

*Laura Gordon:* Victoria Liquori and Jacqueline Dunning are a Patient Navigator and a Pharmacist at Brigham and Women's Hospital in Boston, and they'll talk about development of a remote, non-physician led hypertension management program.

*John Clymer:* It is my pleasure to talk with Victoria Liquori and Jacqueline Dunning from Brigham and Women's in Boston about the program that they helped to carry out to provide remote, non-physician-led hypertension management for patients, and this has been written up in a very interesting article.

I want to begin with Victoria and ask you, where are you located and who are your patients, and then where are your patients located?

*Victoria Liquori:* Hi! So, we are located at Brigham and Women's Hospital in Boston, Massachusetts. We're located at the main campus in a separate office building, and our patients are local Bostonians and other Massachusetts residents who receive their primary care here at the Brigham. Yeah.

*John Clymer:* Alright, great. And Victoria, what were the hypertension detection and control rates for your patient panel—your population before this remote hypertension management program began?

*Victoria Liquori:* So, hypertension, about 50 percent of our patients have hypertension, similar to the national average. And our control rate here at the Brigham was just about above the national average, which is 50 percent. So, definitely more than can be done. We're currently working on a more sophisticated registry that's going to allow us to track closely a little bit better the hypertension rates here and also the control rates.

But, as I said, you know, we're just about above national average, so—definitely work to be done there.

*John Clymer:* Okay, and what was your baseline? What portion of your hypertensive patients had their blood pressure under control before you began the program?

*Jacqueline Dunning:* So, all of the patients that ended up getting enrolled in our program were hypertensive. So, that's how they qualified, technically, for enrollment in our program. So, starting at baseline, we enrolled about a little bit over 130 patients all considered hypertensive with blood pressures over 140/90. But at the end of the program,

though, we were able to reach a 91 percent control rate in our patients that completed the program.

*John Clymer:* Wow, Jacqueline, that's outstanding! Ninety one percent is a great level, so congratulations.

*Jacqueline Dunning:* Thank you.

*John Clymer:* How did you do it? What were the main planning and implementation actions that you took in order to achieve 91 percent?

*Jacqueline Dunning:* So, I think one of the main highlights of our program was really that we were an interdisciplinary team. We worked with a hypertension specialist, Naomi Fisher, who is one of our endocrinologists here, who was key in implementing this program here at the Brigham.

But we also had help from a nurse practitioner, myself as a pharmacist, and then Victoria as a navigator. Kind of altogether, I think that was a huge part in making this program so successful was just having people from different backgrounds and different levels of training. But also, I think that, again, one of the big successes of our program was really that we were able to give these patients a cuff to take home, and we provided the blood pressure cuff, we provided training on how to use the blood pressure cuff. And we were monitoring them every two weeks, so we had a touch point either once a week or every two weeks, really, to look at where their blood pressure average was and make titrations.

So, kind of like, you know, in the actual doctor office setting, we were able to call patients every two weeks, and if their blood pressure was elevated, we were able to make a change and have them get labs if needed and really do a quick turnaround to ensure that patients didn't get lost to follow up and that we could really get their blood pressure under control in a pretty quick time frame.

*John Clymer:* And what's been the level of involvement by the patients?

*Victoria Liquori:* So, all of the patients who are enrolled in the program, like Jackie was saying, they get a cuff from us and they're expected to take their blood pressure for a whole week—twice in the morning, twice in the evening—every two weeks.

So, we do ask a bit of the patients, but like Jackie was saying, in return, they get a quick follow up and a quick turnaround, and they can reach control within seven weeks. So, it's an intense program, but we're able to really get patients through it.

*John Clymer:* Great. And since you are at a point now where you've conceived the program and developed it, implemented it, knowing what you know now, if you were to move to a clinic elsewhere and you wanted to replicate this, where would you start? What would you do?

*Jacqueline Dunning:* So, again, I think it would be crucial to involve this interdisciplinary team together, you know, kind of having this head M.D. that was running the program technically, followed by some mid-level practitioners. So, here in Massachusetts, pharmacists can work under a collaborative practice agreement with the physician that allows them to prescribe using—under, technically, a clinical algorithm.

So, that was pretty key in our program, and I think to make other programs successful, it would be important to have a pharmacist or a nurse practitioner, maybe physician assistants to really implement this process as well as these patient navigators, who were really the ones that were in most contact with the patients, who helped set up the blood pressure cuffs and really streamline the process for us.

And then also, I think that developing a clinical algorithm, as you can see, I think this is our algorithm on the screen here—that helps the process run efficiently and helps standardize everything that we're doing.

And then lastly, I would say that another important part of this would be to get a blood pressure cuff that you know is high functioning, it doesn't have too much technology aspects to it for patients to set up, or if it does, that you can have a process where patients maybe come in the office to set the cuff up or something to streamline that process, because that was one of our challenges of our program was finding a completely compatible, remote blood pressure cuff for our patients.

*John Clymer:* Alright! And how did you overcome that?

*Victoria Liquori:* It's something that we're still working to address. We ourselves are running a pilot study of a couple different cuffs that we're going to be sending out to patients to see which is the easiest for patients to

set up as well as the most comfortable for patients. We're looking at a couple different variables, and we're hoping to find the right one for our program.

*John Clymer:* Okay. And has your program been funded by a grant, or is it coming out of the operating budget, or—how is it funded?

*Jacqueline Dunning:* Initially our program was funded by a grant at the hospital. The hospital gave away—you know, they have certain grants for innovative projects every year that we applied for, and that was our initial pilot which our paper was published off of.

Now, the hospital has funded it and we're working with, actually, the hospital's insurer in our state. So, it's an insurance company now that the program is, I guess, being funded partly by the hospital and this insurance company. So, that's kind of our next phase in this process.

*John Clymer:* And do you have any sense of whether they're funding it because it's a good, charitable thing to do, or because they see it as being a smart quality health care in addition to the system?

*Jacqueline Dunning:* I would say the smart quality health care decision. *[Laughter]* You know, we were able to share our results, obviously, with the hospital and they were really impressed and they kinda wanted to market that also, you know, and have people really wanna utilize this program to help their patients reach these control rates.

*John Clymer:* Great. And where can people get more information about this program?

*Jacqueline Dunning:* Right now, I would say we don't technically have anything up on a website about our program, so it'd really be by contacting one of us until we have an official website developed.

*John Clymer:* Okay, so one could contact Julie Harvill at the National Forum and Julie can put you in touch with Victoria or Jackie at the Brigham. And Victoria and Jackie, I want to thank you both very much for participating. It's great to learn what you've done, and just really impressive. So, congratulations.