Infrastructure for CER on Innovative Delivery Systems for Complex Patients

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Infrastructure Description

This project established a statewide data infrastructure for conducting comparative effectiveness research (CER) using Medicaid and charity care claims, hospital billing data, and mortality records in New Jersey. This new infrastructure built research capacity by allowing researchers to compare the cost and quality of health care delivery system innovations to the care typically received by medically complex patients in low-income communities throughout the State.

Specific Aims

1. Build a sustainable longitudinal database of hospital, Medicaid, and charity care claims and encounter records in New Jersey.
2. Build and evaluate measures of resource use and quality of care for CER on innovative delivery systems for complex patients in low-income communities using the database developed under Aim 1.

Pilot Study

Evidence gathered as a result of establishing this statewide longitudinal database suggests that high utilizers of healthcare services often receive fragmented, uncoordinated care that achieves suboptimal outcomes.

Delays in state Institutional Review Board (IRB) reviews precluded linking Medicaid with other project data, and analyses proceeded on these databases separately. Analysis aimed to understand the determinants of fragmented hospital use and to devise measurement strategies to evaluate delivery system reforms. Poisson regression analyses were conducted on a sample of New Jersey residents with at least two inpatient stays in 2008-2009 (N=105,906).

Preliminary findings showed that more than 1 in 4 people with 2 or more hospitalizations within a 2-year period visited more than 1 hospital for care. The key correlates of multiple hospital use included behavioral

Infrastructure Goal

Establish a statewide data infrastructure to support comparative effectiveness research on healthcare delivery innovations for medically complex, low-income patients in New Jersey

Data Sources

New Jersey Medicaid claims/encounter data, charity care claims data, all-payer hospital billing data, and mortality data.

Data Access

Information not yet available.

Strategies Addressed from the HHS Strategic Framework on Multiple Chronic Conditions

1.D. Implement and effectively use HIT
1.F. Evaluate models of care, incentives, and other health system interventions
4.C. Increase clinical research
4.D. Address disparities

diagnoses and co-morbidities, urban residence, middle age, male sex, private insurance, and hospital choice.

Widespread fragmentation can lead to higher costs and lower quality of care. Fragmentation also may raise challenges for accountable care organizations and other delivery system reforms that require coordination of care and information systems across multiple providers who serve a common pool of complex, high-utilizing patients.

Conceptual research on performance measurement in reformed delivery systems for complex patients has contributed to the development of the New Jersey Medicaid Accountable Care Organization (ACO) Demonstration Program and advanced the literature on Medicare ACOs. Although delayed by the state IRB process, a Pilot Evaluation of an innovative care coordination program in Camden, New Jersey is underway and will be completed after the conclusion of the grant.

Publications (as of September 2013)

DeLia D, Hoover D, Cantor J. Statistical uncertainty in the Medicare Shared Savings Program: Implications for risk assessment and evaluation of accountable care organizations. Medicare and Medicaid Research Review. In Press.

DeLia D, Cantor J. Proposed approach for calculating savings in the NJ Medicaid ACO Demonstration Project. New Brunswick, NJ: Rutgers Center for State Health Policy; 2012 Jul. 10 p. Available at: http://www.cshp.rutgers.edu/Downloads/9290.pdf

(Additional publications currently under review).

Posters and Presentations

DeLia D, Leaving It to Chance: The Effects of Random Variation in Shared Savings Arrangements. Poster presentation at: Annual Research Meeting Academy Health, 2013 Jun 24; Baltimore, MD.

Cantor JC. Factors affecting the fragmentation of hospital use: a Poisson regression analysis. Presentation at: Moving Ahead: Leveraging Knowledge and Action to Improve Health Care Quality. 6th Annual Conference of the Agency for Healthcare Research and Quality; 2012 Sept 9-12; Bethesda, MD.

Hempstead K, DeLia D and Cantor JC. Factors affecting the fragmentation of hospital use: A Poisson regression analysis. Poster presented at: Moving Ahead: Leveraging Knowledge and Action to Improve Health Care Quality. 6th Annual Conference of the Agency for Healthcare Research and Quality; 2012 Sept 9–12; Bethesda, MD, and Annual Research Meeting of AcademyHealth, 2012 Jun 25; Orlando, FL.

DeLia D, Cantor JC, Hoover D. Statistical risks in the establishment of ACO expenditure savings. Paper presented at: Annual Research Meeting of AcademyHealth, 2011 Jun 13; Seattle, WA.

Hempstead K, DeLia D, Cantor J, Brenner J. Fragmentation of hospital use among high-utilizing urban residents. Paper presented at: Annual Research Meeting of AcademyHealth, 2011 Jun 13; Seattle, WA.