How to help patients manage high blood pressure remotely

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Featured topic and speakers

AMA Chief Experience Officer Todd Unger talks with experts about how physicians can help patients manage hypertension remotely and through self-measured blood pressure monitoring.

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Speakers

- Greg Wozniak, PhD, director, AMA outcome analytics
- Hillary K. Wall, MPH, senior scientist, CDC, lead, Million Hearts Initiative
- Daichi Shimbo, MD, professor of medicine, Columbia University

Transcript

**Unger:** Hello, this is the American Medical Association's COVID-19 update. Today we're talking about how physicians can help patients manage high blood pressure, one of the most pervasive chronic conditions in our country, remotely. I'm joined today by Dr. Greg Wozniak, an economist and AMA's director of outcomes analytics in Chicago, Dr. Daichi Shimbo, a professor of medicine and the director of the Hypertension Center and Translational Laboratory at Columbia University in New York, and Hilary K. Wall, a senior scientist in the CDC's division for heart disease and stroke prevention and the science lead for the Million Hearts Initiative in Atlanta. I'm Todd Unger, AMA's chief experience officer in Chicago. Dr. Shimbo, we're going to start with you. Can you tell us why is controlling high blood pressure particularly important right now?

**Dr. Shimbo:** Yeah, absolutely. So first of all, hypertension is actually a very common cardiovascular risk factor. It affects about 46% of the US population based on the 2017 American College of Cardiology American Heart Association guidelines. And during the COVID-19 pandemic, a number of
studies have shown that that hypertension is quite common amongst COVID positive patients, and it's also common among patients who have COVID-19 and also have a bad outcome. But what I mean by a bad outcome, they're either put on a ventilator, they enter the intensive care unit, or they die. So right now, since it's so common, clinicians and public health experts are very concerned about individuals with hypertension, because it may set you up for having COVID-19 and also adverse outcomes.

There is a second reason. I know everyone's talking about the second wave of COVID-19, but in my hospital at Columbia University Medical Center, we actually saw a different kind of second wave, which is that as the pandemic started to ramp down and things got better in New York, we actually discovered that there were many, many, many patients who decided to stay away from the hospital. And in fact, there are many patients with hypertension who just didn't end up coming to the hospital and many of those unfortunately actually have uncontrolled hypertension. It's particularly important because even though we've ramped down and things have gotten a lot better, a lot of patients are scared to come to our medical center. So how do you actually treat and manage patients with hypertension when they actually don't come to your office practice or the hospital?

Unger: Well, that actually is my next question to you. What is the best way for physicians to help patients control their blood pressure from home?

Dr. Shimbo: In the absence of office visits where high quality readings should be obtained and that should dictate how well controlled you are, and then leading to a decision pathway, what should be done with medications or other treatments like physical activity, exercise and diet, and so forth. Really the best option is to have individuals measure their own blood pressure at home. It's also called home blood pressure monitoring or a term that I prefer, which is self-measured blood pressure monitoring, which is that an individual has a device, they put it on their arm and they're measuring their blood pressure themselves. They do it over a few days to weeks, and then they can transmit information. They don't even have to come into the office. They transmit the information to the clinician and the clinician can review those readings and then make a judgment of how, how that individual is doing.

Wall: At CDC we love self-measured blood pressure monitoring, mostly because it has such a strong evidence base. We know, and Dr. Shimbo, you can certainly speak to this, but there are numerous systematic reviews and meta analyses that show self-measured blood pressure monitoring plus what we refer to as clinical support or co-interventions can decrease blood pressure and improve hypertension control. Some studies also suggest that it can improve medication adherence and patient engagement and potentially decrease clinical inertia. So when we talk about clinical support, what we're really talking about is educating patients on selecting validated cuffs with that properly sized cuff, which is so important. We want to make sure that they're trained on proper positioning and preparation so that when they're at home, they know how to accurately take their blood pressure. We want to make sure that the clinical team provides them a protocol with duration and frequency for
monitoring blood pressure values. And then ideally, as Dr. Shimbo mentioned, patients can remotely transmit those values to their clinical team who can then interpret them and provide back titration or lifestyle modification advice. I like to call it the patient clinician feedback loop. That to me is what's so important as we talk about self-measured blood pressure monitoring.

**Dr. Wozniak:** During the COVID-19 crisis, the impact about not seeing patients and not having blood pressure control have not just short term current impact, but long-term impact on their outcomes. So self-measured blood pressure monitoring was important prior to COVID-19 and it's becoming even more important now and after in getting patients under control and maintaining their blood pressure values.

**Unger:** Dr. Wozniak, can you tell us a little bit about the joint statement between the AMA and the American Heart Association?

**Dr. Wozniak:** Sure. That was, as you said, a joint effort led by Dr. Shimbo and myself and Mike Rakotz the vice president in IHO was a coauthor of that. And it really focused on a wide variety of topics around SMBP. There had been a policy statement back [in] 2004, I believe?

**Dr. Shimbo:** 2008.

**Dr. Wozniak:** 2008. And the time seemed right that what had occurred between 2004 in terms of evidence-based and use of SMBP, the new guidelines as well that came out in 2017, really brought out the importance of SMBP, self-measured blood pressure monitoring. In fact, in the guidelines, they address both diagnostic use as well as treatment use of SMBP. So again, it was an opportunity to refresh the knowledge and get that spread out across both private payers, as well as practitioners and physicians, to get that information out.

**Unger:** Dr. Shimbo, let's talk about implementation. What advice do you have for physicians to help them implement self monitoring blood pressure in their practices effectively? Self-measured, sorry.
Dr. Shimbo: Yeah, absolutely. One thing I wanted to highlight is there’s a number of practical steps. I think it’s important to start with the fact that it’s not just a clinician. You remember, of course, that you’re asking the patient or the individual to do it. So both actually have to be educated and trained in how to do proper self blood pressure monitoring. And what that includes is they have to use a validated a device. It’s really a device that’s been tested to show that indeed the reading that’s showing on the machine is indeed the exact blood pressure that is being measured. So there’s a whole bunch of very high quality studies out there that have been validating machines. So it’s very important that a validated machine is used. That’s particularly important because the market is actually flooded with a lot of devices, actually many of of whom are actually not validated, unfortunately. So there are websites that you can go to that actually list the kinds of devices that are validated. So that’s number one, validated device.

Dr. Shimbo: The second thing is that the patient actually has to be taught how to do the monitoring, which is that every time they take a reading, it has to be at rest, seated, the back supported, feet on the ground flat, it has to be after period of rest, a proper cuff size has to be used, and they have to be trained in the use of the device. So it’s not just the device is accurate. They actually have know how to use the device and how to measure their blood pressure. In addition, they have to be instructed and clinicians also have to be aware of what the evidence based monitoring protocol is, which is that we do recommend two readings be obtained in the morning and two readings be obtained in the evening, and that a preferred period of seven days is taken, and then a minimum of three a is also adequate. So that has to be instructed to the patient and the clinician knows how to do that.

In addition, I just wanted to do a shout out to what was just said is self-measured blood pressure monitoring, it’s actually most efficacious and effective when you give it with co-interventions, which are that it’s not just, you’re throwing the device to the patient saying “Good luck. Measure your blood pressure. I’ll see you in a week.” But in fact that you’re helping them understand it, you’re following up with phone calls, you’re educating them, helping to manage their medications, also helping them manage their treatment strategy. So it’s a co-intervention that happens along with the monitoring. So clinicians actually should be aware of those things as with the patients, because it’s lots of evidence to suggest that when you do that blood pressure control is prolonged greater than six months, even up to a year or longer when you do that approach. So those are really the practical things that you should be doing to make sure that you’re doing evidence-based self-measured blood pressure monitoring.

Unger: Dr. Wozniak, as Dr. Shimbo mentioned the validated device listings. Do you want to give a little bit more detail about where people might find that kind of information?

Dr. Wozniak: Sure. So the AMA jointly with AHA, along with an independent review committee have created a website, it’s called [validatebp.org], where there are validated devices listed both for in office, as well as a patient for self-measure blood pressure devices. That’s an ongoing live process of
having the device manufacturers submit their devices and being reviewed for valid readings, accurate clinical reading based on a criteria that's developed by that independent board. So it came live at the end of April, and as I said, the goal is to maintain that and grow that. Right now I think there are 16 home devices that are listed, but the objective would be to expand that. And as Dr. Shimbo said, there are many devices out there that probably won't meet that criteria, but there's probably others that would, and it's just a matter of getting them to submit and going through that review process, because I know I'm not a clinician, but I've heard from Dr. Shimbo and others how often they get asked, "What device should I buy?" From a patient. And without this validated listing, it's very difficult to give that recommendation.

**Unger:** Well, Dr. Wozniak, let's continue on the implementation front and talk a little bit about cost effectiveness and reimbursement for remote blood pressure monitoring.

**Dr. Wozniak:** So Dr. Shimbo and Hilary mentioned a lot of the elements that have gone into various cost effectiveness studies. And we use this phrase, as Dr. Shimbo said, you just can’t throw the device at the patient and expect some improvement in their blood pressure control. The cost effectiveness studies that have been done have used a variety of co-interventions in terms of patient education, patient counseling, telehealth connections, and team-based care, both in terms of in-office and pharmacists as part of the team. But the studies are very strong in terms of showing the cost effectiveness of self monitored blood pressure devices relative to what we refer to as usual care or in-office readings.

And both, as I mentioned before, in terms of the guideline, the recommendations around using it for both diagnostics and treatment, the same as true in terms of cost effectiveness. Most of the research is focusing on the treatment use of self-measured blood pressure, but there’s also support in terms of cost effectiveness that shows it's cost effective relative to in-office readings in terms of diagnosing hypertension. And Dr. Shimbo could probably talk about white coat and mask and all the clinical aspects that you’re really touching on when you’re using a self-measured blood pressure device.

**Unger:** In terms of reimbursement, that's been an issue with telemedicine in general during the pandemic. Can you talk a little bit about reimbursement for SMBP?

**Dr. Wozniak:** So starting in January of 2020, there were two CPT codes that the AMA developed, starting in that January, 2020 had Medicare reimbursement for the use of SMBP and there's two CPT codes. One is for the education and training of patients along with the validation of the device in office, to make sure that it hasn't been dropped, it hasn't somehow been affected, to make sure that that device that should be a validated device is to be a validated device, is actually giving consistent and valid readings. There's a second CPT code that is the reporting of the readings from patients. Again, following that protocol that Dr. Shimbo mentioned in terms of numbers of readings per day, numbers of days those readings are taken, averaging those readings, and then creating a plan of care between the patient and the provider so that they take those readings in and use those to

URL: https://www.ama-assn.org/delivering-care/hypertension/how-help-patients-manage-high-blood-pressure-remotely
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determine what their either diagnosis is or treatment protocol would be.

And again, those are payments for these services. The first CPT I mentioned is for staff. Like many CPT codes, education and training typically are not reimbursed to physicians, but to other eligible professionals. The second CPT code is reimbursed to the provider to the physician. So again, there are reimbursements that are available for Medicare patients. The expectation is that those will also carry over into the private sector. Historically when Medicare starts to pay as part of their fee schedule for services that are new or even procedures that are new, the private sector often mimics that, or mirrors that with a payment as well. So we're looking actually to use those codes and some of the work we're doing in order to track the use of SMBP measurement.

**Unger:** Ms. Wall final question. Can you talk about what the CDC is doing to increase the use of SMBP in your future plans?

**Wall:** Absolutely. So we are one of many national stakeholders for whom garnering widespread implementation of SMBP is really important. And in the last several years, and moving forward in the future, we've done a few key things to help move the field forward. One, we've partnered with the National Association of Community Health Centers to work with federally qualified health centers and their medically underserved populations to see if SMBP is a strategy for their patients with hypertension. And it's proved to be really great, actually. They've done a lot of work with blood pressure monitor loaner programs so that they can get the monitors into the hands of people who need them the most. Generally a monitor costs between 50 to 100 dollars, so for these medically underserved populations, they may not be able to afford that. So they've done a lot of work in that space.

They've also explored how to innovatively deliver the co-interventions or the clinical support pieces, the education pieces that we've discussed on today's call. They've not only explored using it with the traditional clinical team, but they've looked at getting pharmacists involved in delivering some of the education and also partnering with community-based organizations like the Y who has experience delivering chronic disease management program. So lots of good work with federally qualified health centers. CDC is also working, as are others, in the health information technology space, that remote patient clinician feedback loop that we've talked about. There's a lot of technology behind it. And right now we don't have an optimal solutions. And we're really going to be focusing on that in the next year to try to find, hopefully, an interoperable solution that works for most, not necessarily all, but most.

Then the coverage and reimbursement piece is so important. And dr. Wozniak talked a lot about the great CPT codes that AMA led the charge on, which are a great step forward. We've also done, at CDC, in conjunction with the National Association of Chronic Disease Directors and George Washington University, a coverage and reimbursement assessment. And it just sort of solidified what we knew. It's not great in this space. Monitors, even though they're relatively inexpensive, payers don't cover them right now. So CDC and the state departments of health with whom we work are
working with CMS. We're working with state Medicaid directors and private payers to try to increase that coverage.

And then lastly, we all know what gets measured gets done, and there are clinical quality measures out there right now that are used in payment programs like the CMS quality payment program for hypertension control that don't include patient generated self-measured blood pressure readings. Or if they do, they don't do it in a robust way that can be widespread. So there are many of us, those of us on this call and lots of other organizations who are actively trying to improve those clinical quality measures so that they will include patient generated blood pressure readings in the future. So more on that in the future, but lots of good stuff that's happening.

Dr. Shimbo: Fantastic.

Unger: That's great. Thank you so much, ms. Wall, Dr. Wozniak, Dr. Shimbo, for being here today, sharing your perspectives with us. That's it for today's COVID-19 Update, and we'll be back tomorrow with another segment. For updated resources on COVID-19, visit ama-assn.org/covid-19. Thanks for joining us today and please take care.

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