

I'm so nervous about this talk. I really hope I don't contribute my own vomit, sweat and tears. But here we go. So, because this is a CDC talk, I'm going to start with a disclaimer. This is not going to be your typical talk about epidemiology. And it's also not your typical talk about mountain climbing. Despite the promising power stance in this photo, this presentation is not filled with incredible, all inspiring stories of my physical prowess and mountain feats.

Because I'm not that kind of mountain climber. In fact, I'm probably the worst mountain climber you've ever met. For one, I'm actually terrified of heights. Like, terrified. I regularly get altitude sickness and of all the peaks I've tried to climb, I have only been successful about 33% of the time. The only statistic in this entire presentation.

So every time I climb, invariably I always end up asking myself, why am I even doing this? How did I get myself in this situation? Which is not unlike my first few weeks as an EIS officer. So August of 2018. Here I am standing outside of my brand new apartment in Seattle. I had just moved there. The apartment was so new that I didn't even have furniture.

I didn't have a bed. I was sleeping on an air mattress on the floor, and that look on my face is pure nerves. Because I was a week out of finishing my EIS summer course and I was about to lead my first MBA.

I was especially nervous to lead this effort for a few reasons. First, I was leading the investigation with two of my brand new EIS classmates. And two second year EIS officers that were stationed with me in Washington. So these are officers that I had, officers that I had only met a few weeks ago or even a few hours ago.

And we were investigating a condition that I had never heard of prior to EIS: Toxic Anterior Segment Syndrome, or TASS. Thankfully, there's a short name despite over a decade of working as an infectious disease nurse. I had never really had the chance to think about eyeballs. And I definitely didn't have any experience with TASS, which was a noninfectious condition that can happen after cataract surgery and it can lead to blindness.

We had several cases in the Seattle area, so the stakes felt really high.

Despite my nerves and my lack of experience with the disease process, it actually turned out to be a pretty cool investigation. We got to visit three outpatient, surgical sites. We observed surgical procedures. First time ever seeing eyeball surgery. We investigated tools, sterilization processes, and dozens of different eye medications for potential contaminants. And I learned one of my first, perhaps most important lessons as an epidemiologist, which is with good people by your side, you can do really hard things.

This is held up for every outbreak I've investigated since every outbreak of infectious and noninfectious conditions, every public health emergency. And this lesson also applies, I would soon learn, to climbing mountains. So during these early days of my eyes training in between the outbreak investigations, I was flying back and forth between Seattle and Atlanta. And on those flights, I always chose the window seat.

So as the plane would take off, I would stare out the window, hoping to get a glimpse of these mountains. They're actually active volcanoes. And there are five of them in Washington state and 20 in the Cascade Mountain range. I became so transfixed that that first year of the. I decided to do something that was really absurd for someone who's terrified of heights.

And I decided, I want to learn how to climb these mountains. So I did what any nerd would do. I took a class. Actually, I took a lot of classes. I took wilderness navigation, avalanche rescue. I acquired and learned how to use all of the standard mountaineering equipment. And while I was learning the ropes of being an EIS officer in between outbreaks and those trips to Atlanta.

I also learned how to use actual ropes. I learned how to tie all of the knots that mountaineers need to know. I also learned how to travel in what's called a rope team. This is a small group of climbers who stay together on the mountain. So on dangerous terrain, when you're walking across glaciers and you're navigating around dangerous crevasses, you stay tied to each other via these long ropes so that if someone falls, hopefully we're able to rescue that person and not fall down ourselves.

This is a literal lifeline, if you will, and that is not unlike the lifelines that we build in our fellowships and with our CDC and public health colleagues, hopefully taking them with us throughout our careers. My EIS colleagues became a lifeline for me in 2019, when cases of otherwise healthy young adults started appearing at emergency rooms across the country.

They had severe lung injuries and some... many people, unfortunately, also died. But thanks to work by officers in Illinois, Wisconsin and North Carolina, we already knew that these lung injuries were associated with using e-cigarettes or vape pens. So by the time Washington state saw our first cases of EVALI, as it then was known in September of 2019, I had my eyes lifeline to call on a few emails later, and I had documentation and case investigation forms in my inbox literally within 30 minutes.

This is one of the many valuable aspects of our EIS and LLS training. Having trusted colleagues that we know we can call on in an emergency. Back on the mountain, I continue to learn about trust. I learned that it doesn't just happen. It must be built with intention and with practice. So we practice for mishaps, emergencies and rescues, ideally before they happen.

Even on blue sky days, in safe terrain, in clear weather, with great visibility. Even on those days, we would walk close together in close formation with our rope teams. Then this was for good reason. Because on the mountain and sometimes in public health, a lot of the environment is outside of our control. You can look ahead at the weather reports, you can pack extra layers, but often you don't know the conditions until you're in them.

And the higher up the mountain you go, the more rapidly things can change. Being prepared for unpredictable and uncertain circumstances and sticking together really can save a life. Speaking of unpredictable in the world of public health, in January 2020, all of my other EIS projects and my mountain adventures came to a screeching halt when, on January 21st, the Washington State Department of Health announced that we had identified the first case of Covid-19 in the United States.

Suddenly, that old familiar feeling came rushing back. What have I gotten myself into? This is especially true when, two days later, my supervisor, Scott Lindquist, walked into the room and said, the New England Journal of Medicine called, they want a case report. I want you to write it. And by the way, you have seven days. So we did write it.

And I say we because of course, I wasn't alone. I'm sure that several of my coauthors, because there were about 40 of them. Some of you might be in the room, so. Thank you. And, you know, in the weeks that followed, Washington, of course, was not alone. The public health community our rope team assembled several dozen EIS and LLS.

And CDC colleagues flew to Seattle to help support our first case investigations and contact tracing efforts. To this day, I remain incredibly proud and absolutely humbled at how we came together and how hard we worked to save lives. These are the tears I'm contributing. We learned the hard way in the months and years to follow that sometimes, despite all of your preparation, all of your teamwork, all of your tools, the cases might still rise in public health and in mountaineering.

One of the hardest lessons to learn is that there is so much beyond our control. At times. Looking back, this realization felt crushing. But even when it felt futile at the time, I can see clearly that it was not futile because

our work saved lives. We continue to save lives every day in public health. We will continue to save lives tomorrow because we are needed now more than ever.

This brings me to my last two lessons, which are kind of like two sides of the same coin. So in mountaineering we have a saying the summit of the mountain is nothing more than the furthest point you can turn around for this halfway point. The most important thing is not reaching the top of the mountain. The most important thing is that you and your rope team make it home safe.

So if that means that you need to take a break, so be it. If it means you have to turn around before you reach the summit, so be it. When we do have to turn around, and I've done that a lot in my climbing career, we like to say the mountain will still be there tomorrow. And so I say to all of you now, the public health challenges will still be there tomorrow.

I know this isn't easy. Anyone who's worked on a public health emergency response will tell you how hard it can be to take a break. Even when you're exhausted. The key here is redefining what success means to you personally. Like this day, July 2020, three days after I left my position. At the Washington State Department of Health and started as the CFO at the Washington State Department of Health, which was my dream job.

I tried to climb a mountain in Oregon, and I had to turn around 200ft from the summit, and I was so disappointed. But by turning around 200ft from the top, I got to witness one of the most beautiful sunrises I've ever seen in my life. Fast forward a couple of years to the summer of 2022, when I was leading our Washington State and Parks response.

I was working, like many of us in this room, seven days a week for far more hours a day than I should have. And after three months of this pace, I was exhausted. And although I was disappointed to step down from my leadership role after three months because I really wanted to see the outbreak through. By taking a step back, I gave someone else the chance to lead.

And I got some precious free time back for myself.

On the other side of the coin. Knowing when to keep going is equally as valuable as knowing when to turn around. I've had days climbing and days in public health where you're cold. You're exhausted. Your feet hurt. You're all out of your good snacks. You can only see a few feet in front of you, and you're not even sure if you're on the right path.

Those moments always feel pretty hopeless. I know we've all had moments like this in public health, too. I've learned in these situations that if you keep your head down, focus on what you can control and just keep putting one foot in front of the other. Sometimes you're closer to the top than you think. So keep putting one foot in front of the other.

Take care of yourselves. Take care of your fellow climbers and make sure you're ready for the climb ahead.