PROJECT INFORMATION

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Methods to Identify and Predict Which Patients Will Have High Healthcare Needs and Use -- A PCORnet[®] Study

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Organization

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What was the project about?

Patients with high healthcare needs include those with multiple health problems, like diabetes and heart disease. Current methods to identify patients with high healthcare needs aren't always accurate. These methods may miss some patients such as those with mental illness or social risks like unstable housing. Better methods could help doctors make sure these patients are getting the care they need.

In this study, the research team developed a method to predict which patients may have high healthcare needs.

What did the research team do?

First, the research team created a new system for identifying patients who have high healthcare needs. The team organized patients into 10 groups based on different patient traits, health problems, and risks, such as chronic pain, mental illness, and unemployment. The team then tested the system to see if it could identify patients with high healthcare needs. To do so, the team used data from 428,024 patients receiving care at New York City health centers. They also used data about the neighborhoods where patients lived. All patients had Medicare insurance.

Using the 10 groups, the research team created a statistical method to predict if a patient would have

high healthcare needs. The team checked how different groups and other patient data, like age and gender, improved how accurate the method was. They tested the method with data from 1,074,389 patients receiving care from New York City health centers from 2013 to 2016. The team confirmed the results using data from health systems in Florida.

Patients, caregivers, doctors, and health system administrators helped design the study.

What were the results?

The new grouping system identified 99 percent of patients with high healthcare needs.

The statistical method predicted which patients were likely to have high healthcare needs. The method was most accurate when it had patient data on all 10 groups plus age and gender.

What were the limits of the project?

The research team used data from patients with Medicare insurance in two states. The results may differ for patients with other types of insurance or from other locations.

Future studies could test the method using data from patients with other types of insurance or in other regions.

How can people use the results?

Researchers and doctors can use the methods to help make sure patients with high healthcare needs get the care they need.

To learn more about this project, visit www.pcori.org/Kaushal364.

The PCORnet® Study reported in this results summary was conducted using PCORnet®, the National Patient-Centered Clinical Research Network. PCORnet® is intended to improve the nation's capacity to conduct health research, particularly comparative effectiveness research (CER), efficiently by creating a large, highly representative network for conducting clinical outcomes research. PCORnet® has been developed with funding from the Patient-Centered Outcomes Research Institute® (PCORI®).