PROJECT INFORMATION

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Automated Tracking of Symptoms and Treatment Side Effects to Help Patients Starting New Medicines for Diabetes-Related Nerve Pain

Principal investigator

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Organization

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What was the research about?

Diabetes can damage nerves, causing numbness, tingling, or a “pins and needles” feeling. These symptoms start in the toes or fingers. This health problem is known as diabetic peripheral neuropathy, or DPN. There is no cure for DPN, but taking medicines may help manage symptoms. It can be hard for doctors to find the right medicines and doses that will work for patients. DPN medicines have side effects that may be hard for some patients to live with. The research team wanted to find an easy way for patients to tell doctors about symptoms and side effects when starting new medicines.

The research team compared two groups of patients who had new prescriptions for DPN medicines. The first group received automated phone calls from a tracking system. The system asked patients how their medicines were working. Patients’ doctors received an alert message if the patients reported that

- The medicine wasn’t working.
- They experienced side effects.
- They had stopped using the medicine.

The second group received usual care. This group also listened to recorded diabetes-related phone messages about exercise, diet, and foot checks.

The research team wanted to learn if the tracking system improved patients’ quality of life, symptoms, and communication with their doctors. The team also looked at whether frequent patient feedback helped doctors prescribe the right medicines and doses for patients.

What were the results?

About three-quarters of the patients who used the tracking system said they had problems with their medicines. The team didn’t find any differences in quality of life or symptoms between patients who used the tracking system and those who received usual care and heard the educational messages. There were also no differences in how well patients felt their doctors communicated with them or how often doctors found the right medicines and doses for patients.

Who was in the study?

The study included 820 primary care doctors and 1,270 of their patients with DPN. The average patient age was 67. Slightly more than half of the patients were female. The study included patients who were white (57 percent), Hispanic (20 percent), black (13 percent), Asian (8 percent), and other races (2 percent).

What did the research team do?

The research team assigned doctors to one of the two groups by chance. The team assigned patients to the same group as their doctors. The automated phone

system called both groups of patients every two months for six months. For patients who answered the tracking system questions, the research team entered their answers into their medical records. When patients reported problems, doctors whose patients used the automated tracking system received alert messages. If doctors felt the need, they could talk to patients, run tests, or change care in response to the alert messages.

The research team interviewed all patients about quality of life, symptoms, and communication with their doctors before and at the end of the study. The team also looked at the patients' health records to see if their doctors changed the prescribed dose of DPN medicine.

What were the limits of the study?

All the patients were in one health system. Results may be different for patients in other health systems.

After receiving email alert messages, doctors didn't have to respond to their patients in a specific way. The tracking system may not have affected how doctors treated their patients.

Future research could see whether the results change if doctors must respond to their patients after getting alert messages. Also, future research could see if the tracking system works for other health problems that are easier to treat than DPN.

How can people use the results?

The tracking system didn't improve care, quality of life, or health compared with usual care for patients with DPN. Doctors may want to look for other ways to help patients who are having problems with their DPN medicines.

To learn more about this project, visit pcori.org/Adams071.