2021 AMA Research Challenge finalist: Anastasia Piersa, MD
Featured topic and speakers

In this episode of Making the Rounds, first-year resident at Mass General Hospital and AMA Research Challenge finalist Anastasia Piersa, MD, shares her research on understanding gaps in socioeconomic diversity among med students, including definitions and application flags in place by institutions.

Learn more about the AMA Research Challenge.

Speakers

- **Anastasia Piersa, MD**, first-year anesthesiology resident, Mass General Hospital
- **Brendan Murphy**, senior news writer, American Medical Association

Host

- **Shamsh Shaikh**, 2020 co-winner of the AMA Research Challenge

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Transcript

Shaikh: The AMA Research Challenge is the largest national, multi-specialty research event for medical students and residents. Hello, I’m Shamsh Shaikh, co-winner of the 2020 AMA Research Challenge with Victoria Danan. 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. I'm Brendan Murphy, a senior writer for AMA News, focusing on issues related to medical students and residents. I am delighted to have Dr. Anastasia Piersa with me. She is a finalist for the 2021 AMA Research Challenge. Thank you for joining us, Anastasia.

Anastasia Piersa, MD, one of five AMA Research Challenge finalists.

Dr. Piersa: Hi. Thanks so much for having me.

Murphy: Could you give us an introduction to yourself and your background?

Dr. Piersa: Sure. I am Anastasia Piersa. I am currently a first-year resident at Mass General Hospital in anesthesiology and I went to medical school at the University of Chicago Pritzker School of Medicine.

Murphy: Thank you so much for joining us today, Anastasia, and we are here to talk about your poster presentation, one of the five finalists for the 2021 AMA Research Challenge. You're focusing on the issue of socioeconomic diversity in medical students. Why is that issue important for the health of the nation and why did it appeal to you as a topic for your poster presentation?

Dr. Piersa: Yeah, I think that's a great question. Well first of all, I think we can all agree that diversity is a great thing and diversity in medicine in particular and it can really help us provide better, higher quality health care to our increasingly diverse patient population. And socioeconomic status is a component, an aspect of diversity, that is not often talked about with regards to medical education. There's little research that exists on it and from the research that we do have on the topic we know
that there’s not a lot of medical students of low-socioeconomic status that enter medical school. And those that do enter medical school, even at similar MCAT scores and similar kind of grades, they face high rates of attrition.

So as someone who is from low-income background, myself and a couple of other medical students at the University of Chicago we got really interested in this topic and we really wanted to understand what the experiences are and try to see what we can do to help improve this issue and increase socioeconomic diversity. For us, the first step towards improving something is to really understand the lay of the land. And because there wasn't much research on this topic and how the experiences of med students from low SES can differ from those of higher socioeconomic status, we wanted to conduct this research study.

**Murphy:** So you did the research, and we'll get into that in a minute but you also mentioned that your background did not necessarily mirror some of your peers as medical students. How did that anecdotal experience reflect your interest in this topic, and what was your experience?

**Dr. Piersa:** Sure. Yeah, I think that's a really great question. I think this study mainly came out of conversations that me and other medical students of low-income backgrounds at my medical school were having as part of our first generation and low-income interest group. We were all talking about how when we first entered medical school, we felt a little bit like outsiders.

I haven't had physicians in my family or anyone in my family that could really coach me through getting into medical school and how to succeed in medical school. I don't think I related to faculty in the same way that some of my peers did. And even things like hobbies were a little bit different for me and for some of my classmates who shared my background. So having all of these conversations about the fact that even beyond the financial issues and the financial differences there were also some other more social differences between those who come from low-income backgrounds and those that don't.

**Murphy:** That's really interesting. On your poster, you talk about how, and we've seen how, a commitment to racial and ethnic diversity has been an important part in remaking the medical student body but there hasn't necessarily been the same commitment to socioeconomic diversity. Why is that?

**Dr. Piersa:** That's a great question. I think a big part of it is that it's really hard to pin the definition down and that's actually something that we explored in our research. You know, there isn't one universally accepted definition of low SES. I know that AAMC has an employment occupation flag that flags someone as socioeconomically disadvantaged on their medical school application. There's also a couple of other ways to define low socioeconomic status.

For example, looking at parental income, or looking at students, their own experiences and how they define themselves. And we actually looked at those three different ways to define socioeconomic status and we found that they're not correlated very well. So, I think that the first step to increasing
diversity in a given area is to be able to identify what diversity is. I think with socioeconomic status, even that is a little bit challenging and I think that's a big part of the issue.

Murphy: Can you highlight how you went about your research and some of the key findings?

Dr. Piersa: Sure. This was a multicenter survey study, so we invited 22 medical schools to participate. 14 of them agreed to administer our survey to their student bodies. We developed a survey instrument that was pretty comprehensive and we developed it with an input from various medical students of different backgrounds to really make sure that we were asking all the right questions. The questions we asked were both Likert questions, as well as some qualitative questions and some more validated standardized tools questions including a burnout tool, loneliness scale, those types of things.

Then we administered that survey and then we looked at the differences in responses between low-socioeconomic status, or SES, and high-SES medical students. We made sure to adjust for confounders in our models, including demographics which are obviously a very important ... you know, race, ethnicity, are obviously very important confounders for socioeconomic status. We found a number of significant results even after adjusting for those confounders. What we were looking at was about 1,500 students, so that's about 23% response rate. Of those about 30% were defined as low SES, the way we defined it, in a very comprehensive way.

We used three different socioeconomic status indicators that were previously researched and kind of combined them together to get a more comprehensive way to screen those who might be low-socioeconomic status. We found that, obviously, low-socioeconomic status students not surprisingly reported that they had a lot more financial strains than their higher SES peers. They were significantly less likely to report being confident about affording educational resources and also basic resources, such as food and shelter, which was a little bit concerning. And then from a social perspective, low-socioeconomic students were less likely to feel connected to their community, less likely to be comfortable sharing their experiences with their peers and those types of things.

And then we also found that low-socioeconomic status students were more likely to be burned out as defined by a standardized gold standard burnout tool and they also scored higher on loneliness scales. We also got a fair number of qualitative results that really kind of mirrored and further validated some of our quantitative findings. So overall there was a lot of significant results that really confirmed some of the things that me and some of my co-authors suspected just based on our subjective experiences.

Murphy: I'd be curious, what recommendations do you have for supporting students from lower socioeconomic statuses and what can be done to admit more of them to med school moving forward?

Dr. Piersa: That's a great question. I think there's two components to this. Right? There's the component around how do we create a pipeline where we admit more students who are of low-
socioeconomic status background. And then there's the other side of how do we retain those that are already admitted and how do we make sure that we allow them to develop to their highest potential? And I think the pipeline part we didn't address quite as much because we were obviously surveying those who are already in medical school. Although we did get some qualitative answers that did get to some of that pipeline issue saying that it was incredibly hard for those students to even get to medical school and that they felt like it was harder for them to get those experiences that were needed to be a successful premed and to be able to get in.

So I think from the pipeline perspective, more research is needed. But from the little that we could tell from our research would be really trying to decrease the financial barriers in terms of cost of applications, cost of applying for the MCAT, those types of things, as well as trying to make it easier to get experiences that are needed to be a successful medical school applicant. So for example, things like shadowing can be really easy for someone who has a lot of health care professionals in their families but for someone like me, who does not have any health care professionals in my family, it was incredibly challenging for me to find shadowing experiences because no one would want me to come and shadow them because they didn't know me. So that's the pipeline, how do we attract more and how do we admit more low-socioeconomic status students.

And then in terms of retaining them and making sure that they are successful, I think there's the financial support piece. So providing financial support not only for room and board but also for educational experiences, for some of the social experiences, to address some of that loneliness aspect that I talked about and some of that lack of connection. And just I think raising awareness of the socioeconomic status as an aspect of diversity, creating student groups, organizing events that are targeted towards that I think would be important.

Another thing that we found in our study that I didn't mention in the poster was that we asked students, "And are you aware of a student group on campus that focuses on socioeconomic status? Does your medical school have any events that are targeted towards low socioeconomic status?" And most students did not know. I think it was something like upwards of 60% of students had no idea whether anything like this was happening on their campuses. So I think that's something that could really be improved and hopefully our study is a good first step to providing some of those evidence-based recommendations so we can move things forward.

Murphy: I realize you have since transitioned from medical school to residency, so you are busy. But I am curious if you have any plans to expand the scope of your research going forward.

Dr. Piersa: Yeah. First of all, the low-income student group that I was part of that the study was born out of in medical school is alive and well, and there's a lot of active members. And they are, I think are potentially interested in continuing to work on this, so that's really encouraging. And I personally, I would love to work on it and potentially maybe do research more on residents or try to look more into the pipeline of socioeconomic diversity. But I don't have any firm plans yet as of now because, like you
said, I just started my intern year, so I've been kind of trying to settle into this new role first.

Murphy: We've covered your research in a good amount of depth. I think our listeners would be interested to know about your personal journey. How'd you get interested in medicine and where do you see yourself heading in medicine?

Dr. Piersa: I became interested in medicine; I think it's a pretty typical story. I have a fair number of chronic diseases in my family and so I got exposed to kind of the impact that some of my family doctors had on their lives. And I wanted to be that person for someone else and I also always liked sciences and was curious to understand the why behind things and why they happen.

So I thought that medicine was a great combination of trying to understand the biology and physiology, while also making a tangible impact on people's lives. I mean as far as where I'm headed, I am still working on that, so I am an anesthesiology resident. I am potentially interested in critical care. I think that globally speaking I would probably like to stay in academia and work in an academic environment where I could work as a clinician but also teach and do research. But I am still figuring a lot of the details of that out.

Murphy: Last question, and this is a fun one. There is a $10,000 grand prize sponsored by Laurel Road for the winner of the research challenge. How do you plan on spending it if you're the winner?

Dr. Piersa: Oh, that's a great question. I haven't given a lot of thought to it, honestly. Well first of all, because this study was started as a group project between me and a lot of other medical students, a lot of whom are still in school, I think we would all share the money. And we would probably set aside a portion of that towards our first-generation low-income student group that I was a part of in medical school that was really helpful to me. So, we would split the money and then with my share, I don't know what I would do really. I think I would probably do something boring like pay off a little bit of my student loans and maybe get a new laptop.

Murphy: Well, that sounds very generous of you to share with your classmates and I'm sure they'd appreciate it. And now they have a reason to watch when this airs on YouTube on December 8. Anastasia is one of five finalists for the 2021 AMA Research Challenge. You can listen to other podcasts in this series to hear interviews with other finalists, and as I said, you can tune into the event on December 8. Thank you so much for joining us, Anastasia.

Dr. Piersa: Thank you so much for having me.

Shaikh: 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.
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