PROJECT INFORMATION

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Comparing Different Medicines for People Who Have Had a Stroke -- The PROSPER Study

Principal investigator

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Organization

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What was the research about?

Strokes occur when blood vessels to the brain leak or become blocked, cutting off the supply of oxygen to the brain. People who have had a stroke may be at risk of having another one. High cholesterol or an irregular heartbeat, called atrial fibrillation, can increase risk for another stroke. Different types of medicine may help reduce this risk.

The research team looked at how well different types of medicine helped people avoid returning to the hospital or prevented major heart problems or another stroke. The team looked at

- **Blood thinners.** Warfarin is a common blood thinner that keeps blood clots from forming. The team looked at how well warfarin works compared with no medicine in people with atrial fibrillation. The team also compared warfarin with newer blood thinners called NOACs.
- **Statins.** Statins are medicines that help lower cholesterol levels in the blood. Statins can reduce the risk of stroke and heart attack. They can also cause side effects, such as muscle aches. The research team compared patients who received different levels of statins with patients who received no statins.

What were the results?

Blood thinners. Patients with atrial fibrillation who received warfarin had a lower risk for major heart problems and spent more days at home than those

who received no medicine. Compared with patients who received warfarin, patients who received NOACs had a lower risk for major heart problems and spent more days at home.

Statins. Patients who received statins had a lower risk for major heart problems and spent more days at home than those who received no statins. Patients receiving either a high-dose or low-dose statin had similar risk for major heart problems and a similar number of days spent at home.

Who was in the study?

The research team reviewed health and Medicare records for 12,552 patients in the blood thinner studies and 77,468 patients in the statin studies. All patients had a stroke and were ages 65 and older. Patients in the blood thinner studies had atrial fibrillation. Patients in the statin studies were not taking statins before they had a stroke.

What did the research team do?

The research team looked at patients' health and Medicare records for two years after patients were treated for a stroke.

Patients, caregivers, healthcare providers, and agencies provided input on the study's design. Patients also provided input on enrollment, analysis, and sharing results.

What were the limits of the study?

Medicare records may not capture all medicines and treatments that patients receive. Also, the research team couldn't tell if patients took their medicines. If patients weren't taking their medicines, the study's results might be different. The team only looked at two years of records. Differences in long-term effects of medicines may not show up until after two years.

Future research could look at patients' health records for longer than two years.

How can people use the results?

Patients and their doctors can use these results when considering treatments after a stroke.

To learn more about this project, visit www.pcori.org/Hernandez006.