Grant Outcome Report

Improving Care and Reducing Hospital Admissions and Costs for High-Risk Patients

KEY INFORMATION:

GRANTEE
New York City Health and Hospital Corporation–Bellevue Hospital Center

GRANT TITLE
Improving Care and Reducing Hospital Admissions and Costs for High-Risk Patients

DATES
June 2009–October 2012

GRANT AMOUNT
$500,000

FUNDING
Cost/Coverage

The Problem

A small proportion of patients accounts for a disproportionate share of health care utilization and costs. These patients are at high risk not only for hospitalization but also for readmission to the hospital. Many of these patients have complex needs, including social, economic, mental health, and substance use issues that further compromise their ability to respond successfully to conventional medical approaches. To address these patients' long-term health needs—and reduce their rate of hospital readmissions—hospitals need to develop new types of interventions.

Engaging high-need patients in more specialized case management programs at the outset can lead to improved self-care and post-discharge practices; better insight by medical providers into patient needs; positive communication between patients and providers; better health outcomes for patients; and better use of health care dollars by keeping patients out of the hospital.

In 2007, Bellevue Hospital Center (Bellevue), the oldest public hospital in the United States and the cornerstone of the New York City public hospital system (Health and Hospitals Corporation or HHC), launched a pilot study to identify patients at high-risk for readmissions to Bellevue. The hospital found that many of its highest-risk patients shared similar characteristics, including homelessness, social isolation, substance use, depression, and fragmented primary care access. The pilot study targeted patients likely to be hospitalized within the next 12 months based on patterns of prior Medicaid use.

In 2009, the New York State Department of Health selected HHC to receive one of six statewide Chronic Illness Demonstration Project (CIDP) awards. HHC used its CIDP award to build on Bellevue's pilot study, expanding and adapting it to meet the complex needs of patients at high risk for hospital readmissions at two additional hospitals: Elmhurst Hospital Center, in Queens, and Woodhull Medical and Mental Health Center, in Brooklyn. Recognizing that a one-size-fits-all approach would not succeed, HHC leveraged connections with existing HHC and community-based resources that could serve the unique needs of these patients in a flexible and timely way. This included developing agreements with community-based organizations that allowed for improved care coordination; working with Common Ground and NYC Department of Homeless Services to help place some patients in permanent supportive housing and

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connect them to related services; tailoring care coordination; and formalizing regular communication among clinical providers. In addition to improving patient outcomes, a key goal was to create an intervention model that generated more savings than it cost to implement and sustain, resulting in a model that could be replicated at other sites.

Rather than targeting a specific health condition, the model linked enrolled patients with a multidisciplinary care team of licensed social work supervisors, community-based care managers, medical providers, and existing community supports to identify and manage the full range of medical and psychosocial challenges that contributed to patients' hospital admissions.

In 2009, the New York State Health Foundation (NYSHealth) awarded Bellevue a grant to help develop the model at the three sites. HHC operated the program using its CIDP award, but the funds were not sufficient to cover several additional services that Bellevue wanted to include in the program. With NYSHealth's grant, several important components could be implemented, including a dedicated housing specialist, a primary care physician who cared exclusively for enrolled patients, and discretionary funds to address patients' emerging medical and social needs.

Grant Activities and Outcomes

The project aimed to improve health care for a population of vulnerable patients with very diverse needs, by optimizing their health care utilization and improving care coordination and management. Key objectives included reduced hospitalization and emergency department (ED) use, improved connections to primary care, and reduced health care costs.

During initial contact with patients, the program's care managers conducted an intensive needs assessment in which patients were asked to identify the goals that were most important to them. The care managers worked closely with patients, other members of the care team, the housing coordinator, and the patients' other providers to incorporate, track, and update goals in the care plans as appropriate. Care coordination activities included:

- Linking patients to necessary medical providers and community-based organizations;
- Helping to arrange transportation to and from appointments;
- Connecting patients to mental health and/or substance use treatment programs;

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- Accompanying patients to meetings and doctor visits;
- Advocating for patients' needs;
- Working to move patients who were homeless into permanent housing; and
- Helping prevent frequent ED visits by connecting patients to primary care and other sustaining services.

Bellevue contracted with Common Ground to provide a housing coordinator to connect eligible patients to housing. The grant also supported a part-time primary care physician based out of Bellevue, who dedicated all of his clinic slots to all enrolled patients and made home visits as needed. Funds also were used to address emergent social and medical needs of patients that they could not afford on their own, such as pillboxes, alarm clocks, and warm clothing.

Core elements of the program included:

- Firm connections with a primary care physician;
- A multidisciplinary team approach to case management with a care manager who is accountable for coordinating all aspects of a patient's care;
- Motivational interviewing;
- Harm reduction;
- Mobile phone provision;
- Support groups and drop-in hours;
- A 24-hour on-call system for patients to access;
- Facilitation of housing provision;
- An ability to meet small, urgent, and simple needs; and
- Real-time alerts for staff members when patients were admitted to the hospital.

Over the course of the three-year grant, a number of patients were connected to key resources. More than 100 patients used the services of the program's primary care physician. Additionally, 113 patients were referred to the housing coordinator, who personally assisted patients in compiling the necessary documentation, completing housing applications, prepping for interviews, and touring housing facilities. By the end of 2012, 74 patients were placed into transitional housing and 48 patients were placed into permanent housing.

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Expected outcomes included improved linkages to primary care services and supportive housing; decreased hospital admissions and ED visits; and improvements in patients' self-reported measures. However, issues in obtaining accurate State data limited the size of the patient cohort used in a pre- and post-evaluation. Using that limited data, a preliminary analysis found:

- Of 263 Medicaid patients enrolled in the program, their average Medicaid costs dropped from $71,146 annually ($5,928 a month) to $57,064 annually ($4,755 a month). If these decreases are confirmed by more long-term studies, they would represent a 20% annual per-person savings, and more than $3.7 million in Medicaid savings.

- Of 53 homeless patients enrolled in the program, average monthly Medicaid costs dropped from $4,282 a month to $3,426 a month per enrollee—a Medicaid savings of 20%. This cohort included all homeless patients enrolled in the program, whether or not they had achieved housing, with the assumption that provision of permanent housing would only further increase those gains.

The analysis found that much of the savings derived from reductions in inpatient hospital visits and reductions in ED visits. On average, inpatient admissions were reduced by 47% per month and ED visits were reduced by 53% per month.

The Future

This project received wide-ranging attention, and the program's leaders presented on the model to the NYC Office of the Mayor, NPR, supportive housing agencies, and the Institute for Healthcare Improvement, among other venues.

This project was premised on the notion that the truly high-need patient could not be served by the typical medical management system, but rather would respond to a specially tailored approach that accounted for social and economic factors. This perspective evolved to form the basis of the New York State Medicaid Health Homes initiative, which funds a statewide network of similar interventions that incorporate community-based and social services into the provision of medical services.

Borrowing from the lessons of this work, HHC launched State-designated health homes in the Bronx, Brooklyn, Queens, and Manhattan. HHC's health homes incorporate all 11 of its acute care hospitals and 5 of its diagnostic and treatment centers. Patients enrolled in the CIDP program at Bellevue, Elmhurst, and Woodhull hospitals were transitioned into the new health home program, which closely follows the CIDP model.

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BACKGROUND INFORMATION:

ABOUT THE GRANTEE

Bellevue Hospital Center (Bellevue) is the oldest continuously operating hospital in America. Since its humble beginnings as a haven for the indigent, Bellevue has become a major academic medical institution of international renown. Over the centuries, it has served as an incubator for major innovations in public health, medical science, and medical education. Often referred to as a national treasure, Bellevue defines the very best traditions of public medicine as a public service vital to the wellbeing of our civil society.

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