



## 2021 AMA Research Challenge finalist: Priya Shah

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# MAKING THE ROUNDS

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## Making the Rounds

### Transforming medical education around trauma-informed care, 2021 AMA Research Challenge finalist

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## Featured topic and speakers

In this episode of Making the Rounds, Priya Shah, fourth-year medical student at Harvard and AMA Research Challenge finalist, discusses her passion for transforming medical education and the curriculum she developed, based on her research, to improve trauma-informed care.

Learn more about the AMA Research Challenge.

## Speakers

- **Priya Shah**, fourth-year medical student, Harvard Medical School
- **Brendan Murphy**, senior news writer, American Medical Association

## Host

- **Victoria Danan**, 2020 co-winner of the AMA Research Challenge

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## Transcript

**Danan:** The AMA Research Challenge is the largest national, multi-specialty research event for medical students and residents. Hello, I'm Victoria Danan, co-winner of the 2020 AMA Research Challenge with Shamsh Shaikh. Today's interview features one of this year's five finalists for the 2021 AMA Research Challenge, interviewed by AMA Senior News Writer Brendan Murphy.

**Murphy:** Hello, there. I'm Brendan Murphy. I am a writer from AMA News covering mostly issues related to medical students and residents and I am here with a research challenge finalist. It's Priya Shah, a medical student at Harvard. I look forward to getting to know her better. Good morning, Priya.



Priya Shah, one of five AMA Research Challenge finalists.

**Shah:** Good morning, Brendan. My name is Priya. I am a fourth-year medical student at Harvard Medical School and I'm currently applying into the field of pediatrics.

**Murphy:** Priya, thank you for joining us. Your project that won you one of the five finalist spots in the 2021 AMA Research Challenge was on a trauma-informed care curriculum you developed. Why did that appeal to you for your poster presentation?

**Shah:** Yeah, so trauma-informed care, to be able to talk about the importance of that topic, I have to go back to a landmark study in the field of adverse childhood experiences (ACEs) that changed my whole view of this issue. There was a huge adverse childhood experiences study run by the CDC and Kaiser Permanente, which was one of the largest investigations into childhood abuse and neglect, as well as household challenges, and their effects on later-life health and well-being. This was a study that was conducted back in the 1990s with over 17,000 participants who completed surveys about their childhood experiences and their current health statuses and behaviors and so this landmark study really uncovered how strongly ACEs are related to the development of risk factors for disease as well as well-being throughout life.

Almost two-thirds of the study participants reported at least one adverse childhood experience and more than one in five reported three or more and they found this graded dose-response relationship between ACEs, the adverse childhood experiences, on negative health and well-being outcomes, everything from injury to maternal health to infectious disease to educational and professional opportunities. There was a follow-up study that was published this earlier this year that showed 40 to 60% of kids with high numbers of adverse childhood experiences were not receiving the behavioral health services that could improve their developmental outcomes and so these studies really showed to me that we're not adequately addressing an incredibly prevalent issue.

Last year, with global events that highlighted and exacerbated ongoing issues causing traumatic stress in children, such as community violence, systemic racism, stressors related to the pandemic, I was motivated to create a safe space to discuss and learn about how various forms of trauma and the impact that toxic stress has on development as well as long-term health. Trauma-informed care really is just simple changes, things like asking open-ended questions to patients, explaining why you're talking about sensitive or seemingly unrelated topics to patients, really small changes that you can make in your day-to-day clinical practice that can make a huge difference for patients and their families.

**Murphy:** You had an instructive curriculum, if I'm understanding correctly. How did that present itself? What did that entail creating it?

**Shah:** Creating it was a nice little challenge. I had to think about what would be the most effective way to be able to teach about this curriculum and so I ended up creating a half didactic and half interactive role-play hour-long curriculum for clerkship students during their time in their pediatrics clerkship. I started off with a disclaimer, knowing as we just discussed how prevalent trauma is, I knew that the majority of students in the session had likely either experienced themselves or knew someone would experience trauma, and so it was important to make it a safe space. They were coming from busy ward rotations or from other meetings and things like that, so I wanted to start off by creating the space to talk about a really sensitive issue.

The didactic portion consisted of explaining the significance of the CDC Kaiser ACE study, recognizing the broad definition and the multitude of manifestations of trauma. An example that I gave during this part of the talk was an ADHD misdiagnosis example. This would be, if you were in clinic, there was a seven-year-old boy who came with difficulty concentrating, restlessness, hyperactivity. A lot of med students, even practitioners, may immediately think of ADHD as a diagnosis. However, I found this wonderful image that was a Venn diagram showing how this could also be a manifestation of how trauma can present in children. Then we talked about three ways that toxic stress can lead to permanent change in the body, focusing on brain development, immune function and epigenetics. This first half, this didactic portion, set the stage to all be on the same page about trauma-informed care, the prevalence of adverse childhood experiences and the impact that these experiences can have on

later life.

Then we transitioned a little bit into more tangible skills that students could walk away from the session with. We reviewed how to counsel caregivers on serve-and-return interactions, which are a form of positive parenting, and also where and how to find resources for parents of various age groups to be able to have tips and tricks for how to engage their children and support the formation of the important neural connections in brain development during childhood.

Then the last part was a role-playing practice simulation and so I developed two cases, one where one student would play either the patient or the caregiver and then the other, the student would play the provider and then they switched for the second case. The first case was an eight-year-old male presenting with bedwetting, regressive behavior and after going through the history and asking more about what's been going on at home, what would be uncovered is that the parents were arguing, coming home intoxicated. There were a lot of fights and impending separation at home, so there was some traumatic experiences going on at home for him. Then the second case was a 15-year-old female who came in with stomach aches and upon more history-gathering, they would uncover that she lives at home with her cousin who had recently overdosed and been rushed to the hospital, and so that was a really difficult experience for her to process. The purpose of these cases was to get students to think about psychological etiologies of physical symptoms and practice the actual language and verbiage to be able to talk about these sensitive topics with patients and their families.

**Murphy:** You mentioned at the top of the interview that you have an interest in pursuing pediatrics as a specialty. I'd be curious if some of the clinical encounters you had may have informed your interest in this topic and even if there's anything on a personal level that informed your interest in this topic?

**Shah:** Yeah, I think that because we're talking about adverse childhood experiences, sometimes at first glance this seems like a topic that's just important for pediatricians to know about. However, I think that this study really showed how childhood experiences impacts everything down the road, everything from injury to mental health to risky behaviors, chronic disease and so I think that learning about that as a pediatrician, it's a really important topic to know about to be able to intervene at a critical time in children's life where it can make a difference in the long-term developmental outcomes. But also, I think learning about that really made an impact on me in terms of the prevalence of the long-term effects of trauma on nearly every domain in life.

**Murphy:** The medical school curriculum is packed. You'll hear that at any sort of medical education conference. What were the challenges of adding another layer, albeit sounds like a one-day exercise, into the curriculum?

**Shah:** One of the biggest challenges that I faced was getting students interested in this topic. As I mentioned before, they were running around on wards, practicing their presentations, going to other didactic talks, and I would have loved for all of them to be interested in going into pediatrics, but not all

of them were. And so I think one of the challenges I faced was coming into this space of an hour-long session with them but not really knowing their varying levels of interest of the different students in the session. And so I think that something that was helpful for me was to assess where my learners were and what their goals were. And so starting the session off with asking some interactive questions, learning what they knew about the topic, what their goals for the session were, was a great way to make this relevant for them no matter what interests they had within medicine.

**Murphy:** You mentioned you're going to residency, so you're going to be busy but do you have any plans to expand this work beyond its current scope?

**Shah:** Yeah, the future directions for my last few months of medical school are to both expand across all the different clerkships and also make it something sustainable for when I'm not here anymore. And so what I'm going to be working on over the next few months is to create an overarching, centralized teaching around trauma-informed care that students can learn at the beginning of their clinical year and then pair that with clerkship-specific modules that they can attend during the clerkship they're on. And so this way, students can revisit core principles of the trauma-informed care approach in each clerkship with additional specific tips for that specialty.

For example, if they're on an OB-GYN clerkship, it would be important for them to learn specific language and skills for performing a pelvic exam in a trauma-informed manner. And so I think that having this overarching trauma-informed care principles teaching with paired clerkship-specific modules would be a great way to make this a really robust curriculum where they can learn both the overarching principles as well as the more specific tips as well.

**Murphy:** What else about this work haven't we discussed that you'd like to highlight?

**Shah:** This work was born in a medical education longitudinal elective that I took last year where we learned a lot about adult learning theory. I think that knowing the principles and the basics of adult learning theory can be really helpful for medical students, residents, faculty who are interested in building curriculum for medical learners of all ages but adults specifically. Some of the core principles are building on prior knowledge and experiences, creating relevant and applicable learning, learning through problem-solving, as well as involving the learner. And so I really tried to bring these principles together by giving them tangible, readily applicable skills through the session and then also having them engage in real-time problem-solving through the role-play sessions. Being able to really engage them in the learning has been shown to be a more effective form of education for adult learners.

**Murphy:** We've talked at good length about this project but I'd be curious and I think our listeners will be curious to know about what led you to medicine, how it began for you, this journey of medicine and where you see it going.



**Shah:** I have always been interested in education and I think that medicine is a field with a really special position to be able to educate not only patients and families but also create larger-scale educational curricula as well as get involved in more advocacy efforts to be able to really shape the future of this country.

I found that through clinical experiences, I have been exposed to a lot of issues, especially in pediatrics, where the population isn't able to speak up for themselves necessarily and so I find that not only education, clinical care and research are important for pediatricians but also being advocates for their patients. And so I've found issues such as the behavioral health boarding crisis, where patients are waiting in the ED with no therapeutic activities or end in sight can be really traumatic, and so I think seeing that, I saw how much these patients are experiencing trauma and being isolated in the ED in that way, as well as a lot of them already having past trauma, and so I think that's something in medicine that I want to do is not only create educational efforts to deal with these issues but also get involved in advocacy work as well.

**Murphy:** Do you have an experience with organized medicine and how would you see yourself being involved in the future?

**Shah:** I am involved when organized medicine right now. I currently serve as the chair of the Medical Student Committee for the Massachusetts chapter of the American Academy of Pediatrics. In that role, I worked with students from all four medical schools in Massachusetts to get involved in an event called Residents and Fellows Day at the State House, which was held earlier this year. We met with legislators to be able to share our clinical experience and patient stories to be able to help them gather experiences to help bolster their own testimonies in court to be able to get bills passed. For example, the behavioral health boarding crisis that I mentioned earlier, there's a bill to create more transparency around the issue because right now we don't even know how many patients are boarding in EDs and other wards or other areas, and so we need to create more transparency around the issue so that both patients and families as well as providers know what's going on, and so I was able to meet with a Massachusetts legislator to be able to talk about my experience with children in the hospital who are currently boarding for behavioral health issues and be able to share what the impact of that experience on those patients as well as on other patients in the hospital.

**Murphy:** Well, that's great to hear. The last question. The AMA research challenge comes with a \$10,000 prize from sponsor Laurel Road. Do you have any plans on what you do with that money if you were fortunate to be named the winner?

**Shah:** My parents are currently putting three kids through college and grad school simultaneously, so this incredibly generous \$10,000 grant prize would be a huge investment in the future of all us three kids—pursuing medicine myself, my sister pursuing physical therapy and my brother in the marine sciences.



**Murphy:** Well, that's great to hear. Best of luck with it. We thank you so much for your time, Priya. We would encourage anyone listening to this to listen to the other podcasts in this series, each one featuring a finalist from the AMA Research Challenge, and to tune in for the AMA Research Challenge Finals on December 8. Thanks so much for being with us, Priya.

**Shah:** Thank you, Brendan.

**Danan:** Join us on December 8 at 7 P.M. Central time to see all five finalists present their research to an elite panel of judges. The overall winner will receive a \$10,000 grand prize sponsored by Laurel Road. For full details, visit [ama-assn.org/research2021](https://ama-assn.org/research2021).

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