’ Compensation to appoint qualified medical evaluators in each of the respective specialties as required for the evaluation of medical-legal issues, including medical doctors and doctors of osteopathic medicine who meet specified requirements. This bill would provide that a medical doctor or doctor of osteopathic medicine who has successfully completed a residency or fellowship program accredited by the American Osteopathic Association or by an organization that is a predecessor to the Accreditation Council for Graduate Medical Evaluation or the American Osteopathic Association would satisfy the residency training requirement. **Status:** *In the Senate Appropriations Committee.* **Position:** *Neutral as Amended to include AOA training*

AB 2216 (Bonta) Teaching Health Center Graduate Medical Education; grant program

Would establish the Teaching Health Center Primary Care Graduate Medical Education Fund to fund primary care residency programs, as specified, subject to appropriation by the Legislature. The bill would establish criteria for the awarding of grants under these provisions to teaching health centers, as defined, and would require the Office of Statewide Health Planning and Development and the Director of Statewide Health Planning and Development to administer these provisions. The bill would require the office to adopt emergency regulations to implement these provisions. **Status:** *In the Senate Health Committee.* **Position:** *Support*

SB 22 (Roth) Medical residency training program grants.

Would create the Graduate Medical Education Trust Fund in the State Treasury, to consist of funds from public-private partnerships created to fund grants to graduate medical residency training programs and any interest that accrues on those moneys, and would require that moneys in the fund be used, upon appropriation by the Legislature, for those purposes, as specified. The bill would appropriate \$300 million General Fund to the the Office of Statewide Health Planning and Development for the purposes of administering the

Summer Legislative Update

Continued from page 7

Song-Brown Health Care Workforce Training Act over a 3-year period.

Status: *In the Senate - Referred to Com. on Rules.* **Position:** *Support*

SB 323 (Hernandez) Nurse practitioners.

Would expand nurse practitioners' scope of practice, allowing them to practice without the supervision of a physician and surgeon if certain requirements are met. **Status:** *Failed Passage.* **Position:** *Oppose*

SB 482 (Lara) Controlled substances: CURES database.

Would require a health care practitioner authorized to prescribe, order, administer, furnish, or dispense a controlled substance to consult the CURES database to review a patient's controlled substance history no earlier than 24 hours before prescribing a Schedule II, Schedule III, or Schedule IV controlled substance to the patient for the first time and at least annually thereafter if the substance remains part of the treatment of the patient. The bill would exempt a veterinarian and certain types of visits from this requirement. **Status:** *In the Assembly Appropriations Committee.* **Position:** *Oppose Unless Amended*

SB 538 (Block) Naturopathic doctors.

Would revise and recast existing law provisions governing naturopathic doctors and would expressly authorize a naturopathic doctor to order, perform, review, and interpret the results of diagnostic procedures commonly used by physicians and surgeons in general practice and to dispense, administer, order, prescribe, provide, furnish, or perform parenteral therapy and minor procedures, among other duties without the supervision of a physician. **Status:** *In the Assembly – was last held in the Assembly Appropriations Committee.* **Position:** *Oppose*

SB 622 (Hernandez) Optometry.

Would expand optometrists' scope of practice. Would authorize the State Board of Optometry to allow optometrists to use nonsurgical technology to treat any condition authorized under the Optometry Act and would authorize an optometrist to use diagnostic pharmaceutical agents; to independently initiate and administer vaccines; and to use therapeutic pharmaceutical agents for certain anterior segment lasers and minor procedures. **Status:** *Failed Passage.* **Position:** *Oppose*

SB 867 (Roth) Emergency medical services.

Current law, until January 1, 2017, authorizes county boards of supervisors to elect to levy an additional penalty, for deposit into the EMS Fund, in the amount of \$2 for every \$10 upon fines, penalties, and forfeitures collected for criminal offenses. Current law, until January 1, 2017, requires 15% of the funds collected pursuant to

that provision to be used to provide funding for pediatric trauma centers. This bill would extend the operative date of these provisions indefinitely. **Status:** *On Assembly Floor.* **Position:** *Support*

SB 1033 (Hill) Medical Board & Osteopathic Medical Board; disclosure of probationary status

Would require the Medical Board of California and the Osteopathic Medical Board of California to require a licensee to disclose on a separate document her or his probationary status to a patient prior to the patient's first visit following the probationary order while the licensee is on probation. **Status:** *Failed Passage in the Senate - Dead.* **Position:** *Oppose*

SB 1195 (Hill) Professions and vocations: board actions.

Current law provides for the licensure and regulation of various professions and vocations by boards within the Department of Consumer Affairs, and authorizes those boards to adopt regulations to enforce the laws pertaining to the profession and vocation for which they have jurisdiction. This bill would authorize the Director of Consumer Affairs, upon his or her own initiative, and require the director, upon the request of the board making the decision or the Legislature, to review any nonministerial market-sensitive decision or other action, except as specified, of a board within the department to determine whether it furthers state law and to approve, disapprove, request further information, or modify the board decision or action, as specified. The bill would require the director to issue and post on the department's Internet Web site his or her final written decision and the reasons for the decision within 90 days from receipt of the request for review or the director's decision to review the board decision. **Status:** *Failed Deadline in the Senate - Dead.* **Position:** *Oppose*

SB 1261 (Stone) Physicians and surgeons: fee exemption: residency.

The Medical Practice Act generally requires that an application for a certificate be accompanied by the fee required by the act, but requires the waiver of the fee for a physician and surgeon residing in California who certifies to the Medical Board of California that the license is for the sole purpose of providing voluntary, unpaid service. The act establishes a parallel fee waiver requirement for the renewal of a physician and surgeon's certificate. This bill would remove from those application and renewal fee waiver provisions the requirement that a physician and surgeon reside in California. **Status:** *In the Assembly – Business and Professions Committee.* **Position:** *Support if Amended* ■

Meet Assembly Member Jim Wood



Jim Wood is the new chair of the Assembly Health Committee, which oversees issues ranging from health care reform, changes to the Medi-Cal program, prescription drug policy, and health plan oversight. Dr. Wood is a dentist by trade, so he was a natural fit for the Health Committee chairmanship.

Assemblyman Wood was elected in November 2014 to represent California's 2nd Assembly District, which comprises all of Del Norte, Trinity, Humboldt, and Mendocino counties, plus northern and coastal Sonoma County, including the northern half of Santa Rosa.

Dr. Wood has lived in Northern California since 1987, when he opened his family dental practice in Cloverdale. He was elected to the Healdsburg City Council in 2006 and served two terms as Mayor. Wood worked to make local government more effective through reorganizing city departments to increase efficiency, balancing the budget, and streamlining the building permit process. His priorities are health care, economic development, environmental protection, and fiscal reform.

In his first year in the Assembly, Dr. Wood authored 9 bills that were signed into law, including the Marijuana Watershed Protection Act (AB 243), which serves as the environmental cornerstone in California's Medical Marijuana Regulation and Safety Act.

In addition to his work in the State Legislature, Wood is a forensic dentistry expert and serves as the forensic consultant for 5 Northern California Counties. He co-founded a mass disaster identification team in California and helped pass state legislation to standardize county identification procedures, a model now adopted by other

states. Recently, Wood served as part of the response team to the Valley Fire in Lake County, working to identify victims of the blaze and provide closure to family and loved ones.

Assemblyman Wood is an effective member and is generally supportive of measures that would positively impact osteopathic physicians. He is a strong supporter of MICRA. In addition to his medical marijuana legislation, he is working to combat the opioid abuse epidemic in California. He carried a bill last year that sought to prohibit health plans from requiring the use of opioid analgesic drug products that have no abuse deterrent properties. He is currently carrying a bill to establish the Opioid Abuse Task Force to provide the Legislature with recommendations on combatting opioid abuse. Dr. Wood is also authoring AB 2024, which authorizes federally certified critical access hospitals (CAH) to employ physicians and charge for their services until 2024 (exempting those hospitals from the Corporate Practice of Medicine prohibition), and requires the Medical Board to report to the Legislature on the impact of this authorization. Assemblyman Wood's goal with AB 2024 is to increase the number of physicians and surgeons in rural areas.

As chair of the Assembly Health Committee, Assemblyman Wood will consider many issues relevant to OPSC over the course of his tenure. OPSC looks forward to working closely with Assemblyman Wood to ensure that patients receive quality health care and that physicians are supported, and not hindered, in their efforts to expand access to care and meet the needs of the State's expanding insured populations. ■

New CME Reporting Guidelines

Effective July 1, OPSC is required by the AOA to report credits earned for all CME programs within a limited time following an event's conclusion. What does this mean for you? It means that OPSC will no longer be able to accept attestation forms for CME programs on an indefinite basis, as has been our policy in the past. In order to smoothly meet the AOA's new policies and ensure accurate reporting to the AOA for all programs, physicians will have 60 days to attest hours for OPSC-sponsored CME events. Once 60 days has passed after a CME program, credits will no longer be reported to the AOA for that program. OPSC can still process your credits after 90 days but they will only be valid for state licensure CME requirements. The AOA will not accept them after that point.

The quickest way to check to see if you have attested hours for a program is to see if we have posted your CME certificate for that program. Click on the "My CME" link under the CME menu on any www.opsc.org page (sign in is required) to view the certificates we have on file for you. The actual time from submission of your attestation to posting your certificate will vary by event and time of year, but most certificates are typically posted within three weeks of submission. ■

EMR Security Series Wrap-Up

► Scott Helf, DO, MSIT

This article concludes a series of articles previously published in the *California DO*, which aim to educate and empower physicians regarding electronic medical record (EMR) and private health information (PHI) security. Below is a brief review and highlights of the key points of each:

EMR Security for Physicians – An Introduction outlines how EMR and PHI security is the ethical and legal responsibility of the physician. This responsibility cannot be deferred to others, such as computer security experts. Section 13410 of the HITECH Act lays out potential civil and criminal penalties if due care and diligence regarding PHI are not followed. A 2011 case in which Massachusetts General Hospital settled with the Department of Health and Human Services for \$1M, after an employee forgot a laptop containing 192 individuals' PHI on a subway. Not only is it physicians' ethical duty to safeguard PHI, but, there are very real legal potential consequences for not doing so.

Roles, Documentation, and Auditing: Is Your EMR Up to Snuff? deals with the importance of understanding and documenting who has access to what information in the EMR. Roles-based security is discussed, and a few practical examples of vendor predefined and custom security roles are provided. The importance of documenting this information, and keeping it up to date are emphasized. Finally, a recommendation is given to strongly consider having a properly credentialed third party audit your EMR, to ensure that “due care” as considered by the “reasonable man” argument, has been exercised in protecting patient PHI.

EMR Physical Security: The Easiest Way to Violate HIPPA? examines common sense and some not so obvious issues regarding the physical security of devices containing or with access to PHI. Physical access protocols, placement of machines with access to PHI, attention to screen direction and one's physical surroundings, as well as social engineering are discussed. A strong recommendation is made to not store PHI on physical devices such as mobile devices, flash drives, laptops, etc. Furthermore, these devices should have remote wipe capabilities. Lastly, should any device used to store PHI be lost or stolen, it should immediately be reported to the appropriate authorities.

When You Lay Down with Dogs: EMRs and the Importance of Machine Hygiene reviews procedures and habits to secure devices with access to PHI. These include understanding the differences between viruses and malware, installing a single antivirus package, running regular scans, and regularly patching and updating your operating system, software, and drivers. Devices used to access PI should be used for only that purpose—not for video games, social media, or anything else non-work related. Unexpected email attachments should not be opened, nor should links in emails be clicked that appear suspicious or are from a source you do not know. Plugging other devices, such as thumb drives, external hard drives, etc., into a machine with access to PHI should be avoided wherever possible, and at minimum, thoroughly scanned for viruses before doing so.

Email is Secure, Right? What Could Possibly Go Wrong? discusses why email is not secure, and should not be used to communicate or transmit PHI. Instead, physicians and health care providers should use secure EMR provided patient communication features, or the tried and true face to face patient visit.

Passwords: Good Complexity Made Simple explains why the password to your EMR should be suitably complex to thwart unauthorized access via simple guessing or “brute force” password cracking attempts. An easy, practical approach for creating and actually remembering a reasonably strong password is provided:

1. Start with a phrase that is easy to remember.
2. Use at least eight characters derived from that phrase.
3. Use at least one of each: upper and lower case letters, numbers, and symbols.
4. Do not use whole words or names.
5. Do not put capital letters at the beginning.
6. Do not put numbers at the end.
7. Put it all together.

Using this method a phrase such as “We liked Hawaii in the fall of 2010” becomes “<WIH2010ithf>”, which takes the average contemporary computer about 1,000 centuries to crack. At minimum, your EMR, social media, financial, and physical device passwords should be different, and not merely permutations of the same password.

Continued on page 28 ►

New Direct-Acting Antivirals for the Treatment of Hepatitis C Virus

► Charlotte Bates M.Ed. MLS(ASCP)cm, Denene Lofland, PhD

The hepatitis C virus (HCV) is an important cause of chronic liver disease. Many individuals infected with HCV have no symptoms or have non-specific symptoms which contribute to delayed diagnosis. The Centers for Disease Control recommends that everyone born between 1945 through 1965 be screened for HCV. This recommendation stems from the fact people born during these years are 5 times more likely than other adults to be infected. They estimate that this screening would uncover 800,000 undiagnosed hepatitis C cases.

While about 20% of infected persons clear the virus without treatment, 80% develop chronic disease for reasons that are not clearly defined. Approximately 3.9 million people in the United States have chronic HCV infections with potential for progression to liver cirrhosis, hepatocellular carcinoma, transplantation, or death. In 2007 the number of HCV-related deaths exceeded that of HIV-related deaths.

The goal of therapy is the elimination of HCV RNA in order to prevent liver damage. A sustained virologic response (SVR), defined as the absence of detectable HCV RNA in serum 24 weeks after completion of therapy, is predictive of cure and associated with lower risk of morbidity and mortality.

The first treatments for HCV included interferon- α , pegylated interferon monotherapy, and pegylated interferon plus ribavirin, achieving a maximum SVR rate of approximately 55%. This low SVR prompted the investigation of novel therapies directed at HCV. The resultant drugs, termed direct-acting antivirals (DAA), offered the potential for patients to receive a curative, all-oral, interferon-free treatment. This article will provide a brief review of HCV and DAA.

Overview of Hepatitis C Virus

HCV is an enveloped member of the *Flaviviridae* family and contains single stranded positive-sense RNA encoding at least 10 proteins. Several of these proteins induce antibody production in the host and are the basis for serological diagnosis. In addition, they provide targets for antiviral drug discovery.

The core protein is an RNA-binding structural protein forming the nucleocapsid. Evidence suggests it may also suppress several host immunoregulatory genes. It is known to be involved in the development of liver steatosis and has been implicated in hepatocellular carcinoma.

The HCV envelop proteins, E1 and E2, are structural proteins. They constitute the outer coat of the HCV molecule and interact with

host cell surface molecules, such as the hepatocyte receptor CD81, allowing the virus to attach to the cell.

After binding to the cell, the virus is internalized into the cytoplasm where the virus loses its nucleocapsid and envelop proteins. Translation and replication of the HCV RNA takes place in the cytoplasm with translation occurring at the rough endoplasmic reticulum (ER) to produce a polyprotein that is cleaved to form the structural and non-structural proteins. During this process, changes in the cell membrane occur creating a membranous web where NS5B RNA polymerase manufactures more RNA strands. RNA strands become encapsulated in the ER, are enveloped and matured in the Golgi apparatus before release of the new virions.

Non-structural proteins NS2, NS3, NS4A, NS4B, NS5A, and NS5B are required for HCV viral replication. NS2, together with part of the NS3 protein, forms a short-lived metalloprotease. NS3 and NS4A form an essential viral protease that is a popular anti-HCV drug target. NS4B is a membrane anchor for the replication complex. NS5A is important in regulating cellular pathways and is essential for replication. NS5B acts as an RNA-dependent RNA polymerase.

Distribution of HCV Genotypes

Genome sequences of HCV isolates vary by as much as 33%. This heterogeneity contributes to differences in disease progression, response to therapy and difficulty in vaccine development. The genome variability also provides the basis for division into six major genotypes, each with multiple subtypes.

Genotypes 1-3 are distributed worldwide, accounting for 60% of global infections. In the United States, HCV genotypes 1a and 1b are the most common, followed by genotypes 2 and 3. These genotypes are also prevalent in Europe and Japan. In the Middle East, Egypt, and central Africa genotype 4 is the principal virus; with genotypes 5 and 6 most exclusively in South Africa and Hong Kong.

Prior to the introduction of DAA therapy, genotype was considered the strongest viral-related predictor of a SVR with genotype 1 considered the most difficult to treat. However, the predictive value of genotype has decreased significantly due to the high rates of SVR among all genotypes after DAA treatment. ►

New Direct-Acting Antivirals for the Treatment of Hepatitis C Virus

Continued from page 11

Direct acting Antivirals

The goal of HCV therapy is to achieve a SVR defined as polymerase chain reaction determined aviremia 24 weeks after completion of treatment. In a study by Swain et al, 99.1% of patients achieving a SVR maintained undetectable levels of HCV RNA throughout the follow-up period and can therefore be considered cured.

Previously, the combination of pegylated interferon and ribavirin was considered the standard of care for HCV infection. However, the combination had substantial toxicity and limited efficacy, especially against patients with genotypes 1 and 4. The introduction of DAA significantly increased the SVR and provided an alternative to interferon-based therapies.

DAAs are molecules that directly inhibit viral replication by targeting specific steps in the HCV life cycle. They are divided into three classes, depending on the target: NS3/NS4 protease inhibitors, NS5A inhibitors and NS5B (nucleoside and non-nucleoside) polymerase inhibitors.

The initial DAA were first-generation **NS3/4 protease inhibitors**, approved for clinical use in 2011. But, due to the high rate of resistance development, these protease inhibitors were not recommended for use as monotherapy. Their addition to the pegylated interferon and ribavirin regimen increased SVR rates for genotypes 1 and 4 from approximately 55% to 70%. However, due to substantial adverse effects and drug-drug-interactions these agents are not currently recommended and have been replaced by second-generation macrocyclic NS3/4 protease inhibitors with improved profiles. Second-generation protease inhibitors are used in combination therapies and have boosted the SVR rate to about 80%.

NS5A inhibitors are potent anti-HCV agents with high SVR rates but also suffer from resistance development. They have been used in combination with pegylated interferon and ribavirin or with other DAAs with or without ribavirin. The first NS5A inhibitor in the United States is provided in combination with a NS5B polymerase inhibitor (ledipasvir-sofosbuvir, see below).

There are two sub classes of **NS5B polymerase inhibitors**, nucleoside competitive inhibitors and allosteric inhibitors (non-nucleoside) inhibitors. This class has the benefits of low resistance development and activity across all genotypes. Sofosbuvir is the first NS5 inhibitor available here. The once-daily dosing combination of ledipasvir-sofosbuvir is an example of a dual targeting DAA. Ledipasvir inhibits NS5A protein whereas sofosbuvir inhibits NS5B RNA-dependent polymerase, effectively halting viral replication. This interferon-free regimen has performed well in several clinical trials.

Measurements of HCV RNA taken post treatment for participants infected with HCV genotype 1, subgroup 1a (77%) or 1b (23%), showed a significant decrease in the amount of HCV RNA present. SVR rates were between 94 and 100% in treatment-naïve and experienced patients with or without cirrhosis.

Summary and Discussion

Chronic hepatitis C, caused by HCV genotype 1, continues to be a major concern in the United States. Over the last several years, major advances have been made in the discovery and development of efficacious direct-acting anti-HCV agents targeting HCV-encoded proteins. Agents are classified by nonstructural target: NS3/NS4 protease inhibitors, NS5A inhibitors, and NS5B polymerase inhibitors.

HCV DAA monotherapy may result in resistance development due to the virus's rapid replication and introduction of errors by its polymerase. Some variants are resistant to first-generation NS3/NS4 protease inhibitors, however, second generation protease inhibitors remain active. Similar resistance has also been observed among first generation NS5A inhibitors. Few reports of NS5B polymerase inhibitor resistance are noted.

One strategy to maintain SVR and prevent the emergence of resistance is by using combination therapy. The current American Association for the Study of Liver Disease and Infectious Disease Society of America HCV Guidance for initial treatment of HCV infection recommend daily fixed-dose DAA combination. These drug have improved efficacy rates, with SVR as high as 100%. In addition they allow for shorter treatment duration and produce fewer adverse effects than interferon-based treatments. Unfortunately, DAAs may be prohibitively expensive for some patients. The estimated cost for HCV-infected patients, with or without cirrhosis, ranges from roughly \$63,000 to \$300,000. ■

Editor's Note: References available upon request.

MSK POCUS

► Michael Schick, DO, MA, Assistant Professor, Director of Technology Enabled Active Learning, UC Davis Medical Center, Department of Emergency Medicine

Introduction

Musculoskeletal (MSK) point-of-care-ultrasound (POCUS) is applicable in both the primary and acute care settings. It is more sensitive in diagnosing long bone fractures than plain radiograph. It aids in the assessment of tendons, diagnosing tendinopathy, tears, and rupture. It aids in evaluation of the muscle diagnosing tears, hematomas, and myositis ossificans. Finally, joints can be easily evaluated with ultrasound for effusion, dislocation, and associated fracture or soft tissue infection.

Normal Anatomy

Figure 1 demonstrates normal appearing layers of soft tissue, fascia, muscle and bone. In general, the epidermis, fascia, and bone are hyperechoic compared to subcutaneous fat and muscle (which are hypoechoic). Bone will typically produce a clean shadow. **Figure 2** demonstrates normal bony cortex in a long axis with shadow below. Muscle in a short axis is mostly hypoechoic with a few hyperechoic portions (**Figure 3**). In the long axis you can appreciate muscle fiber striations (**Figure 4**). Tendon in a long axis appears as a thin, well demarcated structure with striated fibers (**Figure 5**). **Figure 6** demonstrates the principle of anisotropy, which is most apparent when imaging tendons and muscles. Muscle and tendon may appear focally hyperechoic depending on the angle of the transducer, but this is artefactual and will disappear with further interrogation. **Figure 7** demonstrates a normal shoulder joint with no anechoic effusion and normal articulation of the glenoid and the humeral head.

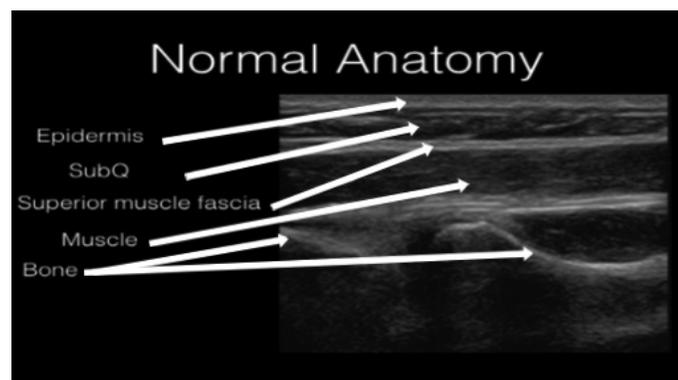


Figure 1. Normal soft tissue, muscle, fascia, and bone layers on gray scale ultrasound.

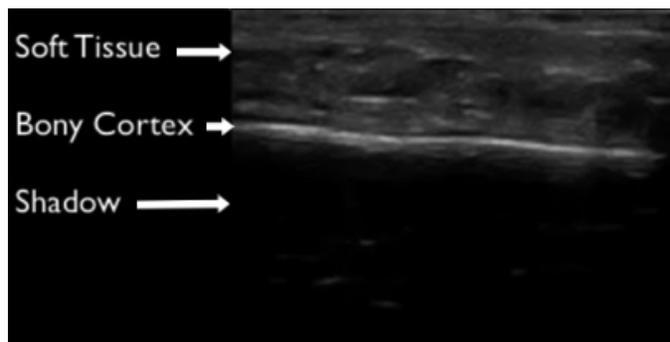


Figure 2. Normal long axis bone appearance on ultrasound. The cortex appears hyperechoic with shadow deep to the cortex.

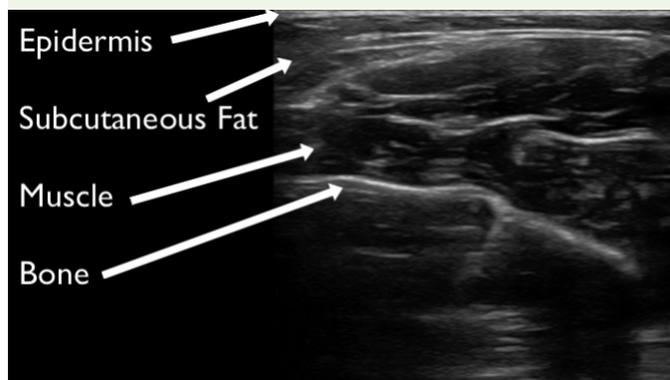


Figure 3. Demonstration of normal muscle on ultrasound in a short axis plane. It appears hypoechoic to fascia, epidermis, and bone. Within the muscle there are small hyperechoic portions that are layering of striated muscle, fascia, or neurovascular bundles.

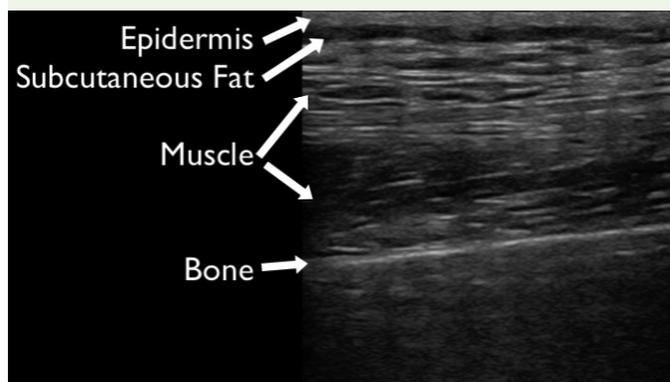


Figure 4. Demonstration of normal muscle appearance on ultrasound in the long axis plane. Its striated appearance demonstrating muscle fibers is pathognomonic.

MSK POCUS

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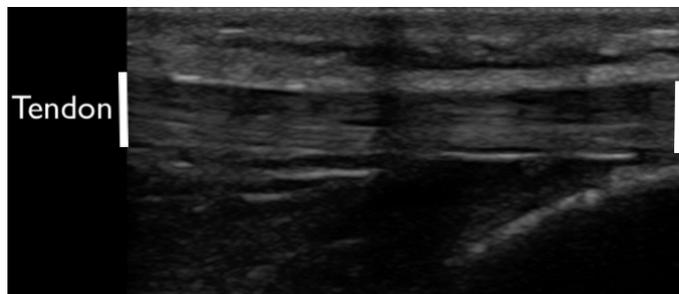


Figure 5. Normal tendon shown with ultrasound in the long axis plane. Tendons appear as well demarcated striated structures that run from muscle and insert into bone.

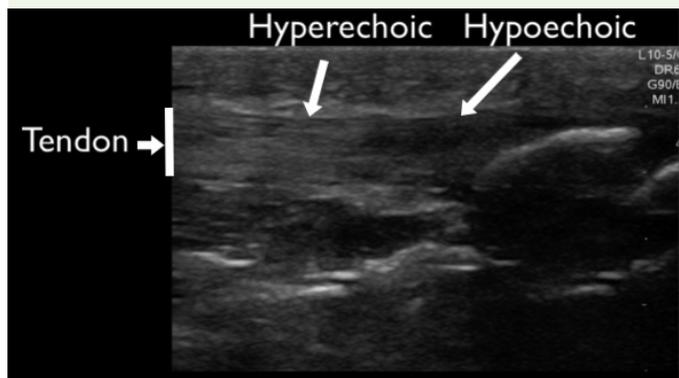


Figure 6. Normal tendon demonstrating anisotropy. Portions of the tendon appear hypo and hyperechoic because of the angle of the ultrasound beam. When further interrogated, these differences in echogenicity are no longer apparent.

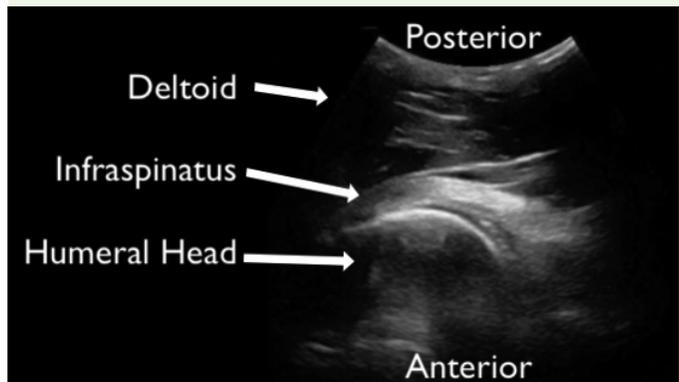


Figure 7. An example of a normal joint. This still image of the shoulder demonstrated deltoid, humeral head articulating with glenoid, and the infraspinatus tendon. The image is acquired from the posterior shoulder.

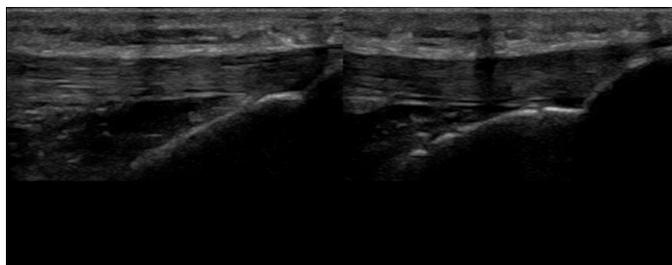


Figure 8. Demonstration of dual screen utilization. One Achilles tendon is imaged in the long axis and a still image is frozen. Then the contralateral Achilles tendon is imaged using the same technique. A side by side comparison can then be made and documented.

General Evaluation Technique

During POCUS evaluation of MSK structures the clinician will uniformly use the high frequency or linear transducer. Use ample gel as often the conditions being evaluated are painful to palpation. All structures should be evaluated in two planes. All structures should be interrogated in their entirety and compared to the contralateral “normal” side of the patient. While evaluating the structure of interest, place two fingers from your hand holding the transducer to stabilize the probe on the patient. Optimize depth to 1-2 cm deep to the structure of interest and not further. Optimize the gain so that vessels appear anechoic. Using a dual screen mode may enhance your ability to perform side by side comparisons of structures (Figure 8).

Specific Evaluation Techniques and Pathology

Bone

In general, fractures are easier to visualize while scanning along the long axis of the bone. Begin on normal bone and appreciate the bright white/hyperechoic bony cortex and shadowing deep to the cortex. Trace the hyperechoic cortex towards the region of pain and evaluate for disruption of the cortex. A break in the cortex is the fracture (Figure 9). Joint spaces may also demonstrate “breaks” in the cortex, but appear different than fractures with smooth borders and in predictable locations. When a fracture is identified take note of the angulation and displacement. You may freeze the image and measure the distance of displacement with calipers. Continue scanning to evaluate for other associated fractures or fragments. Remove the transducer and image the fracture from another surface to further evaluate for angulation and displacement. For example, if a fracture is identified while scanning a patient anterior radius also evaluate the fracture from the lateral aspect of the arm to appreciate how the fractured fragment is positioned in three dimensions. Lastly, hem-

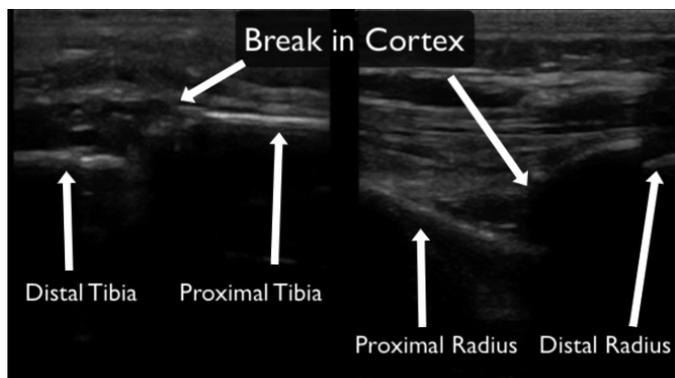


Figure 9. Examples of long bone fractures on ultrasound. Both imaged in the long axis of the long bone. The image on the left demonstrated a tibia fracture and the image on the right demonstrates a distal radius fracture. In both examples there are clear disruptions in the hyperechoic bony cortex.

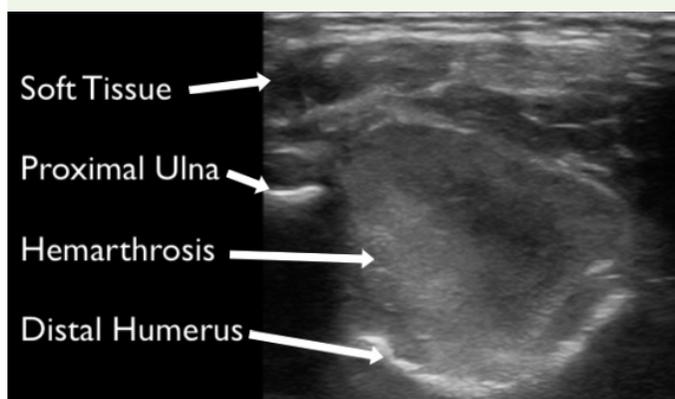


Figure 10. A large hemarthrosis visualized at the elbow in a grade one supracondylar fracture.

arthrosis may be present and should raise the clinical suspicion for fracture even if one is not readily identified (Figure 10).

Tendon

Tendons should be interrogated in their entirety in the short and long axis to where they insert into the bone. The region adjacent to bony insertion is where the majority of pathology is identified. Complete or partial ruptures are readily apparent as disruption of normal striated tendon fibers often with associated surrounding hematoma (Figures 11, 12 & 13). Range of motion testing with simultaneous ultrasound can assist in evaluation for complete ruptures. Tendinopathy can be identified by the presence of calcifications (Figure 14), edema (Figure 15), and increased vascularity (when compared to the

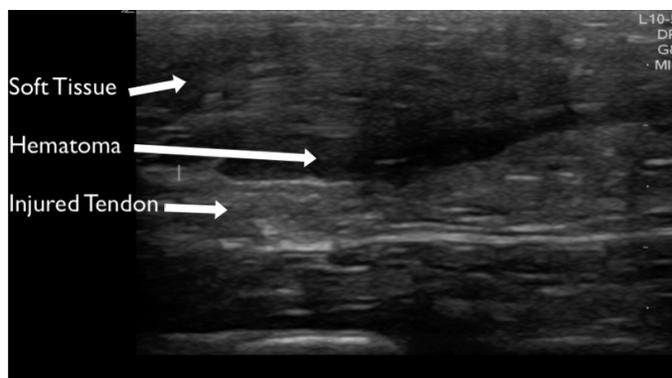


Figure 11. The Achilles tendon evaluated in the long axis demonstrating a partial or complete rupture with adjacent hematoma.

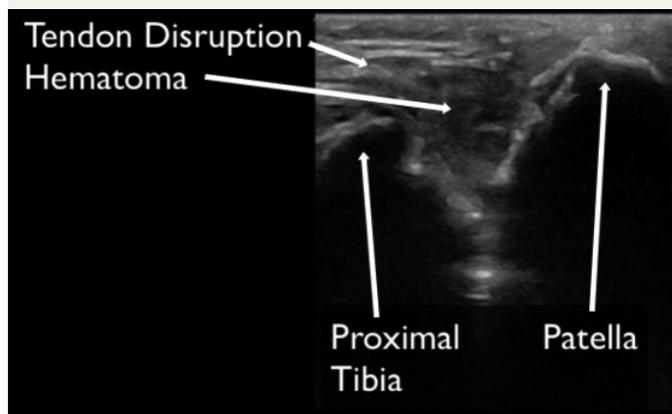


Figure 12. The patellar tendon evaluated in the long axis demonstrating a complete rupture seen at the proximal tibia with hematoma filling the space between the proximal tibia and patella.

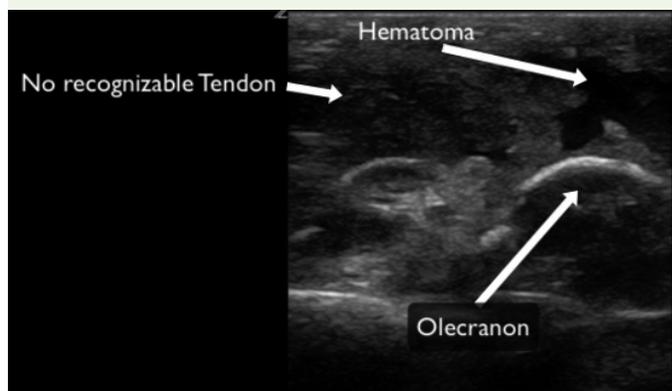


Figure 13. A triceps tendon evaluated in the long axis demonstrating a complete rupture. There is no discernable tendon and obvious hematoma present.

MSK POCUS

Continued from page 15

contralateral tendon). Edema will make the tendon more hypoechoic and larger in diameter compared to the contralateral tendon.

Joint

There are many joints that can be easily visualized with ultrasound and the technique varies based on the anatomical location and specific clinical question being addressed. Effusions appear as anechoic collections within and around joint spaces (Figure 16). POCUS is useful not only for identifying effusions, but for planning and performing joint injections or arthrocentesis. Tendon pathology is often identified near joint spaces at points of insertion. Finally, dislocation can be identified by appreciating abnormal articulation or gapping of the joint space (Figure 17). Evaluating the contralateral joint is helpful as a comparison of normal anatomy.

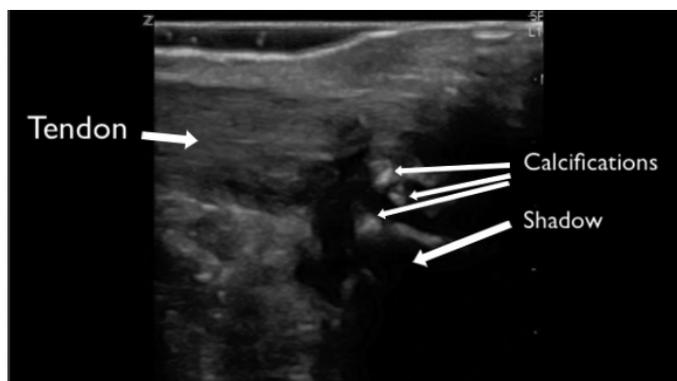


Figure 14. The Achilles tendon evaluated in the long axis demonstrating calcific tendonitis. Multiple small calcified portions in the distal tendon appear hyperechoic with shadowing.

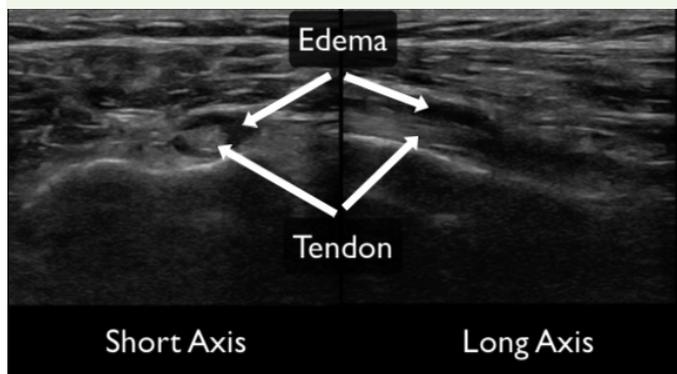


Figure 15. Tendinosis with surrounding edema demonstrated in both the short (left) and long axis (right). The edema appears as a hypo or anechoic ring around the tendon.

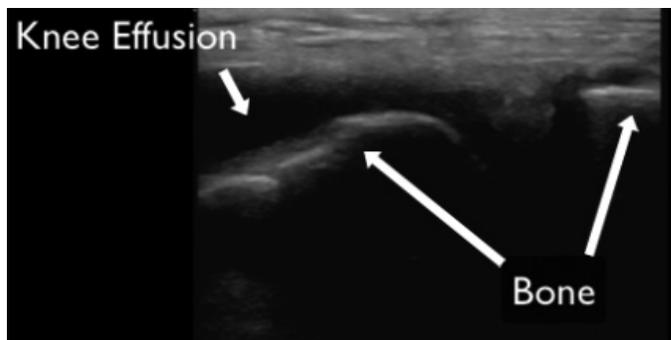


Figure 17. An anechoic collection of fluid identified as a joint effusion in a patient's knee.

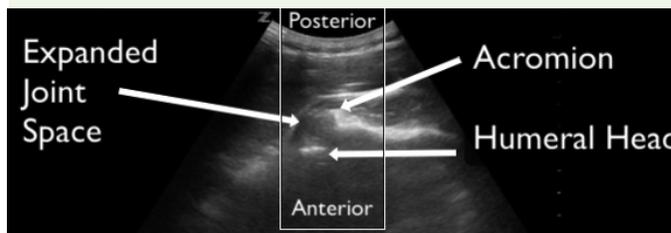


Figure 18. Demonstration of an anterior shoulder dislocation on ultrasound. The ultrasound transducer is placed on the posterior shoulder in the transverse body plane. The acromion and the humeral head are identified as labeled on the image. There is an abnormal space between the acromion and humeral head with translation of the shoulder away from the transducer, consistent with an anterior dislocation and hemarthrosis. Compare this image to the normal shoulder in Figure 7.

Summary

Musculoskeletal POCUS has many uses in the primary and acute care settings. The exam is relatively easy to perform, does not have associated radiation, and can be performed serially to evaluate for clinical change. It is more sensitive than X-ray in identifying long bone fractures. POCUS provides sensitive and useful information when evaluating for muscle tears, hematomas, tendon ruptures, tendinopathies, joint effusions, and large joint dislocations. POCUS can further be used to guide joint injections and arthrocentesis. It is critical to evaluate structures in their entirety in two orthogonal planes and compare to the contralateral side. ■

Editor's Note: This article is presented as a follow-up to Dr. Schick's presentation at OPSC's 2016 Annual Convention.

DO You Know?

Media Recognition of the Osteopathic Profession

The osteopathic profession received tremendous recognition with an in-depth radio interview and two television segments which recently aired in the Sacramento area. OPSC President Abraham Pera, DO performed the radio interview, which aired on five Sacramento area stations, on April 26 with local media personality Julie Ryan. The 20-minute long interview addressed the basics of osteopathic medicine, its history and its contrasts to the allopathic profession. As an interventional radiologist, Dr. Pera brought a unique perspective which was well articulated. At the conclusion of the interview, Dr. Pera provided instructions to guide the audience in finding a DO.

Family Practice physician Randall West, DO performed osteopathic manipulative treatment and talked about osteopathic physicians on two live television segments which aired May 16th on Channel 31's Good Day Sacramento. The interviews, which were conducted in Dr. West's Folsom office, featured a cranial sacral technique to release tension and improve lymphatic flow, and an HVLA treatment to increase range of motion and decrease pain and stiffness. The segments included a banner with OPSC's toll free telephone number to help prospective patients find a DO. (View the interviews on YouTube! Search for "user/opsc01.")

These radio and television interviews are part of a series of public relations activities being undertaken by OPSC to promote the osteopathic profession. Numerous print articles have also been placed in local newspapers to recognize DOs for awards or other notable accomplishments. As this effort advances, OPSC will continue to look for opportunities to expand public understanding of osteopathic medicine – so keep watching for us... ■



OPSC President Abraham Pera, DO discusses osteopathic medicine with CBS radio's Julie Ryan.

Spreading Knowledge

► Alexandra Myers, DO,
Chair of Membership Committee

In the past month I have had the privilege of spreading the knowledge and practice of osteopathy to Germany and Haiti. In early May I went to Cologne, Germany to assist in teaching a course on the application of OMT to athletes. The course was offered by the DAAO (Germany's sister organization to our AAO), and the faculty was selected from the American Osteopathic Academy of Sports Medicine. During the course, Dr. Naresh Rao and I taught the approach to and treatment of the most common head, neck, and shoulder injuries experienced by athletes. Throughout the course, German physicians (MDs who have a Diploma of Osteopathy certification) and our staff exchanged information and insights.

When I returned from Germany, I attended the May OPSC board meeting. We worked together to plan for the upcoming year and followed through on proposals to improve our educational offerings and to provide more value to our members. Shortly after that meeting in Sacramento, I headed to Haiti on a medical mission trip to Leon, Grand Anse. The trip was organized through the Seattle King County Disaster Team. Our team was lead by a social worker from Seattle and a lab technician from San Diego. Both of them had extensive knowledge of Haiti and had each been on this trip over 30 times. Our team of 5 providers (2 MDs, 1 DO, 2 NPs and 2 RNs) treated about 1,200 patients in a week. To say that the environment was austere is an understatement. We all learned a lot and served a very needy group of people in Leon.

The common theme between all of these experiences is organization. Each time I went out to work with a new team, we had great leaders and a detailed plan. When things didn't go quite right, our leaders were there to guide and reassure us. Each time I attend OPSC meetings, I encounter the same situation. The board and the staff of OPSC serve as the leaders of the organization and the committees act upon plans. If things go awry, we have the ability to maneuver. It is reassuring to know that OPSC is prepared and equipped to handle the challenges presented by the ever-changing world of medicine. ■

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Bay Area Osteopathic Medical Association

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Paula Crone, DO, Western University/COMP

CENTRAL OFFICE STAFF

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Karl Baur, CMP, Director of Meetings & Publications

Cassandra Mallory, Director of Membership

Annette Wood, Administrative Assistant

2016 Legislative Reception

Once again, OPSC invited key legislators to visit the association's historic building to meet with osteopathic leaders and discuss issues important to the profession. Although this year's event coincided with campaign stops by all of the Presidential candidates, several Senators and Assemblymembers attended. Here are just a few of the photos from this year's Legislative Reception, held on May 23rd.



Minh Nguyen, DO (left) and Kathleen Creason talking with Assemblyman Kevin Mullin



Senator Joel Anderson (right), making a point to Blake Wylie, DO

Senator Jeff Stone (second from left) with OPSC Board Members Michael Luszcak, DO, Alexandra Myers, DO, and Blake Wylie, DO



Frederick White, DO (right) entertaining Richard Riemer, DO (left) and Senator Jeff Stone (center)

Welcome New Members

Active

Jennifer Lin, DO, Santa Clara, CA, Family Practice/OMT
 Karine Hajyan, DO, Martinez, CA, Obstetrics & Gynecology
 Ryan Kim, DO, Roseville, CA, Family Practice/OMT
 Gail Feinberg, DO, Vallejo, CA, Family Practice

Intern

Waseem Khader, DO, Chino, CA

Associate

Pamela Beck, DO, Erie, PA, Family Medicine
 Bichhoa Nguyen, DO, Winslow, AR, Family Practice

Resident

Bradley Kliewer, DO, Hemet, CA, Diagnostic Radiology
 Jessica Chan, DO, Ventura, CA, Family Practice/OMT
 Linnea Shen, DO, Riverside, CA, Internal Medicine
 Elaine Ho, DO, Sunnyvale, CA
 Michael Miyazaki, DO, Long Beach, CA, Family Practice
 Chad Becker, DO, Palm Springs, CA, Emergency Medicine

Retired

Leslie Kramer, DO, Encinitas, CA, Dermatology

Save the Date!



2016 Fall Conference
 October 28 - 30
 Monterey Plaza Hotel
 Monterey, CA



2017 Annual Convention
 February 15 - 19
 Hyatt Regency Mission Bay
 San Diego, CA



2017 Fall Conference
 September 8 - 10
 Monterey Plaza Hotel
 Monterey, CA



2018 Annual Convention
 February 21 - 25
 Hyatt Regency Mission Bay
 San Diego, CA



2018 Fall Conference
 September 7 - 9
 Monterey Plaza Hotel
 Monterey, CA

Meet Harley Goldberg, DO

What was your motivation to take a leadership position? It is a pleasure to assist in making patient centered care efficient and effective, and helping our partners deliver a rewarding care experience.

What path led you to this position? One foot in front of the other... taking care of patients, and helping develop patient care systems.

What steps did you take to prepare for your current position? KP has internal training systems for leadership development, covering broad medical and business principles, as well as management programs from Stanford, Harvard, and London Business schools. Training in Clinical Research, UCSF, was a great preparation to do clinical research.

What do you find rewarding/challenging about serving in a leadership role? It is deeply rewarding first, to participate in the care of patients. And it is rewarding and challenging to understand the needs of practicing physicians, and the systems we find ourselves in from regulatory and other structural requirements, and to find the most effective path that helps patients get what they need, with the least obstruction.

Skills/traits required for successful physician leadership? Can these skills/traits be learned? Listening, which can be learned, and must be practiced. Focus, on the long term values and strategic goals, both for patients and systems. Collaboration, which demands respect and understanding.

Why should physicians consider serving in leadership positions? Those that find joy in the process, and tolerance of the long term nature of the efforts.

Recommendations for DOs thinking about leadership positions. Use your retrospectroscope: when I'm done, I will be happy and rewarded if... Then, assess the skills you need, and the most efficient method to get them. Balance your need for clinical life, as well as leadership life, in addition to personal life...

Why did you choose to become an osteopathic physician? I was clear that I wanted to be in the healing arts, and the Osteopathic philosophy and practice were (and are) consistent with mine.

What are your hobbies? Wilderness hiking, water sports, particularly scuba diving.

Why are you supportive of OPSC? We can only be effective in society when gathered together to manage our collective needs and interests. OPSC is the California voice of the DO profession where we gather together to move our collective professional goals forward. ■



Executive Consultant; Co-Chair Spine Care Program; Director, Complementary and Alternative Medicine
Kaiser Permanente Northern California Regional Offices

Director Neuromusculoskeletal Services; Director Medical Education; Acting Dean, Boston University School of Medicine
Kaiser Permanente, San Jose Medical Center

Attending Physician, Spine Care Services, Department of Physical Medicine and Rehabilitation
KP Silicon Valley Extension Campus

Osteopathic Medical School:
College of Osteopathic Medicine and Health Sciences, Des Moines

Year of graduation: 1986

Residency: Oregon Health Sciences University, Family Medicine Certification/Fellowship
Osteopathic Neuromusculoskeletal Medicine

Specialty: Family Medicine

Meet Zachary Anderson

Osteopathic Medical School: Touro University California

Expected year of graduation: 2019

Where did you grow up? Atlanta, GA

What are your life goals? My short-term goal is to survive through school! Becoming a doctor has been a dream for a long time, and I'm finally seeing the light at the end of the tunnel. I'm not sure exactly what I'll end up doing in practice yet, but I've always been interested in the mind-body connection. It is one of the last frontiers of medicine, and it could have huge implications for everything from use of pharmacy to pain management to end of life care. I would love to explore the connection from structural, behavioral, and embryological origins and see how OMT can affect the phenomenon.

What specialty are you leaning toward? I'm trying to keep my mind open until I get through my rotations, but the ones I'm looking at most are Family Medicine, Neurology, Psychiatry, and NMM/OMM.

Why did you choose to become an osteopathic physician? I can narrow it down to two words: choice and health. Because of the additional training in manipulative medicine and the additional focus on anatomy and physiology throughout our training, DOs have more choice in treatment plans than our MD colleagues. In my experience at clinics so far, I'm always amazed at how much comfort a simple touch can give our patients.

The other factor that really drove me towards osteopathic medicine is our view of the patient. Our focus on the health of the person in our offices and not the presenting disease is what I see separating us from MDs. From our first day in school, we're taught to look for health: in mind, body and spirit. I see this as the direction of all medicine, and I wanted to learn in an environment that fosters that mentality.

Do you have relatives in the medical profession? My mother is a licensed psychologist and trauma specialist who has a private practice based in Roswell, GA. She specializes in the use of energy psychology modalities as well as traditional talk therapies and also trains other clinicians in these methods. You can find out about her practice and books at www.karjala.com.

Did you have a profession prior to medical school? I have split my time between being a student and working since high school and have been in management in many fields, including hotels, food service, and teaching. While I considered them stepping-stones to

getting here, I am happy to have had these experiences. They have given me a unique view of people from every walk of life and an appreciation for honesty, integrity, good leadership, and hard work.

What are your hobbies? I am a huge fan of board and card games and have amassed quite a collection. It includes a wide variety from word and party games to high-level strategy games that take multiple nights to complete. I have always loved the companionship and humor that come from playing together; many of my friendships revolve around having game nights when we see each other.

My most exciting hobby, though, is travel. I have always enjoyed exploring, both in my home city and abroad. Without question, going to Israel with the Birthright program during the winter of 2012 was the most amazing trip I have ever been on, as it provided a vista of the entire country and history in ten days. As an adult, I have also had the opportunity to travel to Canada, Mexico, the Caribbean, and most recently across the country for school!

Why are you supportive of OPSC? I never saw myself working within the legislative world before OPSC. It took me years to become comfortable with the idea that I could make it through medical school and actually become a competent doctor. Since arriving here, though, I realized that what I was missing wasn't the ability to succeed, but a cause I felt strongly enough about to fight for. Being a DO is a cause worth fighting for.

OPSC provides me with a new skill set to grow into. Being a DO means enough to me that not giving my all to the health of the DO community would be too important an opportunity to miss. The OPSC community itself is the other reason I want to be an active member. As a student, I'm given a voice and the ability to stand equal to my mentors for the future of our profession.

I have been vocal about my pride in being a DO both in and out of school, but there is so much more I can do when my voice joins the chorus of DOs working for the betterment of us all.

Suggestions on how to improve the osteopathic profession in California? My utopian view of the future of our profession starts with the merger currently happening in our post-graduate education. This is a boon for us and gives us the ability to show our skills to a wider audience. I believe that in successive years, more allopathic

Continued on page 29 ►

Touro Dean's Report

► **Michael Clearfield, DO, Dean, Touro University College of Osteopathic Medicine**

COM News

- Touro University California College of Osteopathic Medicine (TUCOM-CA) was noted as one of the top 15 medical schools in the nation for having our graduating students choose a primary care residency (57% choose).
- On March 15, 2016 **Drs. Shubrook, Schwarz, Hendriksz and Clearfield** presented at the Health and Medicine Forum for the Commonwealth Club of San Francisco a program titled "An Osteopathic Approach to the Obesity Epidemic." This program can be accessed: <http://www.commonwealthclub.org/media/podcast>
- On March 24, 2016 TUCOM was part of the White House Pledge which stated that, "Beginning Fall of 2016, we will require all students to take some form of prescriber education in line with CDC guidelines in order to graduate."
- **Dr. Richard Riemer** officially started working as Senior Associate Dean.



EISENHOWER MEDICAL CENTER

Faculty, Family Medicine Residency
Rancho Mirage, California

Become an integral part of an exciting young residency program that began in 2013. We have full 10-year ACGME accreditation. Eisenhower Medical Center in Rancho Mirage, California seeks to hire an osteopathic (DO) faculty member to serve as the leader of our program effort to pursue Osteopathic Recognition. You will have outpatient care responsibilities and may choose to have inpatient care responsibilities. You will precept FM residents in the Center for Family Medicine. You will have protected time for curriculum management, resident advising and scholarly work.

Board certification in Family Medicine (ABMS or AOA) is required. Academic appointment will be confirmed from the Keck School of Medicine of USC and from the Western University of Health Sciences. Rank will depend upon experience and qualifications.

Eisenhower Medical Center seeks candidates whose experience, teaching, research, or community service has prepared them to contribute to our commitment to serving the Coachella Valley. Eisenhower is an EO/M employer. Qualified applicants, including recent residency graduates, are encouraged to apply. Candidates should submit a digital CV and statement of interest to Anne Montgomery, MD, MBA, Program Director, at amontgomery@emc.org. For questions or inquiry, please contact Patti Petersen, FM Residency Program Manager, at ppetersen@emc.org or 760-773-4504.

- We welcome several new faculty to the campus, including but not limited to: **Gail Feinberg, DO, M.Ed** as our new Chair of Department of PCD, **Tina Mason, MD** to the PCD department, **Nicole Pena, DO** to the OMM Department, and **Dr. Andrea Taylor, PhD**.

Campus News:

- On January 29 TUC dedicated a new Student Health Center/ Metabolic Research Center was launched and on Feb. 24th the Metabolic Research Center was initiated with our first research participant under the oversight of **Dr. Jean Mar Schwarz** and our collaborating colleagues from UC Davis.
- The campus has received several donations:
 - A generous donation of a DXA GE machine to the Metabolic Research Center from **Dr. David Steinberg**, Founder of Steinberg Diagnostic Medical Imaging.
 - **Dr. Randy West** and Quest labs donated a chair and centrifuge for use in the new Metabolic Research Center.
- In January, TUC campus was awarded one of the "Healthiest Companies to Work For" awards by the *North Bay Business Journal*.

Student News:

- The Class of 2016 completed their residency match, with 57% of the class pursuing a primary care residency. According to the *US News and World Report*, this places COM for the 7th consecutive year as one of the top 15 medical schools in the nation for having COM graduates choose a primary care residency. 52% of the matches were in ACGME programs, 42% in AOA and 6% in military. 39% of matches were in California and 36% of the AOA matches were to OPTI-West programs.
- Our first two Global Health Pathway Certificates were issued to two of our graduates **Atif Saleem** and **Celia Chao** (Class 2016)

Alumni News

- **Major Kamal Singh Kalsi** (Class of 2005) was awarded a Bronze Star for his work as the medical officer running the emergency room at Camp Dwyer in Helmand province in Afghanistan in 2011. In November 2015, Dr. Kalsi was featured in the *Wall Street Journal* as part of Sikh Coalition who advocates for and works with the Sikh US military personnel to allow them to keep their turbans and beards, which are important elements of their South Asian religious faith. ■

Touro Student's Report

► Zachary Anderson, OMS

OPSC's Touro chapter is alive and well as we head into our last summer break as students! With our first year completed, we're setting our sights to the rest of our preclinical years, and we congratulate our second year brethren as they push through their board exams and onward. I'd like to use this letter to explain our summer plans, our successes over the last semester, and our vision moving forward at Touro.

I will be taking my first cranial OMM course through the Osteopathic Cranial Academy in June. Throughout the rest of the summer, I'll be working with one of our OMM professors before capping the summer traveling to represent OPSC at the AOA House of Delegates in Chicago late July. Sam, our Vice President, is getting married! Kim, Finance, is working mainly at our Student Run Free Clinic this summer, but will also be doing research with Dr. Wagner. Smriti and Androo, our events coordinators, are traveling through Africa and Asia, respectively, for our world health elective at Touro. Smriti will also be completing a cranial course in July.

April was a big month for us at Touro. We were able to bring in Dr. Kowalczyk to speak about gender confirmation treatments and to give a great review to the second years on the reproductive and endocrine systems. The very next day, we were able to host Dr. Kamajian, who gave us a wonderful introduction into his talk titled "The Empathy Project." This was an eye-opening talk that really drove home the idea that empathy was a skill that can be practiced and honed as a doctor, and that it doesn't just affect the doctor/patient interactions, but the health system as a whole. Our most attended event was the brainchild of our Dr. Pfothenhauer, named "Lemon Stories: Defining Moments in My Clinical Experiences." Named after the mental practice of imagining all of the details of a lemon in guided meditation, we had some of our clinical faculty come talk to students about some of their most memorable times in clinics.

What I believe was our most successful outing, though, was during National Osteopathic Week. OPSC partnered with Touro's SAAO chapter and COM-SEC to go to our local ferry building and set up OMM tables and encourage commuters to get treated. Being in plain sight of both the boats coming in and a few local businesses, we were able to advocate for both the school and the profession as a whole. In two hours, we were able to see twelve people on four tables. By the end of it, we had handed out literature to over 50 people and had people who had been treated spreading great word of mouth for us to other commuters!

This last semester, we focused our time and energy on creating more brand recognition within our class for OPSC. The main difficul-

ties the chapter faces are attendance at events and meetings and with students understanding what OPSC does. Touro does not have an active CMA/AMA chapter on campus, so OPSC is able to present on most of the skill-building, professional, or legislative speakers to our campus.

Between our relentless advertising on our school's social media, and Dr. Wagner's tireless promotion of the chapter, I believe the current classes have a wide understanding of who OPSC is and what we represent as an organization. At this point, we want to shift our priorities as a chapter from self-promotion to advancement of the current issues that OPSC is addressing. My focus for the chapter in the upcoming year is to try and have a better community understanding of current legislation affecting the future of the profession. With this knowledge, I would hope to see more activity and commitment from our classmates during their time as students and throughout their professions. We are also looking forward to welcoming the class of 2020 to Touro and inviting them early to participate in our chapter. ■

DOs and PAs Working Together in Team Practice

Learn More About Adding a PA to Your Practice!



New Legislation in 2016 Means Working with PAs Has Never Been Easier!

Documentation Requirements Are Now Customizable and Streamlined.

Teams may now decide if medical record review meetings, chart review or a combination of both are best suited for their particular setting and team.

As of January 2016, physicians may choose to countersign a minimum of 20% of CII medical records (reduced from 100% previously) when the PA has completed a Controlled Substances Education Course, such as CAPA's.

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WesternU/COMP Dean's Report

► Paula M. Crone, DO, Dean, WesternU/COMP, COMP-Northwest

May 20th, 2016 marked the 35th commencement ceremony for The College of Osteopathic Medicine of the Pacific (COMP). The first COMP graduate, class of 1982 and Western University of Health Sciences' Chairman of the Board, **Dr. Richard Bond**, presented COMP's 5,000th DO degree to **Dr. Christara Avanes**.

Faculty Spotlight

The Department of Internal Medicine held its first Family Trivia Night fundraising event on Saturday, April 16. The event was created to fund Internal Medicine student research. Department Chair **Mike Katsaros, DO**, hosted the event that was attended by COMP students, faculty and alumni representing the classes of 1983, 1986, 1993, and 2002. The evening proved to be a wonderful success as more than \$3,000 was raised to benefit student research projects.

Student Spotlight

We are excited to announce our new Pre-Doctoral NMM/OMM Teaching Fellows: **Masumi Asahi, Mary Crista Cabahug, Clare Donahue, Karim Fahmy, Stephanie Hunt, Sam Jazayeri, Peter Lee, Stephanie Zamora.**

Alumni Spotlight

Alfonso Avila (COMP Class of 2015) returned to deliver the alumni address at the 2016 commencement ceremony. Dr. Avila is currently in his Emergency Medicine Residency at Arrowhead Regional Medical Center in Colton, CA.

Dawnell Moody, DO (COMP Class of 2005) has been tapped to head the new Axis Community Health Clinic in Pleasanton, CA. The clinic serves low-income and uninsured patients.

Thought Leadership

The Office of Career and Professional Development, led by **Lisa Warren, DO** (COMP Class of 2001) and **Cha Hanna**, has launched the "Career Development Specialty Series." The program is designed for students who have not yet selected a specialty and are interested in learning from leaders in the field. Other developments from the CPD Office include the upcoming Residency Planning Mixer wherein alumni return to campus to share residency experiences with current students. ■



Western U/COMP Students' Report

► Anirudh Ramachandran, OMS

The WesternU OPSC chapter has had an eventful few months to finish our first year of medical school. First and foremost, we would like to extend our gratitude to Brain Loveless, DO and Alan Cundari, DO for all their help and support. I would also like to congratulate all the other first year students at both WesternU and Touro for completing their first year of medical school. It has been a very challenging but rewarding year.

On March 28th, 2016, OPSC, along with SOMA and LACMA, hosted a "Pathways to Success" lecture with Dr. Michael Finley, DO. Dr. Finley is a rheumatologist with experience as a residency director in the Southern California area for the past 12 years. He discussed the pathway into rheumatology, politics behind residencies, and his opinion on the ACGME accreditation system. We offered food and beverages for about the 50+ students who attended. This event was coordinated and set up by Parvane Barati with help from the other board members and was executed flawlessly.

In late April, OPSC, along with 6 other clubs on campus, worked together to organize 5 events for National Osteopathic Medicine Week. OPSC worked with WesternU Student Government Association, SAAO, LACMA, SOMA, Wellness Club, and AMWA to coordinate these events.

- Monday April 25th, Dr. David Connett, DO gave a talk regarding the updates in the ACGME single accreditation system. We had about 110+ students attend this event.
- Wednesday April 27th, Dr. David Redding, DO gave a talk regarding Osteopathic Medicine and Wellness. He discussed certain osteopathic treatments to improve neck stiffness, digestion, and reduce sympathetic activity. Later that day, Dr. Brain Loveless, DO hosted an Organic Birth event with the AMWA club. This event was about discussing natural birthing.
- Thursday April 28th, we hosted a Students Treating Students clinic where first and second year students are able to practice their OMT skills on each other.
- Friday April 29th, we had a MedWell Fitness event which offered an exhilarating workout to both students and faculty on campus.

I am really proud at how all these clubs were able to come together and coordinate these events for National Osteopathic Medicine Week.

OPSC also hosted a health fair event with the Cucamonga Valley Medical Group on May 7th. The event was about six hours long and we serviced over 100 homeless and indigent populations of the area. We provided OMM screenings and treated not only homeless people but also other volunteers working the event. This was a very rewarding experience; we were able to use our OMT skills to help people who

were in pain. Our external outreach coordinator, Kian Behmanesh organized this event and did an amazing job.

The last event OPSC hosted for this academic year was the Ultrasound with the Professionals workshop. This event was our biggest success. I first want to thank Neda Arora, our internal representative, for all her help in setting up this event. After the last OPSC conference in San Diego, I began to realize the importance of ultrasound in our future medical career. We first contacted a representative from SonoSite and he offered to bring 17 ultrasound machines to WesternU. We also contacted ER Residents from Arrowhead Regional Medical Center and reached out to WesternU faculty to help conduct the different stations. Our event had four different stations: renal/thyroid, FAST exam, Echo exam, and vascular access. We had about 45 students attend the event and it was a great success. Overall, the workshop was about three hours long with 40 minutes per station. Students were able to get hands-on practice with guidance from faculty to practice on the variety of different ultrasound machines brought from SonoSite. It was a very rewarding experience for our club to have provided an opportunity for students to practice ultrasound this early in their medical careers. I am very proud that the OPSC chapter was able to host such an event on campus.

At the end, our ultimate goal as a club is to educate future physicians about the importance of OPSC so we can improve the state of the osteopathic professional in California. I look forward to continuing these efforts in the fall and reaching out to our incoming class of 2020. Our class looks forward to this upcoming Summer break, in which many of us will be traveling abroad to underserved communities to practice our skills and humanism. I hope everyone has a great summer and keep a look out for future OPSC events at WesternU. ■

Poster Competition Results

1st PLACE

Growth Hormone Is Involved in Human Colon Tumor Growth

Bailey CAR¹, Chesnokova V², Zonis S², Melmed S²

1. College of Osteopathic Medicine of the Pacific, Western University of Health Sciences, Pomona, CA.

2. Department of Medicine, Cedars-Sinai Medical Center, Los Angeles, CA.

Purpose of Study:

Growth hormone (GH) is proposed to impact the development of colon neoplasms. Patients with GH overexpression exhibit an increased incidence of colon polyps and increased risk for colon cancer development. Patients with GH receptor (GHR) mutations, exhibit reduced risk for developing cancer. GH deficient mice exhibit a decreased risk of tumor formation. Pegvisomant, a GHR antagonist, diminishes progression of colon cancer in some models. Local GH expression in mammary epithelial cancer cells shows an induction of mesenchymal phenotype transition. We hypothesized that local GH in colon tissue can determine growth of colon tumors.

Methods Used:

We used confocal fluorescent microscopy to test GH and GHR expression in human colon tissue and assessed co-localization of GH with alpha smooth muscle actin, a marker of fibroblasts. We compared tissue samples derived from normal colons, benign adenomas, adenocarcinomas, and colon metastases through individual specimen preparations and composite tissue arrays.

Summary of Results:

We observed that both adenocarcinoma and tumor-associated fibroblasts express GHR. We found that fewer adenocarcinoma neuroendocrine epithelial cells displayed GH expression than those in normal human colon tissue. Fibroblasts in the lamina propria of adenocarcinoma specimens exhibit more abundant levels of GH expression than in normal colon tissue.

Conclusions:

These results imply that GH is expressed in cells comprising the tumor microenvironment and may act in a paracrine fashion via GHR. Elucidating a local GH signaling pathway would represent a novel therapeutic target for prevention of colon adenoma-adenocarcinoma transition.

2nd PLACE

Functional Conservation of HIV Proteins that Play a Role in Altering the Innate Immune Response

Akam, E & Sanchez, DJ

In addition to incapacitating adaptive immunity, HIV also plays a major role in downregulating innate immunity, which is very effective against viral infections. Understanding how conservatively viral proteins modulate the innate immune response can provide an alternative avenue for exploring effective treatment for HIV/AIDS infections. HIV, regardless of subtype, codes for a protein called Nef, one of its most virulence factors. In addition to other functions, Nef degrades IPS-1, the signaling molecule for a pathway leading to the production of IFN-Beta, and antiviral cytokine of the innate immune system.

We wanted to know if Nef always degrades IPS-1 and, if it does, Nef could become a major pharmaceutical target.

Nef variants of different HIV subtypes were selected based on degree of homology in conserved regions. Variants were co-transfected with IPS-1 into HEK293T cells with reporter plasmids, incubated, and cell lysates were analyzed for expression levels of IFN-Beta and presence of IPS-1. Expression of IFN-Beta was consistently and significantly lower in HEK293T cells co-transfected with Nef and IPS-1 than cells transfected with IPS-1 alone across all Nef variants. Western blot analysis showed a low signal for IPS-1 from cells co-transfected with Nef and IPS-1.

We therefore concluded that the function of Nef remains conserved across various subtypes, and this is due to the large homology of the RNA open reading frame that codes for Nef.

3rd PLACE (Tie)**Patients with Six Cannulation Sites for Hemodialysis Correlated with Decreased Occurrence of AV Shunt Thrombosis in Taipei Hospital****Michael Lee¹, Athena Lin¹, Yin-Cheng Chen²**

1. Touro University College of Osteopathic Medicine, California, USA,
2. Taipei Hospital TIHTC, Taipei, Taiwan

Background: Taiwan has the highest prevalence of ESRD and dialysis at 2,902 per million. Treatment of hemodialysis is fully covered by Taiwan's Healthcare System. Encountering fewer complications is desirable to alleviate the burden on nephrologists and government funding. Thrombosis can lead to failed arteriovenous shunts (AV shunt). Treatment of clotted AV shunts at Taipei Hospital involves the use of tissue plasminogen activator (tPA). We hypothesized patients with more hemodialysis cannulation sites have lower rates of tPA use.

Methods: Data collected from 115 hemodialysis patients at Taipei Hospital. Patient's age, frequency of tPA used, Karnofsky score, and diabetes/hypertension status were obtained via electronic records. Hemodialysis nurses determined number of injection sites.

Findings: Patients with 6 injection sites made up 68.9% of patients who have never used tPA, while also presenting with the lowest rate of tPA use of five times or greater at 5.6%. No associations were found between number of injection sites and co-morbidities or Karnofsky scores.

Interpretation: This study suggests patients with 6 injection sites are more likely to have never used tPA for thrombosis at Taipei Hospital. 6 injection sites allows for one site for arterial and venous access each day of treatment every week. The lack of relation between injection sites and studied co-morbidities or Karnofsky score suggests these factors do not prevent use of AV shunts with 6 injection sites. This preliminary study suggests that it may be beneficial for nephrologists and surgeons to pursue AV shunts capable of 6 injection sites to decrease occurrence of thrombosis.

Funding: None

3rd PLACE (Tie)**Point of Care Ultrasound for Skull Fracture****Junus, J; Theo, J; Yoon, M; Galinda, P; & Pera, A, DO**

Head trauma and skull fractures are common emergency injuries in the pediatric population. CT scanning is the best Imaging modality for those patients with significant injuries, skull X-rays are an alternative, both of these however expose the patient to radiation. In addition, neither of these modalities are readily available in third world countries with limited resources, especially in rural areas.

Ultrasound is becoming more frequently available in these settings due to the relative low cost and portability of the equipment. In addition, these units are battery powered allowing use in areas where power is an issue.

We provide a case presentation of an 8 year old Honduran male who sustained head trauma in a rural village. X-ray was available 2 hours from the site. Ultrasound was performed demonstrating a skull fracture which was then corroborated with the plain X-ray.

EMR Security Series Wrap-Up

Continued from page 10

Condoms and EMRs: Of HTTPs, Man-in-the-Middle, and WiFi-ing in Public wraps up the series by exposing the potential dangers of using WiFi – especially public WiFi – to access EMRs. “Man in the middle attacks” are explained, and a strong case is made for using wired connections wherever possible. If a wired connection is not practical, use a vendor provided Virtual Private Network (VPN) software, a kind of “condom for the Internet,” preferentially over a commercial mobile cellular network provider. As a last resort, a trusted WiFi access point may be used, always in combination with a VPN. However, with or without a VPN, one should never use a publically available WiFi “hotspots” to access an EMR.

In closing, we hope that this series has educated the reader, and, more importantly, led to the change of one or more computing habits toward better protecting patients’ private health information. As modern therapeutics once held much promise, so too, does the EMR. As we are compelled to use it, in so doing, we must first, do no harm. ■

Student DO Highlight

Continued from page 21

schools will adopt an osteopathic view of health and the patient and that healthcare as a whole in this country will improve.

That being said, the best things we can do now are to band together and to continue being wonderful doctors. Every patient interaction is an opportunity to further our profession. We don’t have anything to prove as doctors, but we may still need to defend our profession as we rock the boat. This is where OPSC shines; it gives us a platform to stand on and the backing to promote action. ■



A Day in the Life

Continued from page 4

Thursday

Today and tomorrow will be relatively quiet in the office, as both Cassandra and Karl are out of town attending an association management educational program. They always come back from these types of programs energized and full of new ideas, so I’m pleased to have them attend. Mid morning, I head to the Capitol to sit in on a legislative hearing about the corporate practice of medicine. Most of the agenda leans toward support of the ability of corporations to employ physicians; however, there is compelling testimony about the very real risk of financial influence on the practice of medicine. Later that day, I take a good amount of time to review the video testimonial recorded during OPSC’s Annual Convention. We are looking at themes in the testimonials and assessing the best uses of videos. No evening events tonight (whew!), so around 5:30 I call it a day.

Friday

I’ve set aside this Friday primarily for planning. The OPSC Board meeting and legislative reception are coming up, so I take most of the morning to review the multitude of issues which need to be addressed – including a request to join a challenge to the Right to Die law, a “mega” discussion on OPSC’s relationship with the California Medical Association, and the scheduled media training. I put the final touches on the draft OPSC budget for the next fiscal year. During the afternoon, I participate in an AOA Bureau of Osteopathic Education conference call, during which we discuss a controversial proposal to offer 1A AOA credit for on-demand on-line CME. I also take time to work on taxes for the Association of Osteopathic State Executive Directors, for which I serve as Treasurer. Finally, I review preparations for upcoming meetings, including the Moderate Democrats legislative event (because we have to work with both sides of the aisle to accomplish our goals!), DO Day on Capitol Hill – where I’m scheduled to meet with Congressmen Ami Bera, MD and David Nunez, the OMBC meeting during which I’ve been asked to present on several legislative bills, and the meeting with CMA leadership.

At the end of the day, as I reflect on the diverse activities of the past week, I once again find myself amazed and grateful that, after 13 years in this position, I continue to find it challenging and rewarding. ■

Answer to last issue’s teaser: The gentleman in the picture with me was Richard Dent, MVP of the 1985 Chicago Bears Super Bowl championship game.

Online License Renewal Now Available

The Osteopathic Medical Board of California has officially opened its online renewal system (BreEZe). The system is open for physicians to renew their licenses up to 80 days prior to license expiration. Please note that the OMBC does still require hard copy documentation of CME credits earned in support of license renewals. You can view the OMBC's instruction document here: http://www.ombc.ca.gov/forms_pubs/online_renewal.pdf

For physicians reinstating a license that has been delinquent for more than two years, the hard copy renewal process is required. Contact the Osteopathic Medical Board for an updated renewal form at (916) 928-8390.

OPSC recommends that renewing physicians submit their paperwork at least 30 days in advance of license expiration to allow sufficient processing time.

Also, please remember that as a "Professional Member" of OPSC you can receive an advance courtesy reminder of your California license renewal date. To ensure your receipt of this notice please click the "Update Your Profile" link above to provide us with your California license number and expiration date.

2016-2017 Membership Renewals Now Open

Wow! How time flies. The 2016-2017 membership renewal cycle is upon us and members now enjoy the ability to renew early or to wait until their anniversary date to renew their OPSC membership. Renewing has never been easier, simply log into your OPSC profile using the username and password you established and renew your membership at your convenience.

"Nobody made a greater mistake than he who did nothing because he could only do a little."

Edmund Burke

"Nobody can do everything, but everyone can do something."

Author unknown

Call for Volunteers!

In each issue of the *California DO*, it is our pleasure to report on all of the things OPSC is working on and has accomplished. However, none of those things would happen without the support of our volunteers. They give of themselves to help us achieve things we could not do on our own and are always ready to lend a hand. Is volunteering easy? No – it means you have to work. Is it worth it? Absolutely!

Are you ready to step up in support of current and future DOs in California? If so, we encourage you to discover what you can do beyond serving on a committee (though that is a wonderful place to start!):

- **Ambassador**
Welcome new members to OPSC and connect them to the family they have joined
- **Key Contact**
Be the heart of advocacy efforts for the osteopathic profession
- **Mentor**
Be a guide for fellow DOs who want to develop their careers
- **Preceptor/Shadowing**
Prepare future DOs by supporting their further education
- **OMT Educator**
Share your knowledge of OMM/OMT with fellow DOs during OPSC's Annual Conventions and Fall Conferences
- **Conference/Convention Faculty**
The Education Committee is always looking for DOs to present on a variety of topics.

For more details on these volunteer opportunities, please visit <http://www.opsc.org/?page=DOPhysicianVolunteer>

"Start where you are. Use what you have. Do what you can."

Arthur Ashe

"It's easy to make a buck. It's a lot tougher to make a difference."

Tom Brokaw

California DO Information for Contributors: Manuscript Submission

The *California DO* [CADO] only accepts submissions electronically. Authors may e-mail manuscripts and accompanying materials to publications@opsc.org. Please submit only one manuscript set per email sent.

The CADO does not require authors to provide hard copies of manuscripts. However, authors are required to have electronic or hard copies of all materials cited in their manuscripts. Failure to make these materials available upon request during the publication process may result in delayed publication.

Manuscripts should be formatted in Microsoft Word (.doc or .docx), text document format (.txt), or rich text format (.rtf).

Receipt and/or acceptance of submissions by the CADO does not guarantee publication. OPSC and the CADO Editors reserve the right to include or exclude submissions based on space, appropriateness, or any other reason.

Article Length

Ideally, articles submitted for publication should be kept to 2,500 words (approximately 4 pages) or less. While longer pieces are accepted, authors may be asked to rewrite their submissions to fit available space.

Graphic Elements

All accompanying tables and figures should be numbered, and they should be cited sequentially in the text.

Table headings should appear on the tables themselves. Labeled captions for figures, including illustrations, should be provided at the end of the manuscript. A full bibliographic citation should be provided in each caption for reprinted or adapted graphic element.

All patient information must be removed from or blocked out of graphic elements. Radiologic images in particular should be checked for patient information before being submitted to the CADO.

Please note that although charts created in Microsoft Excel (.xls), Microsoft PowerPoint (.ppt), or Microsoft Word (.doc) can be used in the peer-review process, once manuscripts are accepted for publication, CADO staff cannot use these files for production purposes. The CADO must recreate charts submitted in these formats before publication to ensure that the images are of reproduction quality. Authors, therefore, must provide data points on photocopies of charts if they are not accessible in the submitted formats. Subsequently, manuscripts that require these additional steps in the production phase may need to be rescheduled accordingly on the CADO's editorial calendar. Failure to provide data points on request may delay publication.

- **Electronic tables**—Authors should not insert, embed, or copy any graphic elements into word-processed manuscripts. Instead, they should prepare graphic elements as separate documents.
- **Electronic line art and charts**—Although electronic line art saved in encapsulated postscript format (.eps), such as Adobe Illustrator and Adobe Photoshop documents, is preferred for production purposes, .eps files cannot be used for review purposes. Therefore, authors who submit .eps files should also submit electronic line art in an alternate format, such as .pdf. Files saved to joint photographic experts group format (.jpg or .jpeg) can be used for both production and review purposes.

Any artwork that is not prepared in .eps or .jpg format will be re-created by the CADO. For line art and charts that are not saved in either of the preferred formats, the CADO will ask authors to

provide data points if they are not discernable from the submitted electronic documents. The time required for re-creating charts may affect when manuscripts are scheduled for publication.

- **Digital and scanned photographs**—Photographs taken with digital cameras and scanned photographs should be saved at the highest resolution setting. The minimum resolution that the CADO can accept is 1024 × 768 pixels, and the minimum image resolution it can accept is 300 dpi (dots per inch). Authors should not enlarge photographs of lesser pixel sizes and dpi to meet these resolution requirements. The CADO prefers that images be saved in .jpeg format. However, high-resolution digital and scanned photographs in tagged image file format (.tif or .tiff) are acceptable, as long as they are compressed using a compression utility (eg, PKZIP, Aladdin Stuffit).

The CADO cannot accept photographs created for the World Wide Web (eg, photographs saved in graphics interchange format [.gif]).

If the quality of scanned photographs is poor, authors will be asked to provide the CADO with the original film photographs.

- **Radiographic images and photomicrographs**—For radiographic images, authors should provide positive-reading digital images. For photomicrographs, authors should indicate the original magnification and the staining methods used in the images' captions.

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Authors serving in the US military must obtain armed forces' approval for their manuscripts and provide military or institutional disclaimers when submitting manuscripts.

Failure to submit appropriate permission forms may delay publication.

References

CADO requires references for all material derived from the work of others and to document statistical data. Cite all references in numerical order in the text, rather than alphabetizing bibliographic entries. In text, figure legends, and table footnotes, identify references with superscript Arabic numerals. If references are used as general source material from which no specific information is taken, list them in alphabetical order following the numbered references.

References are not generally published but are made available to any who request to see them.

27th Annual Fall Conference

October 28 - 30, 2016
Monterey Plaza Hotel & Spa



CME BY THE BAY 2016



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RESERVATIONS
EARLY!

"I WILL BE EVER VIGILANT IN AIDING IN THE GENERAL WELFARE OF THE COMMUNITY..."

- Osteopathic Oath

Since 1954, this modern version of the Hippocratic Oath, administered to Osteopathic college graduates, is historical evidence of our profession's commitment to our communities. The Fall Conference of 2016 focuses on community and the global public health issues that affect the health and welfare of the communities where our patients live, learn, work and play. Join us as we examine...

- health impacts of climate change and infectious diseases such as Zika and Ebola
- global warming correlates to metabolic syndrome
- epidemics reducing American life-spans, from opioid and heroin overdose deaths to gun violence
- increasing prevalence of disorders associated with our aging demographic of baby boomers, including dementia and musculoskeletal and rheumatologic disability
- pediatric epidemics including childhood obesity and diabetes, escalating prevalence of autism, pulmonary disorders associated with the thinning ozone and air pollution
- the role of vaccinations
- and global issues including the human refugee crisis

I invite you to join your OPSC peers in our annual sojourn to Monterey, where we will continue our tradition of gathering for networking opportunities and quality medical education.

Richard Riemer, DO
2016 Fall Conference Program Chair

OPSC has obtained a special conference rate for room accommodations at the Monterey Plaza Hotel located at 400 Cannery Row, Monterey, CA 93940-1489. Room rates are \$235 single/double occupancy (inland view rooms only).

Reservations must be made by **4:00 pm PDT on October 5, 2016**. To make your room reservations please contact the Monterey Plaza Hotel directly by phone: **(800) 334-3999** or through their online portal, which can be found at **www.opsc.org/event/FC16**. To receive the conference room rate please inform the hotel that you are attending the OPSC conference when making your reservations.

Note: Do not delay in making room reservations as the block has sold out early in recent years.

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20 HOURS OF CATEGORY I - A AOA CREDIT.

REGISTRATION FORM

27th Annual Fall Conference | October 28-30, 2016
 Monterey Plaza Hotel & Spa
 400 Cannery Row, Monterey, California 93940



Name _____

Phone _____ Email address _____

Check here if we may provide your email address to Fall Conference Exhibitors.

Special Needs or Dietary Requests _____

REGISTRATION FEES

	Before 9:00 pm PDT 10/5/16	10/5/16- 10/24/16
<input type="checkbox"/> Member Physician ¹	\$ 345	\$ 395
<input type="checkbox"/> Member Retired Physician	\$ 275	\$ 325
<input type="checkbox"/> Military Physician	\$ 345	\$ 395
<input type="checkbox"/> Non-Member Physician	\$ 820	\$ 870
<input type="checkbox"/> Student/Intern/Resident - Full Registration ²	\$ 95	\$ 95
<input type="checkbox"/> Student/Intern/Resident - Program Only ^{2,3}	\$ 0	\$ 0
<input type="checkbox"/> Allied Professional	\$ 295	\$ 345

All registrations after **October 24, 2016** are considered onsite registrations. Onsite registrations will be accepted as space permits. Rates increase by \$25 across all registration categories after **October 24, 2016**.

1. Out of state registrants must provide membership verification of your home state osteopathic association. California physicians must be a member in good standing with OPSC. 2. Must be in an accredited internship/residency program, verification is required. 3. Meals and CME credits not included.

GUEST REGISTRATION: Guests (including children over 4 years of age) must purchase tickets to participate in meals. Please make sure to check the appropriate registration category.

Guest/s \$95 each Number of Guests _____

Guest Name/s _____

SYLLABUS

Please indicate how you would like to receive your copy of the Fall Conference Syllabus:

- Free Download from OPSC website
- Free USB distributed at Conference
- Hard Copy (\$25/copy; pre-orders only)

MEMBERSHIP FEES:

<input type="checkbox"/> Active 3 or more years in practice	\$ 475
<input type="checkbox"/> Active in 2nd year of practice	\$ 350
<input type="checkbox"/> Active in 1st year of practice	\$ 250
<input type="checkbox"/> Retired	\$ 100
<input type="checkbox"/> Military	\$ 100
<input type="checkbox"/> Associate (out of State DO)	\$ 75

\$	Registration Fee Total
\$	Guest Fee Total
\$	Syllabus Hardcopy
\$	Membership Fee Total
\$	Total Enclosed/Due

PAYMENT INFORMATION:

- Check enclosed** (check must be made payable to **OPSC** representing payment for items checked)
- Please call me for credit card information**
In an effort to protect against potential fraud activity, OPSC has initiated a policy of only accepting credit cards online or by phone.

To register online, please visit www.opsc.org/event/AC16.

CANCELLATIONS: All cancellation requests must be made in writing and received by OPSC no later than **October 5, 2016**. A \$50 processing fee will be assessed for all cancellations. Registration fees are not refundable after **October 5, 2016**.

Membership dues must be current at the time of registration and at the time of the Conference to qualify for member rates.

Mail this form to:
 2015 H Street, Sacramento, CA 95811

Fax this form to:
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www.opsc.org/event/FC16



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