PROJECT INFORMATION

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How Accurate Are PCORnet® Data for Measures of Children's Healthcare Quality? -- A PCORnet® Study

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What was the research about?

Health systems use quality measures to assess how well they deliver care to patients. These measures require accurate data. Health systems often do a manual medical chart review to get accurate data. To do a manual review, staff combine data from a number of patient health records. This process is expensive and takes time.

PCORI funded PCORnet® to make it easier to conduct research. PCORnet is made up of networks of health systems. These networks gather data from electronic health records and transform the data into a common format, called the Common Data Model, or CDM.

In this study, the research team wanted to learn if CDM data are as accurate as data from a manual medical chart review. The team compared how often data from manual chart reviews agreed with CDM data for three quality measures for health problems in children:

- The percentage of patients with sickle cell anemia who received screenings to prevent stroke
- The percentage of patients with two or more prescriptions for antipsychotics who received blood sugar and cholesterol tests
- The proportion of visits for ear infections where children received antibiotic prescriptions that matched recommended care

What were the results?

Overall, CDM data varied in agreement with data from manual chart reviews:

- **Sickle cell anemia.** Manual chart review data agreed with CDM data an average of 98 percent of the time when patients received screening and 89 percent of the time when patients didn't.
- **Antipsychotics.** Manual chart review data agreed with CDM data almost always when patients received blood sugar screening and 81 percent of the time when patients didn't. Chart data also agreed with CDM data almost always when patients received cholesterol screening and 88 percent of the time when patients didn't.
- **Ear infections.** Manual chart review data agreed with CDM data almost always for patients who received antibiotics and 98 percent of the time for patients who didn't.

Agreement between manual chart reviews and CDM data varied across health systems. For example, when patients received screening for sickle cell anemia, agreement ranged from 90 to 100 percent across health systems. When patients didn't receive this screening, agreement ranged from 56 to 100 percent across systems.

What did the research team do?

The research team reviewed data from 13 health systems in two PCORnet networks. The networks represent more than 6 million patients. The team then looked at data in medical charts for each health problem. The team compared the CDM data with the medical chart data to see if the data differed.

Parents of patients; health system staff; and clinicians, like doctors and nurses, helped design the study and analyze results.

What were the limits of the study?

The study included data from two networks. Results may differ with data from other patients and settings.

Future research could look at why medical chart and CDM data differ.

How can people use the results?

Health systems can use the results when looking at data for quality measures.

To learn more about this project, visit www.pcori.org/Walsh380.

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®).