AMA's Moving Medicine video series amplifies physician voices and highlights developments and achievements throughout medicine.

**Featured topic and speakers**

In today’s episode of Moving Medicine, heart attack survivor, Cindy Huang, is joined by AMA Chief Academic Officer Sanjay Desai, MD, one of her first responders, along with Comilla Sasson, MD, PhD, from the American Heart Association. Ms. Huang shares details of her CPR rescue, which has inspired efforts to promote the importance of bystander CPR training. Hosted by AMA Chief Experience Officer Todd Unger.

Access free CPR resources.

**Speakers**

- Cindy Huang, PharmD, heart attack survivor and deputy editor-in-chief, Association of Health System Pharmacists
- Sanjay Desai, MD, chief academic officer, AMA
- Comilla Sasson, MD, PhD, vice president, Science & Innovation, ECC, American Heart Association

**Transcript**

**Unger:** Hello, this is the American Medical Association's Moving Medicine video and podcast. Today we've got a great episode. We're going to be talking about the importance of bystander CPR training and how physicians can help spread awareness and educate patients.

Three guests today, Dr. Sanjay Desai, the AMA's chief academic officer and group vice president of medical education in Chicago. Dr. Comilla Sasson, a practicing emergency medicine physician in
Dr. Desai, in addition to your credentials and your title here at the AMA, I didn't know that you were also a hero because you've got a great story that happened over this last year. You and Cindy didn't know each other but you were both running the Cherry Blossom 10-miler in Washington, D.C. That race did not go as planned for either of you. Dr. Desai, take us back to that day and tell us what happened from your vantage point.

Dr. Desai: Thanks for having us all. Certainly no heroics here, but it was a very meaningful day for me and I think many others, including Ms. Huang. We were running the Cherry Blossom 10 Mile. It's a big race in D.C., about 15,000 people. And right at the end of it, mile nine just before we finished, I noticed out of my peripheral vision somebody fall and then a scream. And we turned around and Ms. Huang had fallen, and we learned she was in distress.

I was one of the first two people there. Luckily the other person there that arrived at the same time immediately was an EMT. And we found Ms. Huang unconscious and what appeared to be seizing. And we put her on her side, but then slowly I noticed that her pulse was going away and she became pulseless. And so we had her then on her back in the middle of this huge race.

And luckily another physician who was a medic in the race, Dr. Muldoon, actually stopped there as well. So the three of us then began a resuscitation for her that was quite chaotic just given the circumstances.

About 15,000 people, lots of security, but I had performed 8 minutes of CPR on her. And thankfully after 8 minutes she did have return of her pulse. And at that time, the EMTs had arrived and they proceeded to intubate her.

A helicopter landed in the middle of this 15,000 person race and we were able to get Ms. Huang onto the helicopter and off to the hospital where she was found to have a massive heart attack and was actually critically ill on life support for the ensuing three days. And then you see her now. So it really was quite a meaningful experience for many of us.

Unger: That's a pretty harrowing story. Cindy, I imagine you're feeling pretty fortunate about who was on the scene in that particular race at that particular time. Why don't you take us back and tell us a little bit about the story from your viewpoint? You're getting ready to run a race that you've obviously been training for. When did you know something was wrong and did you have any symptoms or anything that indicated something like this might happen to you?
Huang: Well unfortunately, I can't recall anything from that day because I suffered memory loss as a result of the cardiac arrest. I can't even remember taking one step of that race. So my accounts from that day have been pieced together from what my friends have told me and from medical reports.

And according to my friend who I was running with, I was complaining of muscle cramps at about nine and 1/4 miles in. And so we stopped to stretch. And as soon as we started up again, that's when I collapsed.

Unger: When did you initially realize kind of what had happened and that something was really wrong here? And what went through your mind at that particular point?

Huang: Well, I finally regained consciousness three days later in the ICU. I found myself in the hospital bed with my husband sitting next to me. And I was in shock initially when he told me what had happened. And I kept asking myself, how could this be? I am an otherwise healthy 49-year-old who has no history of heart disease except for a questionable family history.

My dad had a heart attack when he was 53 and died of complications from bypass surgery, but he was also a lifelong chronic smoker. And I have never smoked in my life. Before my event, I exercised every day and I paid attention to healthy eating and mind-body wellness. I routinely practice meditation and yoga. And I had also just seen my primary care doctor recently and received a clean bill of health, including normal lipid levels.

So there was no indication whatsoever that I would have a heart attack. And I just could not wrap my head around the fact that I had just suffered one.

Unger: Wow. So really a surprise here. And thankfully you're healthy now and you're doing well. There's got to be some kind of special bond that happens when an incident like this occurs, a life is saved. You two now stay in touch. How has this particular incident impacted you personally, Dr. Desai?

Dr. Desai: This has impacted me more than any ... I'm an ICU physician. And in practicing, I've resuscitated hundreds and hundreds of patients, but this is the first time out of the hospital. And I can tell you without any equivocation this has affected me more than any other resuscitation that I've ever been part of. And I've tried to piece together why, talking even to colleagues about why that might be the case. And I think it's the circumstance. It left me very connected to Cindy.

I think the three days that followed, I'd been in touch with their ICU team all day long and her husband every day to see exactly how she's doing and how she's recovering. And the profound effect honestly on me was completely unanticipated. And I've shared the story. I was running with a group of friends, even on them, on my family because I've shared this story with others.
My wife even says this has affected me more than most other things clinically probably as much as taking care of the first patients with COVID that came through which was an incredibly, I think, emotional and meaningful experience as well. So I just feel deeply grateful that Cindy is here, as she is now. And that we’re able to use this hopefully to promote training for others to learn CPR as well. But it really has affected me more than I can explain and far more than I anticipated.

**Unger:** It's interesting too because obviously doctors are in the business of saving lives, but this has obviously some really special meaning. Cindy for you, how did this affect you personally?

**Huang:** I mean, it moved me to tears when I found out what Sanjay had done and Dr. Muldoon and everybody else who was at my side at the time and just the fact that they kept contacting my husband to find out my progress. It was just so overwhelming and heartwarming to have such a group of caring, caring individuals at my side.

And this was definitely a life-changing event for me and a wake-up call. Prior to this, my life was running full speed. I was extremely busy and always on the go. I was working long hours while being a mom to three kids shuttling them to their various activities. And now that I feel like I've been given a second chance at life, so I'm not going to—I'm not going to mess it up this time.

I'm going to prioritize my health and streamline my life by letting go of things that don't matter. And like Sanjay, I see this as an opportunity to promote bystander CPR. Not only should all health care providers be trained on this important life-saving skill, but I think everyone should. I think our kids should be taught in their schools as part of their health curricula.

And it's really such a small investment of time for a potentially huge gain of saving someone's life. So why wouldn't you do it? And I've since signed up my three kids for a CPR class and I intend to get certified as well.

**Unger:** Dr. Sasson from your perspective as an emergency medicine physician, how does this experience reflect what you see in your own emergency department?

**Dr. Sasson:** Well, I think Sanjay you even said this as well, right, there was a series of events that went just as planned to optimize an outcome where Cindy was able to be here with us today. And I think to myself, there's many, many patients who come into the emergency department who are not as fortunate as Cindy. So, there's delays in calling 911, there's delays in even recognition of a cardiac arrest event when the heart stops.

And then of course delays in defibrillation, getting the pads on the chest to get a shock if needed. And then ultimately, once they get to the emergency department, it is a much tougher road for us to be able to get to the point where we can have survivors. And if you look at the stats nationally, we've been stuck at about one out of every 10 cardiac arrest patients will survive.
That's a sobering number, right? So, to think that you are one out of every 10, Cindy. And I think that's why whenever we hear these stories, we want to make sure that we highlight just how important it was that Dr. Desai was there, Dr. Muldoon was there. You were able to get airlifted to a hospital that knew how to take care of patients with cardiac arrest and that you got the care that you needed.

And so I think again for hopefully the audience here today this is a way in which to say, look, this can happen to anybody. And this most likely is going to happen to somebody who you know because the vast majority, 75% almost, of all events will happen at home. So please, take the time to learn how to do CPR.

**Unger:** Given the stats that you just talked about, I mean, you must see a lot of situations where bystander CPR really could have made a difference there.

**Dr. Sasson:** Well, we know that bystander CPR can double or even triple someone's chance of survival. And that's basically—if you think about what CPR is, you are helping the heart externally pump all of the oxygen to the vital organs, the brain and other parts that need it. And so when you perform CPR you're literally helping to do that blood flow to those vital organs until help can arrive. For every one minute that somebody does not do CPR, your chances of survival go down by 10%.

So, you have a 10 minute window. And, Cindy, I think the thing that was probably the most important thing that Sanjay said was that out of the corner of his eye he saw you go down. And so that meant that hands were on the chest performing CPR right away. And I think that's probably the most critical action that you did, Sanjay, to save a life. And Cindy that helps you be here today.

**Unger:** Well Dr. Desai, how is this currently addressed in medical education? Is there room for change there, even if physicians themselves are equipped to perform CPR, should they also be learning how to educate patients?

**Dr. Desai:** I think this is—I'm touched just seeing Cindy now, honestly in listening to her tell her story from her perspective, we met for coffee probably a couple of months after the event as she was recovering. And we met in this big outdoor space, Todd, and I thought even there we mentioned, look at all of these people here. We need to teach CPR in this type of setting.

So physicians can learn and health care professionals can learn, but really we need as many possible adults in the country to learn because you don't know. Obviously these things are unpredictable and the most important thing as Dr. Sasson just said is time. And so we need immediate reaction. I think we need to find ways, Todd, to scale the education and training of CPR for people.

And I had another colleague who works with American Heart Association … and she was able to create training in big events where people want to learn. So, college basketball games, state fairs. Finding people where they are and then training them in bystander CPR and then just doing this as
much as you possibly can. I think that's the way to scale this.

And really, we need to do this as much as possible. Again, seeing Cindy just now and today and meeting her, I think there's no more powerful testimony to everybody learning this than talking with her.

**Unger:** Absolutely. Dr. Sasson, how does the American Heart Association approach this issue? And tell us a little bit more about their efforts to promote bystander CPR.

**Dr. Sasson:** Well just as Dr. Desai had mentioned, it's about meeting people where they are, right? So whether that's at a school, at an airport kiosk—I'm not sure some of you have flown through some of the airports. We actually had a hands-only CPR training station where you can take a minute, it's a game, you can learn how to do CPR.

We've also created a number of resources. So as many folks may or may not know, we recommend for young adults and adults that you can do something called hands-only CPR. And what that is that you don't have to worry about the breaths part. You basically just push hard and fast in the center of the chest at least 100 to 120 beats per minute to the tune of "Stayin' Alive," although I think a lot of folks don't even know what "Stayin' Alive" is anymore.

**Unger:** Have I dated myself by knowing the answer to that? Yes.

**Dr. Sasson:** But what that does do is that it just shows you that really in just a minute or two you can learn how to save a life. And then, of course, if you want to go and take a full course, we have lots of different options. You can do it virtually, you can do it in person. I think the biggest thing is we have to focus on inequities. And we have to focus on the fact that not everybody has the same chance of survival based on where they live or where they collapse.

And so whatever we can do as an organization to make that impact, to meet people where they are, and to make sure that this is a life skill that you get during school. We have advocated now for the last I think almost 10 years to have CPR training be a part of high school graduation requirements. And we're almost up to 40 out of our 50 states. But again, this is where it's about codifying this so that everybody knows how to do CPR so that it doesn't matter.

And I will say one of the biggest steps that we have seen that personally affects me the most is that we see that females oftentimes don't get CPR performed as much as males. And that's because there's oftentimes miscommunication. People don't understand. They just think you've passed out. They don't necessarily realize that you've had a cardiac arrest.

People are afraid of baring the chest. They're afraid of doing CPR compressions over let's say a sports bra. And what we've been trying to do is really help get rid of a lot of the CPR myths that make...
it a health inequity for females to not get CPR as much as males.

So, I think again it's all about battling misperceptions. In the era of COVID, it's about maybe even just telling people, look, just do something. Call 911. Put your hands on the chest and start doing CPR. Whatever it takes to get people to do the right critical actions. That's what we're trying to do right now.

**Unger:** And I wasn't aware of the, you call it the hands-only version of CPR. I imagine that had to that had to come in handy in the middle of a pandemic in terms of people not being afraid. Is that something that you find people are concerned about?

**Dr. Sasson:** Absolutely. I think COVID has really born to light a lot of health care providers risks and personal risks that they may take to try to do resuscitation, a lot of people who are out and about. And I think the thing that's really interesting is that if you look at the data over the COVID-19 pandemic, our bystander CPR rates did not fall dramatically.

I think part of that is because of the fact that, look, you don't have to blow into somebody's mouth if you don't know them. If they're a young adult or an adult, you can just push hard and fast in the center of the chest and call 911. And I think taking some of that extra, am I doing this right? Is it two in 30? Two and 15? All the numbers out of it and just saying push hard and fast in the center of the chest I think has really made it simple for a lot of folks and hopefully something that anybody feels empowered to do, even just by watching a video, for example.

**Unger:** Well that sounds like a great idea. And let's talk a little bit about the role that physicians play in promoting bystander CPR training. Where would someone find out more? Video, whatever kind of resources?

**Dr. Sasson:** So if you go to cpr.heart.org we have a ton of free resources that not only you can use for yourself and your family but also hopefully help promote to other folks as well too, and we try to build these in English and in Spanish so that people have access to these resources that are free in their primary language as well.

So I would hope that people can go there for more information, not just on hands-only CPR but also about, hey, look, I want to get more additional first aid training and CPR training. We have a huge number of training centers all across the world that can do this for folks as well. So, learn hands-only CPR and hopefully that helps you get excited about maybe taking a full course and learning about all of the different first aid emergencies that you can help with or your patients can help with.

I know in the ED, if I have a patient who's had an MI, I talk to their family who's had a heart attack. I talk to their families and say, look, you all should know CPR and here's why, because your loved one is at risk. But there's a lot of–I think there's a lot of opportunity, especially as we continue to build our relationships with our patients to be able to give these free resources both online on websites but then
also in apps and free resources that we have.

**Unger:** Dr. Desai any final thoughts on what you learned from this incident?

**Dr. Desai:** Yeah, first I think just gratitude for everyone that ever participates in these events. And I think my final message to anyone that is listening is learn CPR. It is incredibly valuable, incredibly useful and effective. It's easier now. And obviously we wished this never happened. We wish events like this never happened, but the reality is that they will. And they may happen near you. And so, I feel like actually it's a responsibility for all of us that are capable of learning this to learn it so that we can help whenever called upon.

**Unger:** Cindy any final thoughts or messages you'd like to share with physicians out there or anybody who watches this video?

**Huang:** Well I keep thinking how lucky I was to have received immediate high-quality bystander CPR. This was by far the greatest factor to my survival, and I couldn't have asked for a better team of doctors and emergency personnel who just happened to be there at the right time and place. If I had been running somewhere else alone, I may not have been so fortunate.

So after three months of rest at home, I'm happy to report that I'm now fully recovered. I have no residual neurologic abnormalities. My heart function is back to normal, if not better than normal. I started running again. And I just returned to work. In fact, today is my first day back. And I will just forever be grateful to Dr. Sanjay and the others who performed CPR on me that day because they saved my life.

**Unger:** Such an inspiring story. I will tell you 100%, I'm going to learn how to do CPR and encourage my family to do the same thing just to be prepared. You never know when something like this is going to happen. That's it for today's episode. Thank you so much Cindy, Dr. Desai, Dr. Sasson for being here today and sharing this important information.

We're glad the story turned out the way that it did and hope that this experience helps others have a similar outcome. We'll be back soon with another Moving Medicine video and podcast. You can find all of our videos and podcasts at ama-assn.org/podcasts. Thanks for joining us today. Please take care.

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