Critical Access

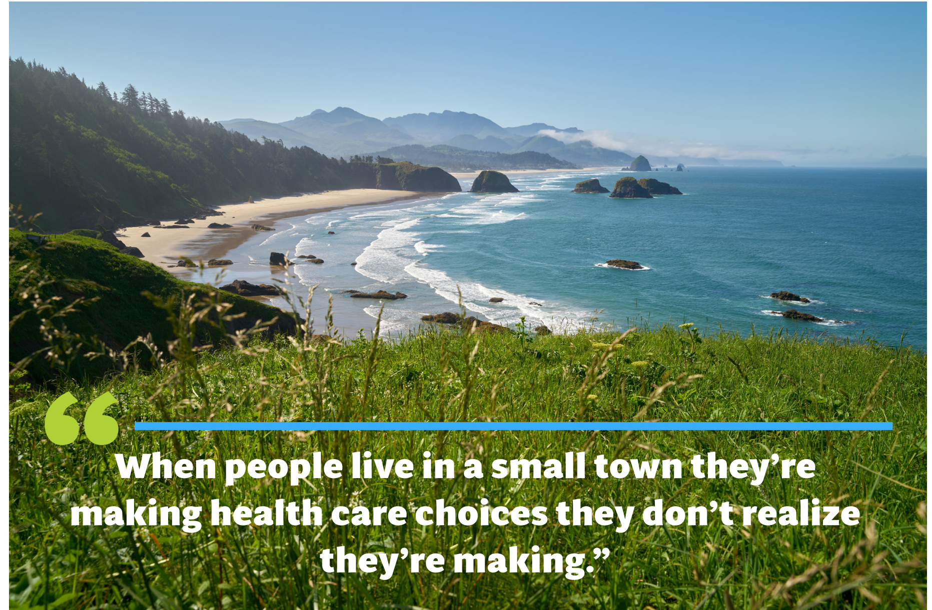
Robyn Hitchcock, MD FAAEM, Rural Medicine Interest Group Chair

AAEM recently started the "Rural Medicine Interest Group." A case I had recently reminds me why this is an important forum.

I am working at a new Locums job on the Oregon coast. When people that live in the northwest have a hankering to see the ocean, this is typically where they go. The Washington coast for the most part is unapproachable and rocky, but the Oregon coast has many areas of approach and a plethora of sandy beaches and little seaside towns. Somehow, despite the fact that I've lived in the "Upper Left" for nearly 20 years, I have never made it to the Oregon coast. So this is a great opportunity for me to finally go, explore a little, and get paid to be here. I think it's a win-win.

I was working my first full shift after orientation. Within minutes of taking sign outs in the morning, half a dozen people checked in. That's quite a few in a single coverage critical access facility. So I was chugging through the list, trying to get all my workups and evaluations started. A 39-year-old woman presented with a chief complaint of vomiting blood, so I focused on her chart. This unfortunate young lady was now sober, but already had severe liver damage from alcoholism and carried a diagnosis of alcoholic cirrhosis. She had no prior history of GI bleeds. But the high volume of blood she described vomiting is typically from esophageal varices in somebody with cirrhosis. She was tachycardic to 126 but normotensive, kind of gray looking and jaundiced. She had not vomited since that one episode that nearly filled her bedside garbage at home.

I started of course with standard labs and some volume resuscitation with saline. Her hemoglobin came back at 9.3, her INR was 1.9, and she was not on blood thinners. I reached out to the general surgeon on call who does endoscopy at this facility. Unfortunately, they typically can't manage esophageal varices because they don't have the right specialty equipment or training. He was performing a colonoscopy so I had to wait for him to finish, but he confirmed that he was unable to care for this patient.



> "When people live in a small town they're making health care choices they don't realize they're making."

Then I think I made a decision that saved this young lady's life. At least I like to think so. She was less tachycardic but still had an elevated heart rate around 110. I had already ordered vitamin K to try and bump up her clotting function. I knew I was going to have to transfer her and wanted to do everything I could to stabilize her. So despite the fact that she was not bleeding in the ED, I ordered TXA which helps blood clot better and decided to continue her volume resuscitation with FFP to avoid further dilution of clotting factors (as a critical access place of course, we do not have platelets or cryo on hand).

Just as the TXA was hanging and the FFP was almost ready she started vomiting blood again. About 500 ml of clotting blood into the emesis bag. She continued to vomit off and on over the next hour. But since I already had the clotting factors hanging, the total amount she threw up was only about 750 ml. By the end of the hour she was just dry heaving bilious saliva. We got her under control.

Of course I was busy during this hour. I wasn't just sitting there watching her throw up. I called the nearby (60 miles away) hospital and spoke with gastroenterology. We added rocephin, reglan, and octreotide. I ordered a repeat hemoglobin and made sure I got her type and crossed with several units of packed red blood cells. We pulled out our oral tube which can help tamponade these bleeds through pressure in the esophagus. I haven't done one since residency so the nurse and I reviewed the instructions together in case we had to go there. And of course all this time I'm desperately hunting for a bed.

The closest hospital is an hour away and although GI accepted, they had no ICU beds. I tried to do an ED to ED transfer, but got refused. I tried to pull the EMTALA card, but the ED said they can't do a scope in the emergency department; it has to be an ICU bed. So they didn't have the capacity to care for her, I had to keep looking. The transfer center called all up and down the coast and inland and we finally found a bed in Portland, 3 ½ hours away by ground. The Oregon coast is often foggy and

>>

overcast but luck was with me that day because the helicopter was flying. The helicopter had been on standby for some time, and now finally had a place to go.

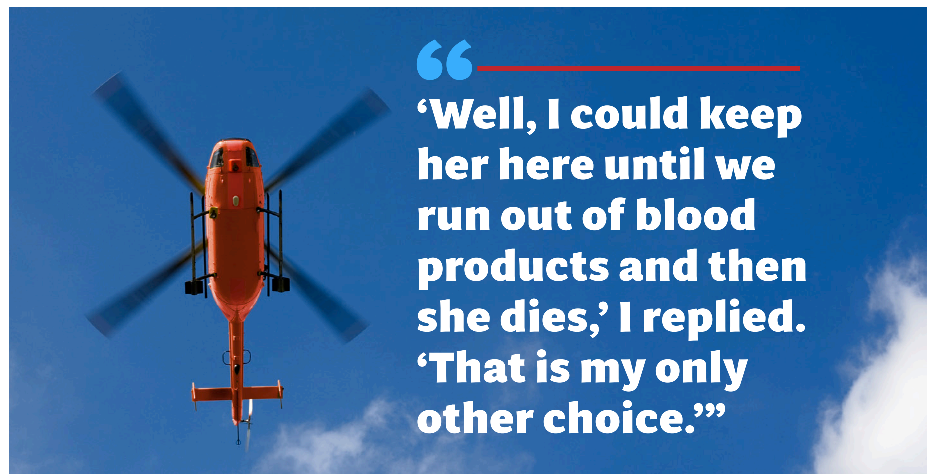
I got on the phone with the intensivist and told her all about the patient. When I updated the vital signs, repeat hemoglobin, blood transfusion, etc., the young woman who was probably an ICU fellow said to me, "Is it really safe to transfer somebody in that condition?"

"Well, I could keep her here until we run out of blood products and then she dies," I replied. "That is my only other choice."

I heard the squeak on the other end of the line. "Oh, ok. We will be waiting for her."

This is why we need a rural medicine interest group. People at large academic institutions have no idea what it's like being at a place with limited resources. When people live in a small town they're making health care choices they don't realize they're making. A ruptured aneurysm, massive trauma, or a bad head bleed is going to die before we get them to a facility capable of caring for them. Every. Time. Sometimes we have to ship unstable people. We do our best to stabilize them within the capacity that we have, but then we have to take the chance that they're going to deteriorate or die in route. Because the other choice is they will die here. The problems we face on a daily basis are seldom addressed in national discussion. I'm hoping to engage this conversation on a national level for awareness and facilitation both from the emergency medicine community, and the people we care for.

Back to the case...The repeat blood count which should have taken 10 minutes somehow took 40 minutes. The helicopter doesn't come directly to our facility, our paramedics have to take the patient to a rendezvous point 20 minutes away from the hospital. I made them wait for the blood test, and sure enough her repeat hemoglobin was 6.2. So I got two units of red cells hanging as she headed out the door, and sent a third one with them. The helicopter has a fourth.



As of today I haven't heard back what happened. Typically if she deteriorated en route somebody would have let us know. So I think she made it okay.

I made a lucky or perhaps intuitive decision to start aggressive clotting factors before she started bleeding again. We did not have to go with the pressure tube in the esophagus which has a huge complication rate and a high morbidity and mortality just placing it. The team of nurses who I had just met did not question my decisions to be proactively aggressive. And I'm pretty sure we saved a life.

A good day at a critical access hospital. ●

AAEM RSA
Innovate. Educate. Advocate.

2022-2023 AAEM/RSA Board of Directors & Medical Student Council Nominations Opening Soon!