EM Physician Elected to the State House: A Conversation with Representative Jon Santiago, MD
Erin Oakley, MD
Boston Medical Center Emergency Medicine Residency

As emergency medicine (EM) physicians, we are immersed in the reality of many of the hot-button political issues of today such as the opioid epidemic, gun violence, and lack of access to affordable healthcare for millions of Americans. We literally know the faces of those that suffer when our government fails them. Many of us are politically active in our own ways – whether we attend protests, donate to the Massachusetts Emergency Medicine Political Action Committee (MEMPAC), or write about our experiences to share with others in publications such as this one. There’s a reason that the National Rifle Association (NRA) advised the medical community recently to, “stay in your lane” in response to a statement on gun violence. That response stung so viscerally because this is our lane!

This past November, the first ever physician was elected to the Massachusetts (MA) State House of Representatives. Even more exciting, he is an EM physician—and a fourth-year resident at Boston Medical Center (BMC). The Hon Representative Dr. Jon Santiago will bring the unique perspective of the emergency department (ED) to Beacon Hill, and he has his eye on key issues that we know to be essential to the health of our patients and society. I asked him about his interest in politics, how EM and politics overlap and compliment each other, and about his plans as a member of the legislature.

Jon, can you tell us a little about yourself for the readers of this article and the members of MACEP?

I am currently a fourth year EM resident at BMC, and I was recently elected to serve as a legislator in the Massachusetts House of Representatives. I was elected in November after a difficult primary in September, we were recently sworn in during the first week of January, so I have been serving for about 3 weeks. As we wrap up residency in the next 4-5 months I’ll be staying on at BMC as an attending and working in the state house.

When did you first get interested in politics?

I think the first time I really started to get involved in politics [from the policy side] was in the years after I completed my time in the Peace Corp. I lived abroad for five years after that and it was during this time that I began to more fully understand the important role that politics and policy play in every aspect of people’s lives. At the end of the day, every political victory, every civil rights issue culminates in a piece of paper that has to be signed. I came to believe that the best way to affect change in a positive direction was to run for office.

Prior to my Peace Corp experience, I was involved in politics and policy matters, but on the activist front. During my Peace Corp time I realized that essentially there were two ways to
effect change: it could be from the outside exerting pressure on the central players involved, or you can be a stakeholder yourself. Given my interests and experiences, I thought it would make sense to get involved on the inside. I wanted to be the person to sign that piece of paper.

A lot of people are interested in politics, but to go from being someone who is educated on the issues of the day, to someone who is an activist or even works on a campaign to actually running for office is a huge jump. What drove you to take this leap?

Something that is not always obvious to people is the difference between policy and politics. To drive good policy, you need good politics, but these are two different things that operate in different spheres. I care very much about the issues that are important to all emergency physicians, such as providing equitable, cost-effective and efficient healthcare, and working to resolve the opioid epidemic. We can address these issues to a point [from the ED], but as we all know: what we see in the ED is what happens when failed public policy continues down its trajectory. So, I really wanted to address these issues upstream. When we take care of someone who has been shot, or who is having a heart attack because they couldn’t get the medications to manage their chronic condition, these patients have been failed by the system. I wanted to get upstream of things, as an elected official, you can advocate for your patients in a different way than you can in the ED.

Which interest came first, politics or medicine?

They’ve both been very important to me for a very long time, but I wouldn’t say one drove the other. I think that I always wanted to be a doctor, but it was not an obvious career choice for me. There are no physicians in my family, I didn’t come from a very [formally] educated family, and I grew up in an underserved community. When I was in high school, my girlfriend at the time, her father was a doctor for the county. He really inspired me by pointing out that “hey, you know, you can be a doctor.” This fact really had not dawned on me up to this point. So, after that, I knew I wanted to be a physician but didn’t believe that I had the intelligence or capacity to achieve that. During college, I still wanted to be a doctor, but I was too scared to tell people out of fear that my friends wouldn’t think I had the capacity. I ultimately made the decision to pursue a career in medicine because I care a lot about issues facing underserved communities.

Other influences that affected my decision to pursue medicine as a career include personal experiences with healthcare such as my uncle’s struggle with HIV. When I was in elementary school, he learned that he was infected with HIV, and as a poor Latino man, he could not access care in Boston—which is known as the Mecca for healthcare around the world I watched him struggle with HIV, which later progressed to AIDS, and ultimately lead to his death. My cousin became an AIDS orphan. This injustice really has stuck with me. Observing a tragedy like this unfold in Boston made me angry, filled my mind with questions and ultimately inspired me to do something to change the status quo. I really believe that you have to look at medicine holistically, and ask why people are sick, and why people don’t get the health care they need. It’s because they’re dealing with all of these upstream issues, whether that’s poverty, lack of housing or racism. I thought I could best get at these issues by affecting policy at a political level.

When I returned from five years living abroad, I moved back to Boston and got involved in the political arena with candidates and campaigns. I was also studying public health at the time as I was applying to medical school. I got involved with my local ward and Massachusetts democratic state politics. I continued to be very involved locally when I attended Yale Medical School.

I was fortunate to study medicine at Yale because their curriculum provides a lot of flexibility. So, while I was a student in New Haven, I still had my apartment in Boston, voted in Boston, remained very active politically, and came home often as I could. During my final year of medical school, I moved back to Boston and became an intern at the state house.

So, you had these two significant goals that were kind of developing in tandem with each other. Did your interest in politics and social determinants of health impact your choice to pursue EM as a specialty?

By the time I was in my 4th year of medical school, I had an idea how EM would fit into my wider mission. I was drawn towards choosing EM as a specialty because of the excitement, the thrill, the fast pace and the wide variety of things we see every day. It was at this time I became more active in politics. I was learning how the state house actually works and I knew I wanted to eventually run for office. I also knew I wanted to be an ER doc.

So, you liked EM for the same reason we all liked EM, and it was a happy surprise that it also fit in with your political aspirations?

Yes. At the beginning of medical school, we were asked to write down one specialty we thought we could potentially go into, and one we absolutely wouldn’t—mostly to see how much they change. I said I would absolutely go into EM. I knew I wanted to be an EM doctor from day one, and, luckily for me, EM is one of the few fields in medicine that can allow you to pursue a political
career while still working clinically at the same time.

You’re planning on practicing EM at BMC while also working as a legislator. A lot of our patients are also your constituents. I think we can all imagine all the issues that come with this role. I think we can all imagine how this will keep you informed of the issues facing your constituents.

I will literally be taking the pulse of the community!!

I don’t know if there’s much more to say than that, but can you speak a little bit as to how you think this will be mutually beneficial for you as well as our patients?

The BMC footprint lies within the 9th Suffolk district, which is the district I represent, so I live and work among the people I represent. I knew when I was elected that, moving forward, I was going to be very intertwined with the community. What I didn’t realize is how often I would run into my patients on the campaign trail. I campaigned hard for 10 months, knocked on 8,000 doors, and I would frequently run into people I took care of. They would come up to me, and say “you took care of me, you took care of my brother,” I would literally go into a meeting and someone would say “this person saved my life.” It’s amazing to get this feedback because to us it may just be an NSTEMI, but to these people, it was their heart attack you diagnosed.

Just this weekend I worked a shift and I was taking care of a patient who was with his partner, and she said, “Hey, I know you.” I thought she was going to say from the campaign, but she said, “you took care of my brother who was shot.” What I’m trying to say is that I’m a member of this community, I represent the community, I treat the community. It’s just an incredible honor and a privilege. I think one job informs the other, what is going to make me a good policy maker is my first-hand experiences of what happens in our ED every day.

What do you feel is the trajectory for further legislation to deal with the opioid epidemic?

As EM physicians, we know what a huge issue the opioid crisis is. We see it from a medical perspective, so the question is how do we confront this on a policy level? Fortunately for us, our governor has been very active on the issue, Governor Baker, the legislature, and many other stakeholders, including Mayor Walsh, have been very involved in policy to address this. In 2016 they passed the STEP act, which committed a lot of resources to confront the opioid epidemic. Understanding that this issue was largely driven by the medical community, this legislation led to a 30% decrease in the number of opioid prescriptions given to patients. In 2018 the MA legislature passed the CARE Act, which built upon the STEP act and committed additional resources to the opioid epidemic. In addition to funding programs that promote and provide Medication-Assisted Treatment (MAT), the CARE Act provides for recovery coaches based in the community.

Legislatively I am interested in how we increase the use of MAT across the Commonwealth, and how do we create systems for delivery of this treatment in the community as you would with medications for the control of your hypertension or your diabetes. I believe that increasing access to treatment will work to decrease the stigma that surrounds drug addiction. Patients will be able to pick up their MAT at the pharmacy just like any other medication used to treat any other medical condition.

I’m also interested in addressing what I call the “capacity misalignment problem” with the availability of addiction related beds. —With the largest number of beds available for initial medical detox, bed availability dwindles from short-term recovery to long-term recovery to sober homes with each additional transition resulting in a significant deficit in the number of beds needed to confront this problem. Many of us understand this issue firsthand in emergency departments across the commonwealth. We take care of patients who just left a detox facility but who have not found additional care after completing that first step. These patients often relapse and keep cycling in this broken system. People say “we need more beds” which is all fine and good, but they need to be the right kind of beds. If we just procure additional detox beds, then that just further exacerbates the problem. I’ve filed a piece of legislation to form a commission to look at this capacity problem, so we can get the correct ratio of beds dealing with each stage of recovery.

I’m also interested in making sure that our houses of corrections are treating people with MAT. Presently in MA, many people with Opiate Use Disorder go to jail and they have to go through withdrawal without medication to deal with this dangerous phase of physical withdrawal. I would argue that this is cruel and inhumane punishment and should never occur in the Commonwealth of Massachusetts in the year 2019. In fact, the American Civil Liberties Union (ACLU) has already sued Essex County Jail and won. People are going to start being given medication to treat their real and potentially serious symptoms of withdrawal while incarcerated. Further questions of how do we bridge the treatment these people receive in jail seamlessly with the treatment upon their release. While incarcerated, a patient’s opioid tolerance becomes diminished over time. These patients require close management after they leave prison during this dangerous and fraught transition as they’re much more likely to die of an overdose at this point. So, I’m interested from a policy perspective on how we can ensure that jails are doing their part to keep these people safe.
Gun violence is another important issue to emergency medicine physicians as well as the public in general. MA is fairly-well known for having strong laws but is there anything you think needs to happen on a more local level?

I think gun violence is a sign of a wider set of issues that drive this epidemic. The driving forces that keep people down are poverty, racism, and lack of economic opportunity. I think we have to address these things to make real headway with the gun violence issue. MA looks good on the books, with respect to the laws but understand that until we eliminate these root problems, we will be unlikely to eliminate gun violence—well, unfortunately I don’t think we will ever totally eliminate [gun violence] but to minimize it. One piece of legislation Mayor Walsh and I filed was to allow physicians to ask their patients if they have a gun.

Generally, I feel that we have to fight for better wages, better housing, and create communities where we don’t tolerate inequities. Whether we’re talking gun violence, job opportunities, or the opioid epidemic. We can do our part in our emergency departments as physicians, and I look forward to bringing our unique perspective to the legislature.

5 Minutes of Your Time
Jesper Aurup, MD
Baystate Medical Center Emergency Medicine Residency

It’s another Saturday evening shift in the Emergency Department. I sit down at an available computer and open the EMR. I review the board. There are 8 people waiting to be seen and what looks like at least 3 signouts coming my way. I inhale a deep breath, pound an energy drink and whisper to myself, “let’s do this”. Then as quickly as the shift began it is over and it is time to signout. I sigh, staring at the computer seeing, I will probably have a couple of sign outs and there are plenty of people waiting to be seen. I reflect on whether I even made a difference today. I could feel that I was defeated or that I succeeded, and I remind myself that all depends on how I measure the outcome.

On any average day at work we all work to push ourselves to be the most efficient and effective providers that we can be. We strive to see more people than we did the day before. We compete against ourselves to be more expeditious providers and to disposition people more quickly. We spend more time in front of the computer than in front of the patient. I reflect on this and think of the cost of this competition.

One of the more memorable moments in my training happened early on in residency when I was asked by an attending “What do you want to work on today?” Naively, I responded, “I want to be more efficient”. The answer was a simple one: “Don’t spend so much time in the patient’s room. You should be in and out in 5 minutes and know the disposition when you close the curtain.” I think that most of us have been in a similar position at some point in our training, where we began spending less time at the bedside and more time in front of a computer. Now, I am not saying that this is the wrong approach or that this transition in training does not allow us to see more patients, but it can come at cost of developing trusting and therapeutic alliances with our patients.

I imagine many of us can remember a time in medical school practicing how to take a history and do a good physical exam. Start with open ended questions and narrow it down when needed. Make the history taking a dialogue and use that time to build a rapport with your patients. I remember it as a rewarding experience. I enjoyed taking the time to carefully develop that trust. However, I also remember it coming at the cost of expediency and seeing only a handful of patients during a shift with this strategy, spending certainly more than the 5 minutes I should allegedly be allotting to patients.

Plenty of people that come to us in the Emergency Department do not need their hand held or supportive reassurance. They come to us because they want answers, because they have pain, or are looking for symptomatic relief. For those, I am happy to give them their 5 minutes of attention and return to my computer to write a note, place orders for labs, imaging, and symptom control.

Then there are those patients that come to us because they are looking for more individualized help, for someone to listen, to care, and to support them through their trials. These patients can often take many forms: A child scared of a procedure, patients in extremis, or the loved ones of a deceased patient just to identify a few. For these patients, I pull up a chair or kneel at their bedside when there is nothing to sit on and give those individuals the time it takes until we both leave the room reassured of the plan going forward. So, looking back on that Saturday evening shift the answer can be that I succeeded. The difference made that day may not be made by erasing the white space on the board, getting expeditious dispositions, doing procedures, or making diagnoses. Some of my most rewarding shifts come from identifying the patients that need more than 5 minutes of my time and finding that time to pull up a chair and have a dialogue.
For the Love of Wilderness Medicine
Myung Bae, DO
Baystate Medical Center Emergency Medicine Residency

I couldn’t breathe. I thought maybe I was just congested, but I was getting more and more short of breath. I wasn’t congested at all, I didn’t have any runny nose, but I noticed I was mouth breathing; the pink puff, blue bloater, breathing through a straw, all those textbook descriptions ran through my head. It was my third night at the high summit camp, stuck and not able to push for summits of Mt. Khuiten, the highest peak in Mongolia, due to avalanche dangers.

I got out of my negative degree sleeping bag, still trying to catch my breath. “Maybe I need a sip of water, maybe that’s what’s going on”, I thought to myself. My thoughts were racing about complications; “have I suddenly developed HAPE (high altitude pulmonary edema) in the middle of the night?” I tried to prove myself wrong. When a sip of water didn’t work, panic set in. That’s when I noticed my tent-mate, a wilderness medicine fellow at my program, getting out of his sleeping bag and gasping for air. We looked at each other, confused and not knowing what was going on. I turned on my headlight and looked around, trying desperately to identify a source of our problem, and that’s when we realized in unison that all of the vents in our tent were blocked.

Yet another snowstorm had occurred overnight, and our vents had been blocked by about a foot of snow. Desperately, we tried to push snow out from the inside, but were only able to free up a small side vent.

“Fine,” I thought as I started putting on my layers of clothing, double boots and heavy-duty gloves. I stepped outside of my minion-sized alpine tent only to discover that the tent rainfly was completely covered in snow. And I mean, snow up to my waist. It took us about 25 minutes to successfully clear the vent. We then walked around our camp, clearing the snow off of others’ tents for the remainder of the night, almost feeling high off of our own CO2.

My name is Myung Bae, I am currently a second-year emergency medicine resident and pursuing a path towards wilderness medicine fellowship. To be quite honest, I didn’t know such a specialty existed until I was in medical school. I have been an avid climber and surfer starting from a young age, and just like many other emergency medicine physicians and residents, the outdoors is my second home. I had applied to all residency programs that had wilderness medicine fellowships because I knew from the moment I learned of this career track possibility it was my calling. I feel so fortunate to be able to pursue a career in wilderness medicine, and thus far I think that mountain and tropical medicine will be my focus.

We unfortunately did not get to summit Mt. Khuiten. We spent four nights and five days at the high camp, hoping for the weather god to help us with our summit push, but it just wasn’t our time. Instead, we ended our summit push with a neighboring peak called Friendship Peak, also known as Nairamdal peak, standing tall as it marks the trip point between Russia, Mongolia and China. That’s the beauty of mountain medicine, wilderness medicine, really any type of low-resource medicine or emergency medicine itself; you are able to adventure, and never know what will happen!

Do you want to write for the EM Advocate?

The EM Advocate is looking for intelligent, creative, and interesting articles to highlight resident thoughts and opinions throughout the Commonwealth of MA. Subject matter can include topics of social responsibility, interesting cases, scientific advances, emergency medicine subspecialty issues, grass roots activism, and opinions regarding public or hospital policies, etc.

Please contact your residency’s MACEP representative (listed on front page of this newsletter) or the EM Advocate Editor (Ethan Tseng, MD, MBA at ethan.tseng@umassmemorial.org) for opinions, ideas, and article submission. We look forward to hearing from you!
Regional Anesthesia in the Emergency Department
Lee Replogle, MD
BIDMC Emergency Medicine Residency

Local anesthetics are locally applied medications that provide a reversible regional loss of sensation. Local anesthetics are safer than general or systemic anesthetics and should be used preferentially when possible. Local anesthetics inhibit depolarization of the nerve membrane by interfering with sodium channels. The action potential in nerve fibers is not propagated because the threshold for depolarization is never reached preventing the sensation of pain.

Ester anesthetics are metabolized by hydrolysis which is dependent on plasma pseudocholinesterase. Certain individuals may have a genetic defect in this enzyme preventing hydrolysis making them susceptible to toxicity from ester anesthetics. Ester anesthetics are also metabolized into PABA which can induce an allergic reaction in certain individuals.

<table>
<thead>
<tr>
<th>Anesthetic</th>
<th>Duration w/o Epinephrine (minutes)</th>
<th>Duration w/ Epinephrine (minutes)</th>
<th>Maximum Dose w/o Epinephrine (mg/kg)</th>
<th>Maximum Dose w/ Epinephrine (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cocaine</td>
<td>45</td>
<td>2.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Procaine</td>
<td>15 - 30</td>
<td>30 - 90</td>
<td>7.1</td>
<td>8.5</td>
</tr>
<tr>
<td>Chloroprocaine</td>
<td>30 - 60</td>
<td>240 - 480</td>
<td>11.4</td>
<td>14.2</td>
</tr>
<tr>
<td>Tetracaine</td>
<td>120 - 240</td>
<td>1.4</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>


Amide anesthetics are metabolized by microsomal enzymes in the liver. Amide-type anesthetics should be used with caution in patients with severe liver disease and in patients taking medications that inhibit Cytochrome P450 enzymes.

<table>
<thead>
<tr>
<th>Anesthetic</th>
<th>Duration w/o Epinephrine</th>
<th>Duration w/ Epinephrine (minutes)</th>
<th>Maximum Dose w/o Epinephrine (mg/kg)</th>
<th>Maximum Dose w/ Epinephrine (mg/kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lidocaine</td>
<td>30 - 120</td>
<td>60 - 400</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Mepivacaine</td>
<td>30 - 120</td>
<td>30 - 120</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Bupivacaine</td>
<td>120 - 240</td>
<td>240 - 480</td>
<td>2.5</td>
<td>3.2</td>
</tr>
<tr>
<td>Prilocaine</td>
<td>30 - 120</td>
<td>60 - 400</td>
<td>5.7</td>
<td>8.5</td>
</tr>
</tbody>
</table>


Anesthesia of the Face
Nerve blocks usea smaller amount of medication than is required for local infiltration. This minimizes distortion of tissue to improve cosmetic repair of regions where tissue distortion would be unacceptable. Prior to each block a sensory and motor exam must be performed and documented. When the needle tip is in close proximity to the nerve, paresthesias will be elicited. If paresthesias are elicited, the needle must be withdrawn 2-3 mm to avoid intraneural injection. You must aspirate prior to injection to avoid venous or arterial injection.
Supraorbital Block
The supraorbital nerve is a division of the V1 branch of the trigeminal nerve which supplies sensory innervation to the upper eyelid, forehead and scalp. The supraorbital nerve exits the skull 2-3 cm lateral to the midline of the face at the supraorbital foramen which can be palpated superior to the pupil when the patient is looking straight ahead.

Technique
- Palpate the superior orbital ridge and locate the supraorbital foramen.
- Prepare and sterilize the skin with alcohol, chlorhexidine or iodine.
- Introduce the needle at a perpendicular angle superior to the foramen.
- Inject 2-3 mL of anesthetic and firmly massage the region for 10 –15 seconds.

Infraorbital Block
The infraorbital nerve is a division of the V2 branch of the trigeminal nerve which supplies sensory innervation to the lower eyelid, the side of the nose and the upper lip. The infraorbital nerve exits from the foramen rotundum 2-3 cm lateral to the midline of the face. The foramen rotundum can be palpated inferior to the pupil when the patient is looking straight ahead.

Intraoral Approach
- Apply a topical anesthetic to the mucosa opposite the upper second bicuspid (premolar tooth) and leave in place for one to three minutes.
- Palpate the infraorbital foramen and keep one finger in place.
- Retract the cheek and introduce the needle opposite the upper second bicuspid (premolar tooth). Keep the needle parallel with the long axis of the second bicuspid until it is palpated with your other finger.
- Inject 2-3 mL of anesthetic and firmly massage the region for 10 –15 seconds.

Extraoral Approach
- Palpate and identify the mental foramen.
- Prepare and sterilize the skin with alcohol, chlorhexidine or iodine.
- Slowly introduce the needle at a perpendicular angle inferior to the foramen.
- Inject 2-3 mL of anesthetic and firmly massage the region for 10 –15 seconds.

Ear Ring Block
The sensation to the external ear is obtained by four nerves including the greater auricular nerve, lesser occipital nerve, auricular branch of the vagus nerve and the auriculotemporal nerve. The ring block will anesthetize the entire ear excluding the concha and inner ear. The superficial temporal artery is located medial to the ear so the use of vasoconstrictors should be judiciously used or avoided.

Technique
- Prepare and sterilize the skin with alcohol, chlorhexidine or iodine.
- Insert the needle inferior to the earlobe and advance the needle anterior to the tragus. Aspirate and then inject 2-3 mL of anesthetic while withdrawing the needle without removing it.
- Redirect the needle and advance posteriorly to the auricular sulcus. Aspirate and inject 2-3 mL of anesthetic while withdrawing and then remove it.
- Insert the needle just superior to the attachment of the auricular helix. Advance the needle anterior to the tragus. Aspirate and then inject 2-3 mL of anesthetic while withdrawing the needle without removing it.
- Redirect the needle and advance posteriorly to the auricular sulcus. Aspirate and then inject 2-3 mL of anesthetic while withdrawing and then remove it.

Posterior Tibial Block
The posterior tibial nerve provides sensation to the plantar aspect of the foot excepting the extreme medial and lateral aspects. The posterior tibial nerve block allows for rapid administration of anesthetic to the heel and plantar regions of the foot allowing exploration and repair with minimal needle sticks to this sensitive part of the body. The posterior tibial nerve is in close proximity to the posterior tibial artery so the use of vasoconstrictors should be judiciously used or avoided.

Technique
- Perform and document a neurovascular exam of the lower extremity.
- Place the patient on their side with the medial malleolus exposed.
- Palpate the medial malleolus and palpate the posterior tibial artery.
- Using a skin marker, mark the region 0.5 to 1 cm superior to the posterior tibial artery lateral to the medial malleolus.
- Prepare and sterilize the skin with alcohol, chlorhexidine or iodine.
- Place a skin wheal of anesthetic and advance your needle through the wheal towards the tibia medially laterally at a 45-degree angle posterior to the artery.
- If paresthesias are elicited withdraw 2-3 mm and inject 3-5 mL of anesthetic.
- If paresthesias are not elicited, advance at a 45-degree
ANESTHESIA IN THE ED CONTINUED FROM PAGE 7
angle until it meets the posterior tibia. Withdraw the needle 1 cm and inject 5–7 mL of anesthetic.
• Firmly massage the region for 10–15 seconds and test for adequate analgesia in the distribution of the nerve.

References

Meet the 2018-19 MACEP Resident Research Grantee, Dr. Emily Cleveland
Emily Cleveland, MD, MPH
Harvard Affiliated Emergency Medicine Residency

Emily Cleveland, MD, MPH is a chief resident at the Harvard Affiliated Emergency Medicine Residency (HAEMR). Though she initially started residency as a plastic surgeon in New York, she found her true calling in Emergency Medicine. Her time at HAEMR has allowed her to develop and pursue her interest in strategies for improving health equity and social justice through evidence-based interventions that facilitate behavior and policy change.

1. Why did you apply for the MACEP grant? (case, access, visibility, etc.)
The MACEP resident research grant offers a straightforward, accessible opportunity for funding a high impact, bite-sized research project. The simplicity of the application process and the rapid turnaround make it a very attractive option for residents who have ideas about how to study and solve problems in their department. In my case, I was interested in answering a question that arose out of anecdotal conversations with my co-residents: do the women interns (and junior residents) get “hazed” by senior

MEET THE MACEP GRANTEE CONTINUED ON PAGE 9

One Small Box
Madeline Brockberg, MD
Boston Medical Center Emergency Medicine Residency

Who can hold this box for me?
It is so small but so heavy.
It fits in my locker but isn’t big enough
To store your blue striped pants and your black onesie.
What could be big enough for that?
They’re all cut up but they still belong to you.
I didn’t use to know (or ever want to know) they made boxes so small.

I don’t think it fits on any of my usual shelves.
They’re not that crowded and I guess there is room
But I would rather give you all away.
I just don’t know who to give you to.

Maybe I could divide you up.
Give parts of you away to people who seem worthy.
My oldest brother could have your pudgy arm where we couldn’t get an IV.
And my husband could take your broken ribs.
Someone else who loves me could hold your pinky sized breathing tube.
And my parents could share your newly braided hair with the purple pom poms.
Would that make the box lighter?

“How was work today?”
“A little girl died, do you think you could carry this box for me?”
I stood next to you and prayed for a miracle
And it didn’t take long for our miraculous efforts to feel cruel.
So we packaged you up
And the small box could have filled the bay, the side, the whole street.
So heavy and so small, so big and so light.
(women) nurses? There are certainly residents who feel that interactions with nursing staff are more challenging for women than men, but we don’t yet know if that’s a widespread experience, or if it is attenuated over the course of residency training.

2. What interest area does the MACEP grant opportunity support for you?
   My research interests center around health equity, including ways in which we as providers can mitigate racial and gender biases to provide equitable care to our patients. However, the impact of bias and discrimination is not limited to patient interactions: it affects resident physicians in the workplace, including how we interact with other professional staff such as nurses. The MACEP grant is allowing me to bring together an inter-professional team of nurse and physician researchers from multiple sites to design and implement a study that will allow us to better understand the ways in which gender influences interactions between our nurses and resident physicians. We anticipate that this will lead to targeted interventions to reduce or eliminate the effects of gender bias in our everyday inter-professional relationships.

3. Specifically how do you see the grant helping you meet your objectives?
   Studying a complex issue such as gender bias and its effect on inter-professional relationships necessitates the use of qualitative methodologies. The MACEP resident research grant will allow us to gather, transcribe, and analyze substantial amounts of qualitative data which would otherwise be impossible due to the cost associated with these types of studies. In addition, the publicity associated with a MACEP-funded study will allow us to disseminate results to a wider audience, thereby enabling other hospitals with resident physicians to identify and perhaps address similar issues in their local environments.

The Save
Liam Porter, MD
University of Massachusetts Emergency Medicine Residency

When I imagined being an emergency medicine physician, I thought of television (it’s hard not to). I knew the TV shows like “ER” are exaggerated for dramatic effect, but I still had the image of the team coming together to treat the patient that just arrived in extremis. When I started residency, the reality did not feel that far removed from television. Illness

ROOTS Initiative – Striving for Diversity in Emergency Medicine
Imikomobong (Micky) Ibía, MD; Andrew Chu, MD; Alyssa Zupon, MD
Harvard Affiliated Emergency Medicine Residency

We believe that ethnic, gender, socioeconomic, and sexual diversity within a residency program—and a health care system as a whole—enhances the learning experiences and opportunities for all trainees. A diverse resident body allows trainees to learn from one another’s lived experiences, thereby developing deeper empathy, understanding, and respect for the communities from which we come. Additionally, we believe the resident body should reflect the remarkable diversity of the patients we serve. This is especially important in the emergency room, where we are the providers for the most vulnerable and underserved populations, many of whom come to the emergency department because they have no access to other health care services.

To this end, we—a group of wide-eyed interns at the Harvard Affiliated Emergency Medicine Residency (HAEMR) at Massachusetts General Hospital and Brigham and Women’s Hospital—created HAEMR ROOTS. HAEMR ROOTS is a resident-driven initiative that strives to create an academic and work environment where everyone can thrive and feel comfortable bringing their “full selves” to work by: 1) creating an environment where everyone’s personal story is welcomed and celebrated and 2) recruiting and retaining minority and socioeconomically disadvantaged residents.

In a short time, we have been blessed to accomplish many of our goals including creating a “diversity” section within our haemr.org website highlighting our program’s commitment to diversity and related initiatives, creating sleek, customized HAEMR ROOTS wares for applicant-centered recruitment events, and participating in the Harvard Affiliated Residency Program Showcase for prospective visiting students. However, our most successful initiative was the creation of our HAEMR ROOTS bio book. The initiative consisted of placing a packet of brief biographies that highlighted why each ethnic minority, female, LGBTQ, and socioeconomically disadvantaged resident chose HAEMR for residency training. The bio book was incredibly well received by our fellow residents, faculty, and staff on both sides of town. Perhaps most importantly,
multiple applicants this interview season thanked us for being vulnerable and remarked that “HAEMR felt like a place where their story would be welcomed”.

In the near future, we hope to further our efforts in recruiting a larger cohort of minority and socioeconomically disadvantaged residents by partnering with Mass General’s Center for Diversity and Inclusion, one of the first academic hospital-based centers in the country dedicated to helping build a diverse community of physicians and scientists and fostering a culture of inclusion and respect, to create unconscious bias training for all emergency medicine faculty and resident interviewers. We also hope to transform our HAEMR ROOTS bio book into a yearly series that highlights the incredible stories of our residents and faculty.

We are particularly thankful for the mentorship of Dr. Adaira Landry, one of our wonderful assistant program directors. She has been (and continues to be) a guiding light for us throughout this process and we are incredibly grateful to have her as a role model, mentor, and friend. We are also thankful for the mentorship and logistical support that the rest of HAEMR leadership has given us, especially our benevolent program director Dr. Eric Nadel.

If you are interested in learning more about what we are building or just have questions, comments, or constructive feedback, don’t hesitate to reach out to us at any time at HAEMRROOTS@gmail.com!

Belong
Andrew Kamilaris, MD
University of Massachusetts Emergency Medicine Residency

Here I stand at the head of the bed
A jaundiced woman in front of me almost dead
Ten pairs of eyes gaze up at me
All of this attention can make one uneasy

What would you like doc? The nurse asks
A laryngoscope and ET tube up for the task
Etomidate and sux should do the trick
20 and 100, I say—after some arithmetic

Palms are sweaty and hands quiver
A plastic tube above the carina I strive to deliver
Uvula, epiglottis, and cords I pass
I practiced this once in airway class...

From purple to yellow the color changes
The spirit in the room is contagious
I take a sigh of relief as I look up at the crowd
“Thank you everyone,” I say aloud

With no time to waste I gather supplies
Still feel like a student in doctor guise
To the septic hypotensive I take a trip
Sweat dripping down my back—drip, drip...

“Needle, wire, cut”—I repeat
When was the last time I got to eat?
The hyperechoic wire on ultrasound I see
This has to be in the II I plea

A typical shift during intern year
Still at the beginning of my career
More questions than answers I have at this stage
I suppose this is part of the physician’s coming of age

I look up at my attending from the head of the bed
There is not much more that needs to be said
A nod of approval is what I receive
Exactly what I needed on this late eve

Little gestures like these is what keeps us going
Especially when the waiting room is overflowing
Many believe this career choice is wrong
But I would say this is where I belong

Approach to Avulsed Teeth in the Emergency Department
Lisa Simon, DMD; Alec Koffer, MD
BIDMC Emergency Medicine Residency

Dental complaints are a common occurrence in emergency medicine, accounting for 1.3% of all ER visits. However, emergency medicine residents are often uncomfortable by these complaints, as dental complaints often receive less attention in our medical education. Below is our approach to a somewhat common complaint: the avulsed tooth.

1. Complete a full medical assessment of the patient and

AVULSED TEETH CONTINUED ON PAGE 11
could be lurking behind every benign sounding complaint, as I had not yet mastered the “sick versus not sick” skill yet. Was this next abdominal pain gastroenteritis or a rupturing AAA? Gradually however, I started to learn and become more comfortable with the variety of common presentations we see every day. Now, the chest pain was not a hidden aortic dissection. It was a regular workup, a risk stratification, and a disposition. My world was becoming more routine, and with that the sense of accomplishment was diminishing. The heroic saves seemed few and far between, drowned out by the multitude of abdominal pains and back pains.

On a regular shift, I was going about my day as usual. On my way to see a new patient, I see someone being rolled by hurriedly. His color was off, a pale gray, and he was completely flat in the stretcher, usually a bad sign. I followed the nurse and tech into the room and we started the EM mantra: ABCs and IV, O2, monitor. We quickly realized that his breathing was not intact, and neither was his circulation. As I am hooking up the bag-valve mask, the monitor comes up: the ominous undulating waves of ventricular tachycardia. CPR is started, the code and airway carts come flying around the corners; nearly every staff member in the pod is standing at the doorway. We run through the algorithms, shock here, epi there, and thankfully regain a pulse. His post arrest EKG is concerning for ischemia, and after a skillful intubation by one of my co-residents and a call to the cardiology fellow, he is whisked off to the cath lab. I take a few minutes to let the adrenaline evaporate, and then it’s back to work. On to see the patient whom I originally intended to see.

When I looked up the case a couple weeks later, the patient had survived his ordeal. After a successful bypass and complicated recovery, he eventually made it to discharge, neurologically intact. The case was a win in virtually every sense. He had a true emergency that we successfully treated. Nurses, residents, techs, everyone stopped what they were doing to come help. That day made me proud to belong to the specialty and gave me back some of the sense of accomplishment in my work that was drifting away. It reminded me of the things I love about what we do: the camaraderie of the team coming together, the rapid-fire medicine and call to action, the mental workout of switching from one patient to the next. To me, this case is a reminder of why we fight. Why we endure the nights and weekends and holidays. To treat whatever comes in next. To be ready for the one you can save.

determine clinical stability before treating the avulsion.
2. If the tooth has been near soil, evaluate the patient’s need for additional tetanus.
3. Anesthetize the area of the avulsed tooth using a 25-30 gauge needle and lidocaine, bupivacaine, or mepivacaine with epinephrine.
4. Consider a panoramic radiograph or dental radiographs, if available.
5. Evaluate the oral cavity for lacerations and any fractures of the alveolar bone; once anesthetized, any displaced fractures should be realigned using gentle pressure on both sides of the alveolar bone (buccal and lingual, or from within the tooth socket).
6. If this was not done in the pre-hospital setting, re-implant the tooth. The tooth should not interfere with the patient’s natural bite.
7. Evaluate adjacent teeth for signs of damage, such as fracture of the dentin/enamel, or bleeding of the gingival cuff around the tooth. Bleeding around the edge of the tooth indicates trauma to the periodontal ligament and these teeth should not be used as anchors for splinting of the avulsed tooth.
8. Consider splinting the tooth, if the materials are available.
   a. Gently dry the avulsed teeth and at least 2 adjacent teeth on either side with a piece of gauze. You can use the prongs of a nasal canula using 15 L/min to help blow area dry
   b. If available in your ED, use a thick but flexible orthodontic or surgical wire for splinting. If this is not available, the piece of metal from an N95 mask is an acceptable alternative.
   c. Apply the etch (40% phosphoric acid, which has a blue color) to the avulsed tooth and adjacent teeth you have selected to support it. Wait 45 seconds. The etch has a very bitter taste, so try to avoid getting it on patients’ tongues or cheeks if possible.
   d. Wipe the etch off with gauze or a cotton roll.
   e. Keeping the teeth dry, apply the bond, which allows the restorative material to adhere to the teeth.
   f. Use a curing light to set the bond. The light should be applied as close to the surface of the bond as possible on each tooth, for about 45 seconds.
   g. Place the wire against the teeth and adhere it with composite. This is a tooth-colored restorative material that can either be packable (with a viscosity like Play-Doh) or flowable (which is liquid). Apply the composite to 1 tooth at a time, and cure with the curing light for 45 seconds for each.
9. Patients will need close dental follow-up to remove the splint and evaluate the health of the tooth. Most people who have a traumatic avulsion eventually require a root canal to keep the tooth.

10. Prescribe a 1-week course of antibiotics. A tetracycline such as doxycycline is first-line; in children under age 8 in whom there is high risk of tooth discoloration, Penicillin V can be used as an alternative.

Sources:

Calendar of Events

MACEP Monthly Board Meeting
Tuesday, April 23, 2019
4:30-6:30 pm
Holiday Inn, 265 Lakeside Ave, Marlborough, MA

MACEP Annual Meeting
Wednesday, May 1, 2019
8:30am-2pm
Massachusetts Medical Society
860 Winter Street, Waltham, MA
Free to all Massachusetts EM Residents

MACEP Monthly Board Meeting
Tuesday, June 25, 2019
4:30-6:30 pm
Holiday Inn, 265 Lakeside Ave, Marlborough, MA

MACEP Monthly Board Meeting
Tuesday, September 24, 2019
4:30-6:30 pm
Holiday Inn, 265 Lakeside Ave, Marlborough, MA

MACEP Monthly Board Meeting
Tuesday, October 22, 2019
4:30-6:30 pm
Holiday Inn, 265 Lakeside Ave, Marlborough, MA