

Community-Based Self-Measured Blood Pressure Monitoring Program Using Physical Activity and Lifestyle Modification as the Intervention Piece

Summary

When the Mitchell Rec Center applied and received funding for self-measured blood pressure (SMBP) monitoring through the South Dakota Department of Health (SD DOH), they knew they were taking the road less traveled. Some of the goals of an SMBP program are to teach people the proper technique to take their own blood pressure (BP), collect frequent BP readings and ultimately have better blood pressure control. This type of program is traditionally operated in a clinical setting, but this did not stop them. The Mitchell Rec Center saw an opportunity to make a difference in their community and went for it. Participants in their program, Cardio Index, are loaned a blood pressure cuff for two weeks and are asked to check and record 10 blood pressure measurements. Then, the participants receive six weeks of personal training at no charge. After the six weeks, the participants take 10 more blood pressure readings.

Solution

The Mitchell Rec Center faced many challenges as the first non-clinical, community-based program to offer SMBP in South Dakota. Part of the program is ensuring participants' providers are aware of individuals' blood pressure readings. This created a barrier as the Center had to determine how they could share that data confidentially. In clinical settings, electronic medical records and other workflow are already in place for HIPAA compliant information sharing. So, when presented with the challenge of data transmission, they decided to simply hand-deliver BP documentation. When Covid-19 prevented participants from coming into the Center and participating in one-on-one training sessions, the Center went virtual like the rest of the world! Covid-19 was not their only in-person training obstacle. One of their participants didn't want to give up family time to come to the gym, so program staff virtually connected with him, and continue to send workouts that he can do at home with his kids!

Results

The feedback from community members and healthcare providers has been very positive. As of June 2021, 70 participants have entered into Cardio Index, and 26 have completed the full program. Of those 26 participants, 21 have decreased their 7-day averages in systolic and diastolic BP for both morning and evening readings. The very first participant to finish the program lowered his systolic BP by 17 mm Hg and diastolic BP by 7 mm Hg! He continues coming to the center regularly to ensure ongoing progress. Program results prove, physical activity and lifestyle change impact blood pressure in a big way!

Timeline

The project started on December 1, 2020 when the Mitchell Rec Center first started loaning out BP cuffs. Cardio Index is still going strong and has no end in sight!



The Rec Center has also implemented The National Diabetes Prevention Program, which pairs nicely with Cardio Index.

"It's amazing to see how much my A1C dropped after getting into this program," said Oldenkamp, while he worked up a sweat on the elliptical. (Mitchell Republic)

"The efforts to prevent this epidemic from getting worse are only going to get better from here on out," Gullede said. "I'm proud to be a part of it." (Mitchell Republic)

Key Components

The beneficiaries of Cardio Index were obviously the participants, but even more than that, the Recreation Center and its staff. The success of Cardio Index has led to foundational changes in how the Center markets, trains, and interacts with customers. The population served with Cardio Index consists of people who typically present with multiple chronic conditions, not just hypertension. The key organizations that are involved are the SD DOH, Sanford Health of Mitchell, and the City of Mitchell Recreation Center. Team members consist of Rachel Sehr, Liz Marso, and Kevin Atkins from SD DOH, Thomas Gulledge, Adam Fosness, and Chris Cranny from the Rec Center, and Mindi Smith, Nikki Hajek, and Jenny Holzer from Sanford Health of Mitchell. The team holds monthly Zoom calls, and meets routinely in house to adapt and evolve the program.

Evidence-Based Interventions

The implementation of self-measured blood pressure monitoring with clinical support among adults with hypertension along with a weekly physical activity minimum (at least 150 minutes of light to moderate physical activity) has created healthier habits with Cardio Index participants. Dietary tracking, along with consistent BP monitoring both in the morning and evening, has created increased accountability.

System Change

A systematic change has occurred because of the implementation of Cardio Index at the Rec Center. The Center's identity and approach to marketing has taken on a new look, focusing more on helping community members with chronic conditions than the traditional fitness center model. The Center has shifted staff to provide more time with each participant to really engage them in every aspect of their wellness journey.

Successes

The Mitchell Rec Center relates their success to the support of the SD DOH and Sanford Health of Mitchell. The idea of implementing an SMBP program with physical activity and lifestyle modification as intervention pieces is an easy concept to imagine, but much harder to roll out. The Rec Center leaned heavily on support from Sanford Health of Mitchell when writing the funding application, relying on the expertise of healthcare workers to guide them. The funding and support provided by the SD DOH made this program a reality. Financially, the Rec Center would not have been able to sustain a program that offered free training sessions to participants for very long, if at all. So, the success of Cardio Index is directly tied to the support received along the way.

Future Directions

In August of 2021, the Rec Center completed and started airing TV commercials for Cardio Index in hopes of drawing more participants. Short-term goals include continuing to provide sustainable amounts of training and lifestyle modification sessions to the participants, while adding 2-3 new participants a week. Long-term, the Center would like to continue Cardio Index as a referral-based program from physicians and other relevant healthcare providers.

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