NATF North American Thrombosis Forum
Fighting blood clots through education

The Beat

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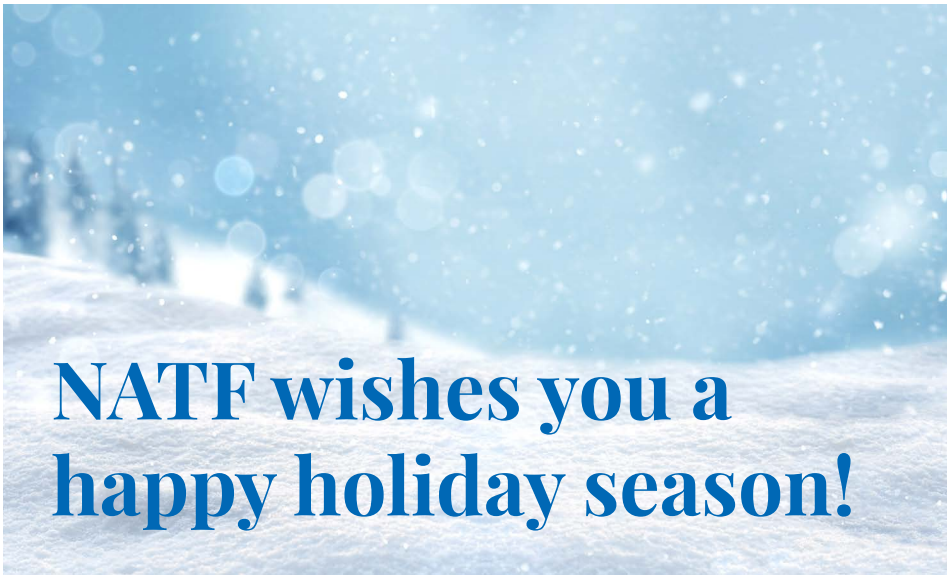

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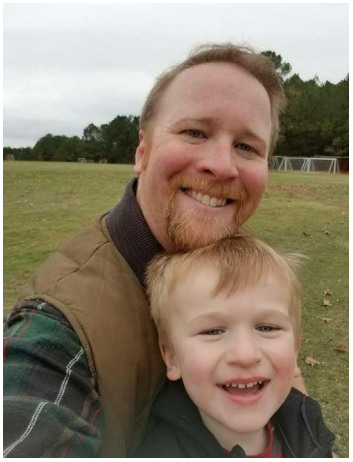
A Surprise Event: Adam's Story



Adam and his son, Connor

Nearly six years ago, then 36-year-old accountant, Adam Kane, started his day like any other: he took his almost 3-year-old son, Connor, to school. When he went to sign Connor in, he noticed that his signature looked strange. Later that night, he would go to the ER and find out he had a blood clot in his brain that had burst and caused a stroke.

Q: Tell us a little about the weeks leading up to your blood clot and stroke.

A: I was living in Los Angeles with my wife and son. We were getting ready to move to North Carolina and were busy packing and getting things ready for the cross-country move. I had about 3-4 weeks of headaches leading up to my event. If I even coughed, it would cause a lot of pain. Using WebMD, I self-diagnosed my symptoms as a stress headache. I took a

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Is Telehealth the Future of Healthcare?

Lauren Eberly, MD, MPH

Telehealth has become an important tool for patients and providers during the COVID-19 pandemic. However, there are still many questions about whether it's the right fit for all patients, since it can pose challenges and barriers for patients of different ages and backgrounds.

To help us look more deeply at telehealth services, we spoke

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with Dr. Lauren Eberly is a cardiovascular fellow at the University of Pennsylvania. Her work focuses on identifying issues related to inequity in healthcare and developing strategies to make healthcare services more accessible in the US and around the world.

Q: Tell us about your research related to telehealth services.

A: When we had to abruptly transition to seeing patients using telephone or video conferencing because of COVID-19, we were worried about patients that we might be leaving behind or potentially not reaching with telehealth services.

To help answer these questions, we did two studies [outlined in the table below].

Q: Were you surprised by the findings?

A: In some cases, yes. For example, it was interesting that Black and Latinx patients completed more primary care and specialty visits but had lower video use as part of telehealth visits. This finding indicates that telehealth has the potential to increase access to care and can be leveraged to reduce disparities, but that some barriers remain that we need to address. We must be intentional with implementation to ensure that all patients are equipped to effectively participate in telemedicine. We also discovered that female patients were less likely to use video conferencing. There could be lots of reasons for this: childcare duties may fall disproportionately to female patients in the home, or there could be different employment strains for women.

Q: Are the services patients receive for a telehealth visit of the same quality as an in-person visit?

A: Traditionally, in-person visits have included hands-on physical exams, such as taking a patient's blood pressure or listening to a patient's heart. With telehealth, one interesting thing is that we're able to complete many of the same physical exam components. For example, you can use video to look at a patient's legs for swelling or look at their neck for increased pressure. Right now, at our UPenn clinic, we're creating care kits for patients to help with telehealth appointments. The kits may include a blood pressure monitor, an electronic stethoscope so we can listen to their heart, and other tools they can use at home. We can't replicate every type of test, but there are many things we can do.

Q: What are some challenges of telehealth?

A: Using only a telephone without a video component makes it harder; it's hard to always get a full understanding of the patient. However, a bigger challenge is that providers may not receive the same payment from insurers for telehealth services that they do for in-person visits, which may indirectly limit the use of telehealth services. Providers should have the flexibility to decide what type of visit is appropriate and not be penalized for selecting one appointment type over another.

STUDY	WHO WE LOOKED AT	WHAT QUESTIONS WE HAD	FINDINGS
Initial Study	Approximately 3,000 UPenn cardiology outpatient clinic patients from March-April 2020.	• Who successfully completed the appointment? • Of those that attended the appointment, were there differences in use of video conferencing versus phone/audio only?	• Non-English-speaking patients and female patients had more barriers to using telehealth services with fewer completed visits. • Lower income, older, and female patients were less likely to use video for telemedicine visits.
Follow-up Study	Approximately 150,000 patients for primary and specialty services who used telehealth from March-May 2020.	• Who was able to complete the visit? • Who successfully completed the appointment? • Of those that attended the appointment, were there differences in use of video conferencing versus phone/audio only?	• Older age, Asian race, non-English language, and Medicaid insurance were associated with fewer completed telehealth appointments. • Older age, Black race, Latinx ethnicity, and lower household income were associated with lower video use overall.

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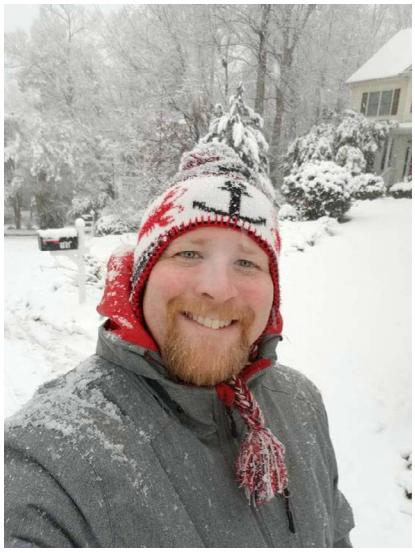
lot of Advil and tried to drink water. I also thought it could be allergies or just stress from the impending move. Los Angeles was also experiencing wildfires, so it was a stressful time overall.

Q: What do you remember about the day of your event?

A: I dropped off my son at daycare. I signed his name, but when I went to sign my name, I thought it looked strange. I was holding all his stuff and figured it was just from having my hands full. I went to pick up some barricades for a moving pod we needed. Again, I had to sign my name to rent the barricades, and I thought my signature looked strange. I attributed it to being in a rush and headed home. While in our bedroom packing, I passed out. I've passed out before from standing up too quickly, so again, I didn't think much of it. I remember going to the refrigerator to get water and realized I was really out of it – but didn't do anything.



I then did the worst thing…I drove to pick Connor up from daycare. Everything went fine; I took him home, made him dinner, and put him to bed. When my wife came home, I told her what happened. Apparently, I wasn't making a lot of sense and she urged me to go to the hospital. Her parents were in town to help us move, so they came over and watched Connor while we went to the ER.

Q: Did you think you were having a stroke?

A: While my wife's parents were on the way over, I was putting on my shoes and noticed the right side of my body wasn't working well. That's when I knew something was wrong. It wasn't a total loss of control, but it felt like there was a heavy weight on my arm and leg. When that happened, I was like, okay, something's wrong.

I don't remember a lot from that night. The next morning, the doctors told me I had a blood clot in my brain that had burst and caused bleeding (medically known as cerebral venous sinus thrombosis or CVST).

I had a second stroke a day or two later. I remember a nurse had asked me how many kids I had and I couldn't get the words together to tell her I had one son. They held up a picture of a beach with palm trees and a hammock and asked what I saw. I couldn't say the word "hammock." I talked to my wife on the phone, but couldn't vocalize much. They then called another stroke code. With more fluids, I began to feel better and haven't had an episode since then.

Q: What treatments did you receive?

A: I spent two weeks in the hospital while they ran tests and figured out my blood thinners. I was on warfarin for about 3-4 months, and was also put on cholesterol medication and a daily baby aspirin, which I still take today. I no longer take any blood thinners or other medication.

Q: What happened in the next few months after your stroke?

A: After being in the hospital for two weeks, I drove across the country with my father to meet my family in North Carolina. We stopped many times along the way so I could have blood tests and make sure everything was okay. When I arrived in North Carolina, I was set up with a primary care provider and a neurologist.

In the hospital and over the next several months after the stroke, I was tested for every genetic blood clot condition, but all tests were negative. They checked my heart but didn't find anything wrong.

There were a lot of follow-up appointments for about a year. My neurologist believed that severe dehydration may have triggered my stroke. It was 112 degrees in California that summer, which could have contributed to the dehydration.

Q: Is there any medical history of stroke or heart condition in your family?

A: Not that I'm aware of beyond my father, who has an irregular heartbeat. Beyond that, I don't know of anyone in my family who's had a similar experience.

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Q: What were some of the immediate ways your stroke impacted your life?

A: It definitely changed my lifestyle at the time. Things have fluctuated since then; I went back to less-than-grand dietary ways for a while, but have recently gone back to eating healthier. Now, I'm always thinking about food and what I eat. In terms of physical activity, I'm doing much better. At the time of the stroke, I didn't do any physical activity. I would go to work, sit all day, and not work out. Now, I'm more active. I joined a run club last year and I take karate 2-3 times a week with my son.

Q: How has your experience affected you?

A: I have more of a "seize the day" attitude. I might not have said something or done something before, such as going for a promotion at work, telling someone how I feel about them, etc. I'm more likely to do that now because at any time, things can change.

I'm also more conscious of my body. If I stand up and get dizzy, I pause and think about it. It's strange, but if I don't feel well, the first thing I do is sign my name. That was the first sign for me that something was wrong on the day I had the stroke. Recently, I had a cold and felt off, so I wrote my name a few times on a piece of paper. My wife came home and said, "what's wrong? Your signature is all over the paper." Luckily, I was fine.

Ultimately, the idea of being gone from Connor is with me all the time, and that's why I'm always trying to take better care of myself. ■

Do you have a blood clot story you'd like to share? If so, please contact us at info@natfonline.org.

Upcoming Events

Check our website at natfonline.org for our upcoming events in 2022.

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Q: What are some of the benefits of telehealth services?

A: I find telehealth to be an incredible bonding experience overall. We get insight into patients' lives, and they can see us in our home, too. I believe it provides more context and complete care for patients to see them in their home. For example, we can see the medicines patients are taking. Sometimes when a patient comes to the office, they may forget their prescriptions or may not remember how often they take it. With telehealth, patients can show me the bottles. Telehealth can help identify some safety or environmental barriers in the home, too. For example, some of my primary care colleagues have discovered that patients have rugs that are tripping hazards, which prompted them to suggest a home evaluation by a physical therapist.

Telehealth has also allowed for more involvement with family members. With in-person appointments, family members may not be able to attend because of work or other commitments. Telehealth makes us more accessible to families; they can ask questions or hear about care for the patient. We can also show results easily from different tests right on the screen.

Another huge benefit is with patients who are non-English-speakers. After seeing the disparities in telemedicine uptake among non-English speaking patients, we implemented an integrated real-time translator for visits. We're able to click a button and a translator is immediately available by video as part of the visit. With in-person visits, we often have to wait for a translator to be available, which causes delay in care. The video translator program is so helpful that I now use it during in-person visits.

Finally, we can quickly complete care assessments outside of office hours. It allows us as providers to expand our normal hours. I can quickly talk to a patient at 7 p.m. on a Saturday about their blood pressure. I have found it can be quicker than coming into the office. I can spend more time talking to the patient and less time shuffling from patient to patient.

Q: We discussed how important it is to not just have technology, but to have the right technology.

A: Technology is important but every time we implement something new, I want us to ask ourselves how this tool or solution impacts equity. With this technology or solution, do all patients have equal access to the same care or information? After seeing disparities in telemedicine uptake, we at UPenn have tried to decrease barriers to connecting with the clinician via telemedicine. We've integrated text messaging into our telehealth appointment system whereby patients receive a text to join their appointment; they don't have to download an app or other software. We can use the same text messaging system to tell patients whether a doctor is running late. Translation services are also integrated into the text messaging platform so instructions can be translated. This technology helps decrease some of the known barriers to telehealth.

Q: When is the right time to use telehealth versus an in-person appointment?

A: This depends on the patient's diagnosis. For example, we can check blood pressure by video or phone quickly. Another option might be to evaluate all new patients in person and then transition them to telehealth appointments if appropriate for their specific medical issues. Giving providers the flexibility to make this choice with patients is helpful, which is why we strongly advocate for ensuring equal reimbursement from insurance for different types of appointments through permanent legislative action.

Q: What would you tell patients who are trying to decide between a telehealth visit and an in-person visit?

A: Patients have been nervous about in-person appointments because of COVID-19. However, we don't want patients to put off their symptoms or questions; we want to intervene before patients get even sicker.

For patients wanting telehealth, I encourage them to connect with their clinic and providers to figure out what options are available. Opportunities for telehealth may vary greatly by specialty, clinic, and type of care. ■

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