Expanding Technology-Enabled, Nurse-Delivered Chronic Disease Care: A Pragmatic, Randomized, Effectiveness-Implementation Trial

Pro # Pro00107722 · **NCT #** NCT05120544

Why We Did This Study

Many people with type 2 diabetes have trouble keeping their blood sugar in a healthy range, even with medical care. Some also have high blood pressure. Telehealth programs may help people manage these conditions, but they are not widely used in health systems that rely on fee-for-service care. This study tested whether a nurse-led telehealth program that included health coaching, remote monitoring, and medication management could improve health outcomes more than a self-monitoring program.

Who Participated in This Study?

The study included 220 adults from Duke Health clinics. Participants were 30 to 75 years old and had type 2 diabetes with an HbA1c level above the study target for at least 6 months. HbA1c is a blood test that shows average blood sugar levels over time. Participants also had high blood pressure. The average age was about 55 years. About 64% were women, and about 68% were Black. Participants were randomly assigned to either a self-monitoring program or a comprehensive telehealth program and were followed for 12 months.

What Were the Results?

Blood sugar levels improved in both groups over 12 months. The telehealth group had an average HbA1c decrease of 1.1 percentage points, compared with a 0.7 percentage point decrease in the self-monitoring group. However, the difference between groups was small and did not reach statistical significance. Most other health measures, including blood pressure, weight, and self-confidence in managing health, were also similar between groups. The telehealth group showed better diabetes self-care scores. Serious health events were uncommon and were not substantially different between the two groups.

What Do These Results Mean?

In this study, the nurse-led telehealth program did not clearly improve blood sugar control more than the self-monitoring program. Both groups showed improvements over time. The researchers noted that several factors may have affected the results, including challenges delivering all planned telehealth visits and the strong performance of the self-monitoring group. The findings suggest that implementing large telehealth

programs in fee-for-service health systems can be difficult. More research is needed to understand how these programs can be delivered effectively and sustainably.