Delivery of ASCVD Secondary Prevention Strategies for Rural Communities

Announcer: Welcome to the Mayo Clinic Cardiovascular Continuing Medical Education podcast. Join us each week to discuss the most pressing topics in cardiology and gain valuable insights that can be directly applied to your practice.

Dr. Kopecky: Hello, I'm Dr. Steve Kopecky, Preventive Cardiologist at Mayo Clinic in Rochester, Minnesota, and today, I have the great pleasure of speaking with my colleague and friend, Dr. Arruda-Olson, Adelaide also as we know her so fondly, and we're gonna be talking about a very interesting and timely subject, which is the health of rural communities, and how to improve our delivery of ASCVD preventive care to rural communities. So welcome, Dr. Arruda-Olson.

Dr. Arruda-Olson: Thank you, Steve, and thanks for having me here.

Dr. Kopecky: Yes, well this will be a very exciting conversation, because the rural communities, how do you define a rural community?

Dr. Arruda-Olson: There are many different definitions for rural communities. One of those are communities that have one urban core of less than 50,000 people, and so essentially, these smaller communities, as we have many here in the Midwest.

Dr. Kopecky: Yes, we certainly do. And then the urban versus rural, you know, rural is like 25% of the population, but 75% of the landmass, so they're really spread out. The other part is will be the secondary prevention. How do you define secondary prevention?

Dr. Arruda-Olson: So that's a great question. Secondary prevention is when you apply preventive strategies to avoid an event to occur again. Let's say a person may have had a heart attack, and so what should the person do to avoid having another heart attack or avoid having progression of their disease? And then there are recommendations from our clinical practice guidelines that are also endorsed by the CDC on how, which strategies should work for patients who have atherosclerotic cardiovascular disease. Then the other question would be what are the atherosclerotic cardiovascular diseases in those, they include the heart attacks, the stroke, and the peripheral arterial disease that are the blockages to the blood vessels to the legs, so on. The, what are the recommendations? So essentially, there are four main recommendations for these patients that are, let's say, they should have good control of the blood pressure, should take medication that's called anti-platelet actions such as, you know, aspirin and so on. Also, if no contraindications, they should take medication that's called a statin, that's a medication that helps lowering the levels of cholesterol and protect against inflammation that occurs, and then not smoke. So these are what we call the big fours, for example, in the case of atherosclerotic cardiovascular disease.

Dr. Kopecky: Good, so the big four that we all try to pay attention to, which are extremely important in rural populations, there's many people, probably don't realize the rural population, you know, 50 years ago had a longer lifespan than the urban population, but now, they have a shorter lifespan. And they have more poverty, they have more smoking, more smokeless tobacco, the kids are more obese, and compounding that is these other issues we talked about

where they have to go farther to a hospital that's a critical access hospital 60% of the time, and doesn't have all the facilities. Why do you think these rural populations have more risk factors now?

Dr. Arruda-Olson: That's a great question. I think the problem has you know, is a complex situation with multiple levels, that one of those, one of those reasons is the difficult access to care providers, difficult access to a primary provider, and then it gets hard for those patients to get certain information that they need to take care of themselves, and so, and I think that's a very significant barrier. Another issue is let's say, that's very significant in rural communities are the barriers to transportation. So often, we have elderly people who live in these remote areas, and they don't have, you know, they can't drive, and who is gonna take them to the clinic, so that's one barrier. Another barrier is you know, that they have in this era of technology, do they have access to computers, and if they have, even if they have a computer, can they use the computer that they have? Can they use the system that they have? So there are barriers that I would say both at the patient level and also at the systems level, and then the transportation also is this significant barrier.

Dr. Kopecky: Certainly, and when they need to get transportation acutely, the ambulance has to come farther, it is probably going to be volunteer, EMTs, it takes longer to get there, and then when they get there, they have, you know, less providers available to treat them, not as high technology. It really is an almost overwhelming burden we have to overcome, and then finally, the reimbursement is less in the rural communities. So it really gets to be difficult. So you talked about the big four things to focus on. How do you, what is your system that you're trying to implement within the Mayo Clinic Health System to overcome this?

Dr. Arruda-Olson: That's a great question. So our system also tries, we created a system that we try to address some of these barriers that patients encounter, and so in addition to these factors that we mentioned, there is also a shortage of providers, and the fact that the secondary prevention for these patients is usually delivered only by physicians. So we created a system that empowers teamwork for delivery of these four recommendations that have a proven benefit on secondary prevention of these patients.

Dr. Kopecky: Wonderful, now and the big four are trackable, we can track them, you know, the medicines they get, et cetera, the blood pressure they have, but it, how are we doing with the things that we can't track so easy, like how physically active are they? 'Cause we know there's more sedentary lifestyle in the rural community, which is really surprising to me. How do we track diet, you know? This is a future project, I would think?

Dr. Arruda-Olson: Absolutely, that's a future project. For now, we are, in our opinion, we had to start somewhere,

Dr. Kopecky: Sure.

Dr. Arruda-Olson: And when we built this novel system for delivery of care, we did that in conjunction with the local providers and also with the local patients, and what was considered let's say low-hanging fruit are those four recommendations. And another important aspect is that

with the assistance of technology, providers can, after one click of the mouse, they can evaluate the current status of a given patient, of the situation, what's happening with the patient, and then identify the gaps in care, and assign the right patient for the right provider that would deliver the care that that person needs. For example, if a patient is a smoker, that person could be assigned to a tobacco cessation counselor, and then for information on how to strategize to discontinue smoking. Or if a person doesn't have a prescription of a statin, "Oh, my prescription has not been renewed, "what do I do?" The person could be you know, would be connecting with a pharmacist that has the privileges for writing prescription and then you know, the person gets their prescription. So and then using this, you know, identification of the gaps and then assigning the right person for the right provider for the targeted delivery of these recommendations is essentially the core of this new system for delivery of care for these rural communities.

Dr. Kopecky: That's a beautifully designed system, because you have the information on the patient within the Mayo Clinic electronic record. They had an event, they're secondary prevention, how's their blood pressure, are they on these medicines or not, and the other thing is that you're kind of not relying necessarily on a physician, you're relying, you said the pharmacist can prescribe anti-hypertensives and anti-lipid drugs, both?

Dr. Arruda-Olson: Absolutely.

Dr. Kopecky: Smoking cessation, and then, how about the anti-platelets or Clopidogrel or something like that?

Dr. Arruda-Olson: So with the anti-platelets, the pharmacists, they address that in conjunction with the primary provider or with the primary NP, and then they come up with a recommendation.

Dr. Kopecky: So it's really a team?

Dr. Arruda-Olson: It's a teamwork, and then for the blood pressure management, we have a wonderful team of nurses who have these strategies for optimization of blood pressure control. And I think one big, one of the many strengths of these strategies is that we do have with the Mayo Clinic health record, and this teamwork, we have the opportunity for continuity of care, so if you change the blood pressure medication for a given person, we can also monitor, so that person will have the follow up and so on, and then how to get access, you know, the person, the patient, in the case of the patient, will have the option to say, "Oh, I don't have transportation access today. "Can we just do this discussion by phone?" Absolutely, so phone encounters are a very important part of this access to healthcare. But there are other individuals, other, especially elderly patients, that just love going to the clinic just to get out of the house, so that's another option, just, "Oh, you're welcome to go to the clinic "and visit people and have your discussion." So the option of how to get connected with your healthcare provider is gonna be based on the patient preference, so the way that they want to do, even if they want to do telemedicine, they are, you know, computer savvy and love to do that stuff, absolutely, we can arrange that.

Dr. Kopecky: Wonderful, so once you've identified this patient more centrally probably from the medical record, then will these reports go out like to the provider, there'll be a single provider or a team at the sites that will get reports on these different big four?

Dr. Arruda-Olson: Excellent, so good question. What we have, we have a centralized system that we make an analogy with, let's say, air traffic controller. So the air traffic controller is the person who has access to this application that we have created, that's populated by medical record data. And then that person assigns, assigns a patient to their care providers, they do the communications between the different team members, including, you know, the primary care doctor, the nurses, and all these providers that we're talking about, and then this information gets added and updated to the patient medical record, which by the way, as you know here at Mayo, we have a wonderful system where each one of the Mayo, the clinics that we have across all these rural communities, they all use the same medical record system.

Dr. Kopecky: That's great.

Dr. Arruda-Olson: And another big, big strength and a big need that there was, raised by the rural people who live there in these areas was patients, they really enjoy receiving care by providers that work there in the rural communities. And so, and we facilitate. So all the providers that will be contacting the patient work locally, and whereas, let's say, the air traffic controller can cover many different clinics, and then let's say, oh, today we don't have a tobacco cessation counselor in community A, but we have one in community B, then the person from community B could help, you know, a resident in that community, but these are all rural providers. So we're not bringing someone from urban area to take care of these patients, it's all local.

Dr. Kopecky: So it really optimizes efficiencies of using the personnel that are available. That's tremendous, and then, will this be a pilot, are you going to do so many patients or so many years and then look at the data, or what's the plan?

Dr. Arruda-Olson: So currently, we are actually using our pilot number two, that is happening in Austin, Minnesota, and this fall, the intention is to implement or deploy this system in all sites of the Mayo Clinic Health System in southeast Minnesota.

Dr. Kopecky: Wonderful. Now you have 54% of Native Americans live in a rural community. Do we have any, we don't have any, really, Native American pockets within the Mayo Clinic Health System, do we, or?

Dr. Arruda-Olson: Not that I'm aware of.

Dr. Kopecky: Maybe up by Red Wing, there may be, you know, there is a community there, but that's very interesting. So you can approach all the different aspects of this care. Now you have, this is a publication, it'll be coming out soon? What is the journal it'll be in, and when do we expect it?

Dr. Arruda-Olson: So it's "Journal of Medical Internet Research," JMIR, and it's in press, it should be coming up within, you know, less than a month.

Dr. Kopecky: Good, well that's a big journal in this area. I know that that's a very well respected journal. So overall, this will approach kind of the on the ground issues that we can deal with with the patient. This won't be able to approach the bricks and mortar that we need more hospitals, we need more communication, transportation, we need better reimbursement, but hopefully this research will start to lead to questions of what we need to fix next to help our rural communities. So this is a very exciting project, Dr. Arruda-Olson. Thank you for visiting with us today. Any final words or insights you want to give our listeners?

Dr. Arruda-Olson: Yes, I think this whole new system of care was created together with the local providers and with the input from the local patients, and I think it was very important to, critically important to get their input on how to access this healthcare, and how to address this health disparity by optimization of the local resources. So for us, it's been a privilege to be part of this group.

Dr. Kopecky: Boy, that's great insight and wisdom. Include the communities, include the patients, include the caregivers, and not just the physician providers, the nurses, the pharmacists, the tobacco cessation, et cetera. That's wonderful. Well, that's been a great conversation. We're looking forward to the results of this, probably the next year or two we'll probably come back and give you results. The, again, I'm Steve Kopecky talking today with Dr. Adelaide Arruda-Olson about rural communities and secondary prevention. Thank you for listening, good day.

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