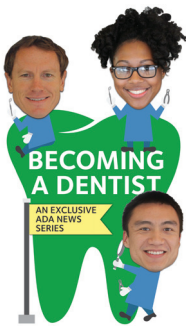


Learning from the patient's perspective



*Editor's note: In November 2017, the ADA News launched *Becoming a Dentist*, a series of stories that follows three dental students at the University of Maryland School of Dentistry — Dan Yang, LaShonda Shepherd and Ben Horn — during their journey to becoming dentists. See all the stories in the series at ADA.org/BeADentist.*

BY JENNIFER GARVIN

The humanity of the dental profession is something that is stressed often. And nowhere is that more keenly felt than when playing the role of patient.

Dental students, like the dentists they are training to be, must never lose sight of what it feels like to be in the chair. And so, the first patients they learn to deliver anesthetic to are not really patients at all — they're their fellow students. And the dental anesthesia lab — humorously referred to as “stab lab” or the “stick 'em clinic” — is the place where they do it.

Here, everyone gets a chance to experience how it feels to be both doctor and patient. For the first time, the students will be working in real mouths.

“It's different when you're looking at a skeleton or pictures on a wall. Everyone has different anatomy, and everyone has a different jaw. Plus, now there's tissue over everything,” said Dr. Cynthia Idzik-Starr, course instructor and clinical assistant professor in the department of oral and maxillofacial surgery, at the University of Maryland School of Dentistry. “They need to know how it feels for their patients. That's what it's all about.”

Dan, LaShonda and Ben have all eagerly anticipated this lab, albeit a little nervously.

“It's good to be on this end, to see what it's like,” said LaShonda.

For today's lab, the students are charged with practicing four injections, including two blocks, using 27-gauge needles with Carbo-caine:

- A local infiltration on the second upper premolar.
- A posterior superior alveolar block — PSA for short.
- A palatal infiltration on the first upper molar.
- An inferior alveolar nerve block — or IAN.

Dr. Matthew Frykenberg, a clinical instructor in UMSOD's department of oral and maxillofacial surgery, gets things started with a tutorial on how to properly load the syringe and cartridge.

“Let's pick one of the premolars, maybe No. 4 or No. 5, and think about where the apex of the tooth root is,” said Dr. Frykenberg, holding up a mannequin head for a demonstration of a buccal infiltration. “You're going to come in at a 45-degree angle, and you're going to go in with the needle and aspirate. When we're about to give an injection, first we place the needle in the area. In this case, we slide it into the tissue at the apex of the tooth, and we're going to aspirate a little bit. What we're looking for is a negative aspiration to make sure we're not in a blood vessel.”

More than once, the students will be reminded of this: “Before you inject, aspirate.” The goal is not to damage any blood vessels and cause a possible hematoma for the patient or cause the epinephrine that's in most anesthetics to directly enter the bloodstream.

“If you do aspirate blood into the car-



Learning by doing: Ben prepares to administer a posterior superior alveolar block on his lab partner, Erin, as instructor Dr. Matthew Frykenberg and fourth-year Sara Knox observe.



Look here: Dr. Matthew Frykenberg demonstrates during anesthesia lab as students Mimi Macauley, left, and LaShonda look on.



Instrumental knowledge: Sara Knox, left, shows Erin Golueke how to use the mirror to figure out placement for an injection on Ben.

tridge, what do you do?” Dr. Idzik-Starr asked. “First, throw the cartridge out. Have you done something wrong? No. This is why we aspirate, because we're not Superman. We can't see what's going on. What you're doing is seeing if you're anywhere near a vessel. So make sure you're aspirating.”

The two doctors share more tips:

- Keep your thumb back, not down.
- Use the mirror to feel your way.
- Figure out what works for you. There's no one way to do this.

For the inferior alveolar nerve block — called the IAN, for short — the big signifier that you're doing the injection properly is the shock.

“With IAN, you're going to feel a couple carpet shocks,” Dr. Idzik-Starr

said. “You want to tell the patient before you inject. Because patients, when they feel that shock, they think you're doing something wrong. Now that they know what to expect, they're going to feeling positive [about the shock] because they know they're going to get nice and numb. I ask patients to raise their hand when they feel the shock.”

Once the demonstrations are done, the students head into operatory rooms in pairs where each pair is assigned a fourth-year dental student to walk them through the injections and answer any questions they have. Throughout it all, Drs. Idzik-Starr and Frykenberg supervise and provide encouragement.

“I'm more nervous about getting injected than giving the injection,” admitted Dan. “I knew I would be under solid supervision from the oral surgery faculty and the D4s, but I've always been sort of afraid of needles.”

After applying a topical anesthetic to his partner/patient Erin Golueke's gums, Ben gets ready to execute his first injection — a buccal injection of the second upper premolar.

“Is this angle right?” he asks Sara Knox, his fourth-year guide.

“Perfect,” Sara said. “You want to be in the buccal vestibule and you want to hit a little bone and then, just inject.”

“And I'll feel that bone?” Ben said.

“Yep. You're not going into very deep because the canine eminence is there, too,” Sara replied.

And just like that, Ben completes his first injection, earning praise from his patient.

“Great job with the pressure, Ben,” Erin said. “That didn't hurt at all.”

“Administering anesthesia will quickly become our bread and butter and to do it for the first time, is a pretty big milestone. I called my brother (an orthodontist) because he told me one of his best memories of dental school was injecting each other. He told me that if my hand is shaking to just tell Erin that I was mixing the carpule,” Ben said.

Next door, LaShonda climbs into the chair as her partner, Mimi Macauley, gets ready to perform an inferior alveolar nerve block — which they have deemed to be the most difficult of today's four injections — with D4 Sam

Photos by Holly Selby

Dastrup guiding her all the way.

“Keep going until you’re about three-quarters of the way and you’re going to feel a little jolt,” Sam said as Mimi locked her thumb to begin the injection. “Go a little bit more, a little bit more, and you might feel bone. Keep going. Do you feel bone? OK, right there. Now, aspirate. No blood? OK, now slowly administer. The slower you go, the less pain they feel. That’s good.”

In addition to playing patient, LaShonda is actively trying to absorb Sam’s teaching. “How’d you feel during that?” Sam asks LaShonda.

“Not too bad. I definitely felt the jolt. When you said, ‘Keep going,’ I thought, she can’t possibly have any place left to go, but it wasn’t too bad.”

After completing his injections on Erin, Ben takes a turn in the chair.

“I’ve been waiting my whole life for this,” he joked, sharing this would be his first time receiving an anesthetic.

For this injection, the PSA, Erin uses the mirror to help find the right spot in Ben’s mouth.

“You’re going to want to apply a lot of pressure — it’ll be a lot more than you think it is,” Sara instructed. “You want to see the tissue blanche.”

“Do you feel numb, Ben?” asked Erin.

“I’m starting not to feel my tongue. Oh yeah, that’s super numb,” he said.

LaShonda credited her preparation — which included watching videos and shadowing one of Dr. Idzik-Starr’s fall classes — with giving her confidence. Her main goal in the lab was not to hurt Mimi.

“Administering injections feels sort of like working blindly,” she said. “You learn where the nerves should be, but we all have subtle differences so it’s crucial to have a good grasp of anatomy. A few minutes after I administered the IAN block, Mimi started to describe the numbness she felt, and I think that was the highlight for me — that I had gotten it right.”

Dan felt relieved as well. “I’d actually never gotten a dental injection before in my life so this was my first time!” Dan said. “The day turned out to be a lot of fun! I will definitely try to make my way down to oral surgery more to try to practice giving injections. [I’m] still scared about getting injected though, but at the end, my hand was definitely steadier giving the injections.” ■



Photos by Holly Selby.

Teaching moment: Dr. Cynthia Idzik-Starr, left, and LaShonda discuss ways to administer anesthesia as Mimi Macauley looks on.



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Feeling her way: LaShonda feels her cheek following an injection during her anesthesia lab.



Lab partners: Second-year dental student Kevin Barnes administers an injection to Dan.

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