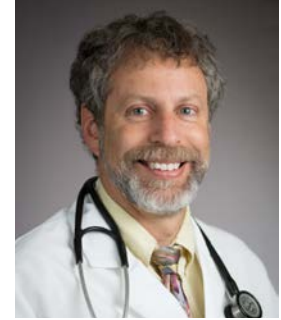




Million Hearts®—Success in Blood Pressure Control

Keeping blood pressure under control helps prevent heart attacks and strokes and saves lives. Million Hearts® launched the Hypertension Control Challenge in 2012 to recognize clinicians and health systems who make blood pressure control their goal. The Hypertension Control Champions use evidence-based strategies to achieve blood pressure control rates in their practices at or above the Million Hearts® goal of 70% of adult patients. As of 2015, CDC has recognized 59 clinicians, health care practices, and health systems as Million Hearts® Hypertension Control Champions.



Dr. Lawrence Garber,
Reliant Medical Group

Reliant Medical Group, a multi-specialty group practice, cares for over 300,000 patients across more than 20 locations in central Massachusetts. In 2010, Reliant launched an effort to better control high blood pressure among its patients. Identifying which patients were truly hypertensive proved to be a significant challenge.

Reliant Medical Group used a Harvard Pilgrim Health Care grant to study how blood pressure was being recorded across its numerous locations. The data showed that the frequency of patients' blood pressure readings tended to spike on multiples of 10, such as 120, 130, or 140. The team discovered that roughly half of blood pressure readings were being rounded up or down to the nearest 10, casting doubt on the accuracy of readings.

In response, Reliant created standard operating procedures for accurately measuring blood pressure and distributed digital blood pressure monitors to all of its primary care sites. Reliant hypothesized that digital monitors would make it easier for the health care team to record accurate readings. The team continued to collect and graph data on blood pressure readings. Soon, Reliant began to see dramatic results.

"After we got the digital cuffs, we evened [blood pressure measurements] out much more so that [staff] weren't rounding to the nearest 10," said Dr. Lawrence Garber, medical director for informatics at Reliant. "It's very striking."

After this initial success, the Reliant team tackled the challenge of controlling patients' high blood pressure. In a pilot study funded by the Agency for Healthcare Research and Quality, Reliant gave digital home blood pressure monitors to 200 of its prediabetic and diabetic patients. Several times a week, patients measured and uploaded their blood pressure readings into their electronic health record (EHR). Nurses regularly reviewed patients' data and adjusted the amount of blood pressure medicine based on a protocol. If a patient's medicine did not seem to be working, the nurse would talk with a physician about switching to a different medication.

Reliant found that mildly hypertensive patients with home digital cuffs were more likely to get their blood pressure under control than similar patients without home monitoring. This was especially true for hypertensive patients with a systolic pressure of 160 mmHg or lower.

Dr. Garber said that this group can easily be overlooked if they see a doctor only once every 6 months.

"If a person comes into my office and their blood pressure is 152 and we talk about it and [they say] they hit traffic on the way...I might write it off," said Dr. Garber.

But with more frequent readings, nurses and doctors can see that someone consistently has high blood pressure, even when they are in a relaxed setting at home, he said: "It's a lot more obvious when someone has slightly elevated blood pressure and thus we were treating them more appropriately."

Reliant found that home monitors not only helped identify patients with uncontrolled hypertension, but the digital cuffs can also help patients control their blood pressure more quickly than patients without home monitoring can.

"The patient can get several medication [adjustments] between the time I see them initially and when I see them at a 6-month follow-up," said Dr. Ken Kronlund, Quality Chief of adult primary care at Reliant. "It's so much smoother and more aggressive [as a medication

adjustment] process than we had 10 years ago. [Before,] you might spend years trying to treat someone with modestly elevated blood pressure."

Now, anyone at Reliant who is diagnosed with hypertension is linked to a nurse right away.

"In days of old, it would be, 'Your blood pressure is high; see me in 6 months,' and now it's, 'Your blood pressure is high; talk to the nurse three to six times before I see you next,'" said Dr. Kronlund. Patients can either purchase or borrow a home monitor to track their blood pressure as their medication is adjusted.

Through a combination of accurate measuring, home monitoring, and nurse, clinical pharmacist, and health coach feedback and support, Reliant transformed blood pressure care and control in its patient population. Reliant now has a hypertension control rate of 79% in its adult population and is consistently in the top 90% of blood pressure control rates compared with other health care systems across the country.

A key part of the program was allowing patients to visit the practice without a copay. The health care team answered questions about medicines, discussed diet and exercise, and counseled patients on how to adhere to their medicines.

"This has to be convenient for the patient, and doctors can't become the bottleneck in moving patients forward in their treatment," said Dr. Garber. In order to facilitate this process, Reliant developed medication protocols that are available to all 250 physicians in their medical group.

And how do the patients feel about tracking their health?

"They gleefully bring in more data than I ever wanted—blood pressure readings at multiple times a day," said Dr. Kronlund. "Engaging patients and letting them become empowered to participate in their blood pressure monitoring has been a very positive thing."



Dr. Diego Illanes of Reliant Medical Group confers with a patient about her blood pressure. Credit: Mark Seel/Reliant Medical Group