

Rethinking Service Delivery for High-Cost Medicaid Patients

March 2009

The Medicaid Institute at United Hospital Fund is working to improve the Medicaid program in New York by providing information and analysis and developing a shared vision for change.

**The Medicaid Institute
at United Hospital Fund**

**James R. Tallon, Jr.
President**

**David A. Gould
Senior Vice President for Program**

**Medicaid Institute
at United Hospital Fund
Empire State Building
350 Fifth Avenue, 23rd Floor
New York, New York 10118-2300
(212) 494-0700
www.medicaidinstitute.org**

MICHAEL BIRNBAUM Director of Policy, Medicaid Institute, United Hospital Fund
DEBORAH E. HALPER Vice President, United Hospital Fund

Improving care while reducing costs is a long-standing priority for Medicaid, as well as for other public health insurance programs and private payers. As a result, policymakers are focusing on the small number of patients who account for the majority of Medicaid spending, and particularly on those experiencing hospitalizations that might be avoided or prevented by timely ambulatory care and related community support.

In order to promote innovative approaches to serving these high-cost hospital patients, the United Hospital Fund — in collaboration with a range of partners — launched the High-Cost Care Initiative (HCCI) in 2005. The HCCI sought to shape new practices and policies that would rationalize service use, improve health outcomes, and cut Medicaid costs with three separate but linked approaches. First, an analytic approach: determining the numbers of high-cost patients, surveying their health challenges and demographic characteristics, and developing ways to identify them more quickly. Second, a program approach: targeting grants to health care providers, conducting in-depth analyses of high-cost patients, and designing interventions sensitive to these patients' unique characteristics. Third, a policy approach: examining the current Medicaid reimbursement system and considering what strategic changes may be necessary before successful treatment methods can be broadly implemented statewide. Each of these approaches is described in this report.

Establishing the High-Cost Care Initiative

The HCCI was a collaborative effort that built on the complementary strengths and resources of a range of organizations. The United Hospital Fund provided a total of \$692,000 in grants to the seven consortium members between 2005 and 2008. The New York Community Trust contributed an additional \$250,000 in grants to the consortium's health care providers. Under the HCCI, the Fund and its partners developed predictive modeling tools, refined patient interview protocol and assessment tools, conducted patient and provider surveys and focus groups, analyzed Medicaid data, conducted literature reviews, and provided technical assistance on developing care management models.

Working with Professor John Billings of New York University's Wagner School of Public Service and the New York State Department of Health's Medicaid paid claims file, the Fund analyzed the characteristics, patterns of service use, and levels of spending associated with high-cost Medicaid beneficiaries in New York. After confirming that a small share of Medicaid

beneficiaries account for the majority of program costs, Professor Billings examined the services used by Medicaid's most expensive patients and found patterns of delayed or inappropriate care leading to more intensive and costly treatments.

The Fund invited select New York City health care provider organizations to apply for research and planning grants to support the design of a new approach to serving high-cost Medicaid beneficiaries. Seven organizations received a total of nearly \$1 million in grant support: Bellevue Hospital Center, Woodhull Medical and Mental Health Center — which are both New York City Health and Hospitals Corporation (HHC) facilities — Montefiore Medical Center, NewYork-Presbyterian Hospital, Bronx-Lebanon Hospital Center, Maimonides Medical Center, and Visiting Nurse Service of New York. From 2005 through 2008, members of the Fund's high-cost care consortium used their funding to pursue work that included analyzing patterns of service use in their own facilities; researching patient and clinician perspectives on the functioning and shortcomings of the current delivery system; developing, deploying, and testing new models for delivering care to high-cost Medicaid beneficiaries; and meeting regularly at the Fund to review progress, challenges, and lessons learned.

High-Cost Patients: How Large an Issue?

While most of New York's Medicaid beneficiaries are now enrolled in managed care, most Medicaid spending remains in fee-for-service (FFS). Most disabled and elderly beneficiaries, as well as many of the sickest and most costly (non-elderly, non-disabled) adults, are exempt or excluded from joining a Medicaid managed care (MMC) plan.¹ Consequently, like many other states, New York is experimenting with new approaches to delivering and financing services under FFS in order to improve Medicaid's cost-effectiveness.²

¹ Sparer M. 2008. *Medicaid Managed Care Reexamined*. New York: United Hospital Fund.

² Bella M, C Shearer, K Llanos, and SA Somers. 2008. *Purchasing Strategies to Improve Care Management for Complex Populations: A National Scan of State Purchasers*. Princeton, NJ: Center for Health Care Strategies.

Most high-cost Medicaid beneficiaries have diverse combinations of chronic health conditions and acute illnesses, and Medicaid's central role in financing mental health and substance abuse treatment means the program serves many individuals with simultaneous physical and behavioral health care needs. Many also face challenges that make it harder to access health care effectively, such as homelessness, unstable housing, and a lack of family or community supports. High-cost beneficiaries typically have long-standing needs and many rely on Medicaid for many years. (For some detailed examples of high-cost hospital patients — including their diagnoses, service use, and Medicaid costs — see the individual beneficiary profiles on pages 6 and 7.)

Notwithstanding their diversity, these high-cost beneficiaries share two threshold similarities that define them as a group: they account for substantial levels of Medicaid spending and they rely heavily on hospital inpatient services. The 4.5 million beneficiaries who did not use long-term care services in FFY 2004 collectively accounted for \$16 billion in Medicaid spending. Among these, the most costly 10 percent (numbering about 450,000) accounted for 57 percent of spending (\$9 billion), at an average of \$20,000 per beneficiary (Figure 1).³ The top 1 percent (numbering about 45,000) accounted for 20 percent of spending (\$3 billion), at a per capita average of \$71,000.⁴ While these patients use a broad array of services, hospital inpatient care figures prominently. Medicaid hospital admissions cost an average of \$9,300 in 2004,⁵ and many high-cost Medicaid beneficiaries had multiple admissions.

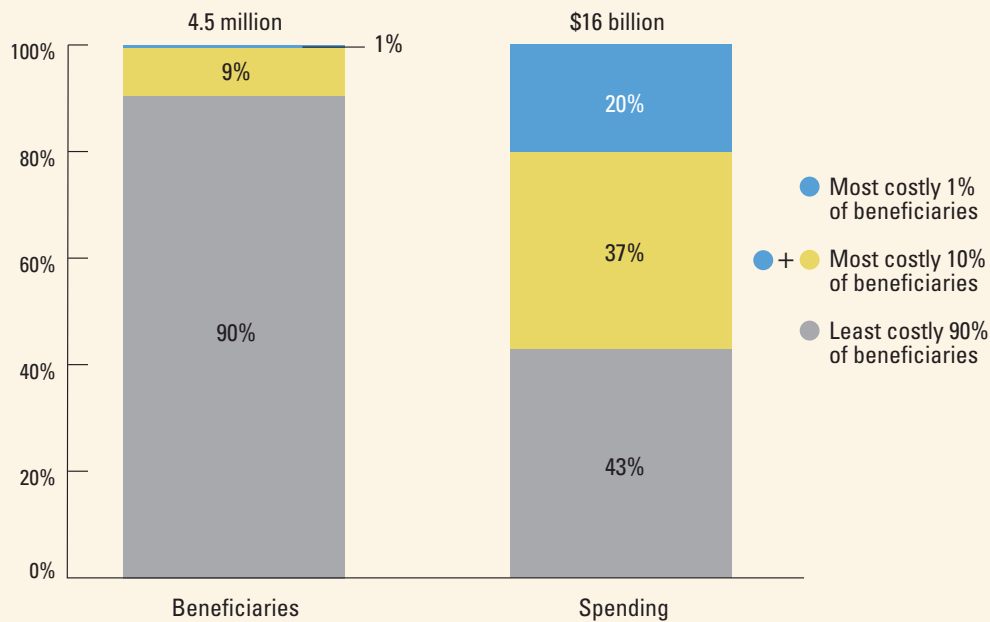
If new health care interventions for high-cost Medicaid beneficiaries are to simultaneously change service use, improve health outcomes, and reduce Medicaid spending, they must accomplish two things: first, they must identify in advance patients at risk for high future costs through predictive models that assess diagnostic and utilization patterns; second, they must change how services are delivered to patients in a way that reduces

³ Urban Institute and United Hospital Fund analysis of CMS Medicaid Statistical Information System (MSIS) and Form 64 data.

⁴ Urban Institute and United Hospital Fund analysis of CMS MSIS and Form 64 data.

⁵ New York University Center for Health and Public Service Research and United Hospital Fund analysis of New York State Medicaid paid claims file. Admissions and spending for MMC enrollees, dual Medicare-Medicaid enrollees, and maternity patients are excluded.

Figure 1
Concentration of Medicaid Spending on Beneficiaries Not Using Long-Term Care (FFY 2004)



dependence on costly inpatient care.⁶ New predictive modeling methodologies developed by health services researchers working with the Fund are helping providers identify in advance those Medicaid beneficiaries at high risk of having an inpatient hospitalization in the coming year.⁷ By successfully identifying high-risk enrollees early, providers can target health care services to better meet these patient's needs sooner. Integrating support services to address a range of high-risk behaviors and social problems — an approach that makes interventions not strictly medical in nature — is an approach that constitutes significant delivery system reform.

⁶ Billings J and T Mijanovich. November/December 2007. Improving the management of care for high-cost Medicaid patients. *Health Affairs* 26(6):1643-1654.

⁷ Billings J and T Mijanovich. November/December 2007. Improving the management of care for high-cost Medicaid patients. *Health Affairs* 26(6):1643-1654.

Understanding High-Cost Patients

Analyzing the Medicaid claims data provides rich and detailed information — down to the individual Medicaid beneficiary — on diagnoses, service use, and Medicaid spending. The following five individual snapshots of high-cost patients illustrate the depth and complexity, as well as the diversity, of health challenges (Figure 2).

Figure 2
Individual Beneficiary Profiles

Individual Beneficiary Profiles					
Beneficiary	Mr. A	Mr. B	Ms. C	Ms. D	Mr. E
Age	46	57	54	61	62
Medical costs (2003-2005)					
Total Medicaid spending					
2005	\$56,958	\$182,246	\$101,454	\$75,282	\$409,194
2004	\$68,031	\$48,000	\$92,354	\$36,498	\$166,180
2003	\$33,317		\$26,995	\$20,657	\$149,473
Hospital Inpatient as % of total					
2005	88%	99%	87%	75%	99%
2004	90%	100%	87%	54%	99%
2003	99%		46%	46%	95%

Source: New York University Center for Health and Public Service Research and United Hospital Fund analysis of New York State Medicaid paid claims file.

- **Mr. A** is a 46-year-old with Medicaid costs of almost \$57,000 in 2005. His diagnoses include paranoid schizophrenia, bipolar disorder, depression, alcohol dependency, and cocaine dependency. He also suffers from hypertension and high cholesterol. From 2003 to 2005, he was hospitalized 32 times at 10 different hospitals. All but four of these admissions were for mental health care or substance abuse treatment. The others were for adverse reaction to anesthesia, chest pain, and loss of consciousness. In 2005 alone, he spent 44 days in the hospital — at a cost of \$50,000 — over the course of 4 hospitalizations. His use of outpatient care during these three years was inconsistent: he averaged a dozen outpatient visits a year, seeing several primary care and mental health providers, but he often went months without a visit. His use of prescription drugs was also inconsistent; he filled prescriptions in about six months of each year.
- **Mr. B** is a 57-year-old with Medicaid costs of over \$182,000 in 2005. His diagnoses include congestive heart failure, hypertension, cardiac arrhythmia, and internal hemorrhoids. He was hospitalized 10 times at 4 different hospitals during 2005. Six admissions were related to his coronary conditions; the others were for hemorrhoids, a foot injury, and vertigo. Despite spending a total of almost three months in the hospital, Mr. B had only 6 outpatient visits during 2005, and he filled no prescriptions. His inpatient costs accounted for over \$181,000, almost all of his Medicaid costs that year.

- **Ms. C** is a 54-year-old with Medicaid costs of over \$101,000 in 2005. Her diagnoses include congestive heart failure, hypertension, diabetes, asthma, atherosclerosis, hepatitis, arthritis, cirrhosis, depression, and a chemical dependency. She also suffered from bronchitis, pneumonia, glaucoma, and gastroenteritis. From 2003 to 2005, she was hospitalized 8 times at 3 different hospitals for a variety of conditions. Ms. C saw a primary care physician, mental health provider, and specialists regularly during 2003. Her outpatient care declined significantly during 2004, although she continued to fill prescriptions every month. In 2005, she spent 82 days in the hospital during two admissions for infectious arthritis, which each cost over \$40,000.
- **Ms. D** is a 61-year-old with Medicaid costs of over \$75,000 in 2005. Her diagnoses include morbid obesity, hypertension, and diabetes. From 2003 to 2005, she was hospitalized 5 times, all at the same hospital. In 2005, she spent 9 days in the hospital over the course of 3 admissions — one for diabetes, one for obesity, and one for atherosclerosis — which together accounted for \$57,000 in Medicaid costs. Her hospitalization for atherosclerosis, which lasted 5 days, cost \$43,600. During these three years, Ms. D generally saw a primary care provider and a specialist at least once a month, and she filled prescriptions regularly.
- **Mr. E** is a 62-year-old with Medicaid costs of over \$400,000 in 2005. His diagnoses include diabetes, hypertension, congestive heart failure, a hole in the heart, an irregular heartbeat, renal failure, obstructive chronic bronchitis, joint disease, and a chemical dependency. He also suffered from a heart attack, stroke, recurring bronchitis and pneumonia, tuberculosis, bacteria in the blood, and an accumulation of fluid in the chest cavity. In 2005 alone, he was hospitalized 41 times at 9 different hospitals for his heart conditions, renal failure, and drug withdrawals. Mr. E spent 282 days hospitalized during 2005 — the equivalent of over 9 months — and these admissions accounted for nearly all his Medicaid costs. He was hospitalized 17 times in 2003 and 18 times in 2004, for an average of 99 inpatient days and \$158,000 in Medicaid costs each year. Over the three-year period, he had four primary care visits and filled one outpatient prescription.

Better Understanding High-Cost Medicaid Patients

While understanding the combinations of health conditions and patterns of service use for high-cost patients in the Medicaid program as a whole provided valuable context, consortium members were eager to drill down into more clearly defined subsets of their high-cost Medicaid patients. Providers used a variety of approaches to identify cohorts that were in some ways distinct but whose common denominator was a heavy reliance on hospital inpatient care. Bellevue, for example, used a variation of the predictive algorithm developed by Professor Billings to predict future admissions based on diagnoses, prior service use, and costs. Montefiore analyzed its patient records to flag individuals who had seven or more admissions over the previous five years; Woodhull flagged adults with at least five inpatient admissions during the past five years. NewYork-Presbyterian and Bronx-Lebanon used similar approaches. Maimonides and Visiting Nurse Service targeted different subsets of high-cost Medicaid patients; their approaches are described in the box on page 10.

As consortium members' work progressed, the existing Medicaid data sets — which are generally limited to administrative data collected for the purpose of processing claims — did not provide a complete or nuanced understanding of their targeted high-cost patients. To address this limitation, each consortium member identified a study cohort of 50 patients, and conducted surveys and qualitative interviews to collect detailed information not only on their health characteristics, but also on their broader life circumstances, including housing situation, family, and social support.

The target populations flagged by consortium members faced consistent health challenges. Typically, two-thirds to three-fourths had a chronic health condition, and nearly half had more than one. About two-thirds had a mental illness, two-thirds had a substance abuse condition, and about half had both simultaneously. While most reported having a usual source of care, it was most frequently the emergency department. Those providers conducting retrospective analyses found that, over the last three to five years, these patients averaged three to six admissions per year — in their hospitals alone.

The patients under study also faced a range of challenging life circumstances. The majority (70 to 90 percent) were unemployed and received cash assistance, most often through Supplementary Security Income disability payments. About 5 to 10 percent worked full- or part-time. Precarious housing arrangements were another common challenge: one-fourth to one-third of patients were living temporarily with family or friends. Bellevue's rate of homelessness among its target population was one in three, much higher than the rate seen in other participating institutions (about one in ten).

To ensure that the interventions they designed directly engaged the perspectives of their patients, consortium members listened closely to their target patients discuss their health care experiences and needs. What patients revealed was striking: a broad range of factors impaired their physical and mental health, presented barriers to improving their life circumstances, and led to reliance on emergency departments and, in certain cases, even a preference for hospital admissions. These factors included not only health care delivery issues — such as facing long waits to see doctors, receiving uncoordinated care from too many health care providers, taking prescribed medications inconsistently, and struggling with poor communication and a lack of respect from clinicians — but also precarious or unsafe housing, financial pressure, a lack of employment opportunities, limited transportation options, social isolation, abusive family relationships, and a lack of community supports.

One of the HCCI's priorities was to not artificially confine discussions or potential interventions to the realm of health care delivery and practice. Instead, consortium members remained open to the idea that successful change may require broader thinking and a more diverse set of interventions than are typically components of health care discussions. Because the health care delivery system has limited leverage in resolving broader social problems, addressing this challenge may require an unprecedented level of coordination between health care services and social support.

VOICES FROM THE STUDY: PATIENTS

“I always see somebody different, a different doctor all the time... I don't know if he's going to remember what I told him last month. They don't really know you.”

“One day, someone was shot in the head, and I saw it... I try to go [to the doctor] during the day, and I go in a cab. I don't walk around the neighborhood.”

Maimonides Medical Center

Maimonides focused on addressing a common root cause of high-cost hospital care: lack of coordination between the delivery of physical and mental health services. In partnership with South Beach Psychiatric Center, a state facility operated by the Office of Mental Health, Maimonides co-located primary care clinics at three of South Beach's outpatient clinics. In order to provide accessible primary care clinics to mental health patients at risk of future hospitalization, Maimonides developed a model of care that included regular provider meetings, a supervisory nurse case manager, and inter-clinic referrals.

In just over a year, 185 patients were seen at the Maimonides clinics, an average of nearly three times each, for a range of primary care, preventive services, acute treatments, and diagnostic tests. Consistent with the patient mix seen by other consortium members, two-thirds of Maimonides' patients had at least one chronic health condition in addition to their mental health conditions, and more than one-third had multiple chronic conditions. However, an analysis of prior service use indicated these conditions were not being monitored consistently.

At regularly scheduled meetings between Maimonides' primary care clinicians and South Beach's mental health clinicians, providers exchanged information on patients' medical and mental health needs, discussed alternative treatment options, identified potential drug interactions, and strategized to improve patient compliance with prescribed treatment regimens. Through improving access to consistent, coordinated, and patient-centered care, Maimonides' model may help improve health outcomes and avoid costly and unnecessary hospital admissions.

Visiting Nurse Service of New York (VNS)

VNS focused on another aspect of high-cost hospital care: reducing readmissions among patients who have been discharged into post-acute home health care. Using comprehensive data on individual characteristics, diagnoses, and prior service use for over 10,000 Medicaid home care recipients, VNS developed a statistical model that aimed to predict the risk of readmission for patients in a cohort in which 30 percent are readmitted during the 60-180 day period following discharge.

VNS's model succeeded in identifying specific risk factors that increased patients' odds of readmission, including dependence on medications. It also found that patients receiving care and support from a spouse, as well as females in general, had a lower risk of readmission. VNS's successful development of a predictor tool for hospital readmissions suggests that individual provider organizations operating in a range of service areas have the capacity — through a rigorous examination of their patient population — to better identify and target those at greatest risk of hospital readmission. Such an approach may be an effective tool to reduce spending on high-cost Medicaid beneficiaries.

Better Understanding the Provider Perspective

Consortium members collected information from clinicians — including emergency department physicians, attending physicians, residents, nurses, and social workers — through structured interviews. These providers also expressed frustration with how the current rules and practices governing health care delivery constrain practice patterns and treatment options for high-cost Medicaid beneficiaries. Clinicians often cited poor integration of services across settings, a lack of continuity of care, and frequent duplication of services. Some expressed frustration that the current delivery system encourages a short-term outlook in which immediate results are systematically favored, long-term relationships and treatment plans are too difficult to sustain, and bureaucratic regulations too often limit who can receive what kind of care.

These limitations are exacerbated when emergency departments and inpatient units effectively serve as patients' medical homes. For example, hospital emergency department clinicians have the authority to make a binary choice for each patient: admit or discharge; however, they lack the authority and resources to arrange some services that may preempt future emergency department visits or hospital admissions. Doctors also cited the lack of patient tracking capabilities and the inadequacy of discharge planning — which typically failed to connect follow-up activities on the physical health side with patients' behavioral health and social needs — as limitations that exacerbated the challenge of maintaining patient compliance with follow-up appointments and medication regimens. Some clinicians said it was so hard to follow up with patients after discharge that they did not even try to do so.

Clinicians expressed a desire for stronger links among physical health, mental health, and substance abuse providers, including resources within the same hospital. They also cited the potential benefits of improved communication with providers of other services, including housing — an acknowledgement that for Medicaid's high-cost hospital patients, greater access to a broader range of services and supports may reduce reliance on costly health care services. Clinicians at Bellevue hypothesized that, in

VOICES FROM THE STUDY: PROVIDERS

“[Patient X] has personal relationships with all of the emergency department (ED) staff and comes in when he is intoxicated, which is often... He enjoys social interaction with the ED, warm meals, a warm environment, and he does not have a stable residence.”

“[Patient Y] had two homes: one on the street and one in the hospital... He keeps coming to the hospital... The reality is that he’s very comfortable here.”

many cases, frequent hospitalizations could be avoided by placing high-cost patients in more stable supportive housing situations. They lamented housing programs with limited slots, complex rules, and policies that did not prioritize placing individuals near their regular health care providers.

Many providers expressed frustration with patient behavior: poor adherence to treatment regimens and follow-up plans, unwillingness to change behavior patterns, and general lack of personal responsibility. Another frustration cited by several providers was patients’ desire to spend time receiving basic services in the familiar setting of the emergency department — or even to be admitted, despite a lack of clinical indication, as a refuge from daunting life circumstances. However, during the study clinicians saw the results of patient surveys and interviews, which had a considerable effect on their attitudes toward patients. Learning more about patients’ priorities led some providers to reconsider some of their frustrations with their patients, and to revisit how they address others. There was a strong consensus that learning more about the broader picture of patients’ lives, and how health care challenges and treatments fit into it, can help make health care providers more informed and more effective.

The High-Cost Care Initiative’s findings — about patients’ health care challenges and life circumstances, as well as about patients’ and providers’ experiences and frustrations — were eye-opening. But the initiative’s goal was not merely to better diagnose individual problems and systemic challenges; the initiative also hoped to design and test better models for serving high-cost Medicaid beneficiaries. To tackle this challenge, provider organizations need sustained financial support and substantial technical assistance over several years.

Refining Care Management Models

After completing the research and analysis phase of the High-Cost Care Initiative, Montefiore and Bellevue received a second round of grant funding from the United Hospital Fund and the New York Community Trust to refine the care management models they had developed, and to

prepare the facilities operationally for a full and competitive research and demonstration project geared to serving high-cost Medicaid patients. The two models shared common themes and approaches related to intensifying care management, integrating service delivery, incorporating collaboration with community-based social service organizations, and enhancing communication and data sharing. But they had distinct elements as well: Bellevue emphasized the integration of supportive housing into its care management approach; Montefiore, in collaboration with Bronx-Lebanon and other providers, developed an approach within a framework of financial risk. These multidimensional models aimed to address change at the health care system, facility, individual provider, and patient levels.

Bellevue's Care Management Model

Bellevue designed and pilot-tested a model focused primarily on high-cost Medicaid beneficiaries facing substance abuse conditions as well as chronic homelessness or unstable housing. The approach relied on training and sustaining full-service and multidisciplinary care management teams of physicians and social workers. It also emphasized clinicians' responsibility to communicate regularly among themselves and with all others involved with a given patient's care, whether in the hospital or in community settings.

Bellevue's intervention began with an attempt to identify high-cost patients. Using inpatient, emergency department, and outpatient clinic data for the most recent five years, Bellevue ran Professor Billings's algorithm to produce a "risk score" of 1 to 100 for each patient; higher scores indicated higher probability of future admission.⁸ Those patients with risk scores of 50 or greater were approached upon admission and asked to participate in the pilot. Each patient who volunteered received a thorough assessment, including an examination of physical and behavioral health challenges, housing situation, and family supports.

⁸ See Billings J and T Mijanovich. November/December 2007. Improving the management of care for high-cost Medicaid patients. *Health Affairs* 26(6):1643-1654.

Bellevue's intervention continued long after patients' discharge into the community, providing a medical home responsive to individual patients' specific needs. To coordinate care and integrate service delivery, the care management team was responsible for patient outreach. A team member was available around the clock to connect with patients wherever they were — at home, on the street, or in a shelter. The team developed a plan of care, used cell phones given to patients to reach them, and encouraged patients to schedule appointments rather than showing up at the emergency department. Bellevue recently launched a comprehensive tracking system that provides team members with real-time e-mail notifications of participating patients' contact with the facility. This system helps clinicians and care managers receive up-to-date information on patients' health and patterns of service use, and it can be used to support ongoing internal evaluations of the model's performance.

In addition to its clinical role in coordinating all in-house health care services and disease management efforts, the care management team also had a responsibility to work with government agencies and community-based organizations to help patients obtain other social services. One core component of the model is its pursuit of supportive housing for its target group. Partnering with the New York City Department of Homeless Services and Common Ground Community, a private not-for-profit organization that develops supportive housing for the homeless, Bellevue's intervention screened care management patients for chronic street homelessness. When patients met those criteria, Bellevue's team worked with Common Ground to prioritize placement into subsidized housing. The intensity of Bellevue's intervention is notable: providers and patients are asked to maintain regular contact to keep detailed and up-to-date information about patients' health challenges and broader life circumstances flowing to the care management team. Bellevue is still pilot-testing this model, but it has enjoyed some notable early success, described below.

New York's Chronic Illness Demonstration Projects

To help providers advance the goal of redesigning service delivery for high-cost Medicaid patients, the New York State Department of Health launched the Chronic Illness Demonstration Projects (CIDP) in 2008. In many ways, the CIDP built on the approach of the Fund's High-Cost Care Initiative. The state's goal is to improve health outcomes and reduce costs for Medicaid beneficiaries with chronic or behavioral health conditions who remain outside MMC. Through a request for proposals, the Department of Health sought interdisciplinary and integrated models that are not only innovative, but also practical and replicable, because the Medicaid program needs an approach that can become the new standard of care for high-cost Medicaid beneficiaries.

Following an important premise of the High-Cost Care Initiative, the CIDP urged providers seeking support to consider not only target populations' complex health care needs, but also their considerable social barriers to care. It invited providers to develop models that promote consistent and collaborative patient-centered care from multidisciplinary teams of clinicians, who strive to coordinate and integrate care across the health care system and build links to other support services, in an effort to make the provision of health care services as effective and efficient as possible.

In January 2009, the Health Department announced six substantial grant awards through the CIDP, the largest of which (\$1,749,000) went to HHC to support a collaborative proposal from three HHC facilities — Bellevue, Woodhull, and Elmhurst Hospital Center. HHC's successful proposal cites the lessons learned by Bellevue and Woodhull under the HCCI in striving to address the complex health needs of its high-cost Medicaid patients as well as the social barriers to care they confront. HHC intends to implement a similar full-service model of care that integrates physical and behavioral health services with community-based organizations, working on issues from health care to housing. HHC's proposal also cites Bellevue's preliminary finding under the HCCI: "The pilot's intensive, community-based care management approach is working to keep patients engaged with the program and linked with hospital-based primary and specialty care and community-based services."

Early Success at Bellevue

Bellevue's initial analysis of its care management demonstration shows that it achieved remarkable changes in patterns of service use among enrolled patients, and corresponding reductions in Medicaid charges. A substantial increase in the volume of outpatient care provided to its enrollees led to dramatic reductions in emergency department visits (67 percent) and inpatient admissions (45 percent). The early evidence supports the model's fundamental premise: to be successful, a service delivery model for high-cost Medicaid patients must embrace challenges such as undiagnosed or untreated mental illness, long-standing substance abuse conditions, and unstable housing — challenges that, if ignored, would thwart traditional medical approaches to delivering acute care.

The case of one enrolled patient serves as a compelling example. PD is a 62-year-old man with an abnormal heart rhythm and two prosthetic heart valves that necessitate a lifelong regimen of blood thinner to prevent blood clotting. He has a mental health condition, is an alcoholic, faces chronic street homelessness, and has no family or social supports. Because of his lack of consistent attendance at follow-up clinic appointments, he was deemed not to be a good candidate for receiving blood thinner, despite his need for it. Bellevue's care management intervention provided PD with a regular primary care physician. He visits the clinic regularly and faithfully to control his blood levels. Bellevue also provided him with a cell phone to help him keep in touch with his team of providers. He has not enrolled in rehabilitation for his alcoholism, but he has reduced his drinking on his own.

Upon enrollment in the demonstration, Bellevue placed PD temporarily at the YMCA; after three months there, he moved into the Christopher, a permanent supportive housing residence run by Common Ground. The Visiting Nurse Service visits him regularly in his new home and helps him manage his medication. For the first time in his life, he is visiting a psychiatrist weekly. Through Bellevue's vocational rehabilitation program, he is applying for a job in the hospital library. In the first three months following his enrollment in the demonstration, PD had three hospital admissions for abnormal heart rhythm after going off his

medication; he was drinking before at least two of the admissions. But for the remainder of his first full year in the demonstration, PD remained admission-free. Bellevue's intervention — built around integrated service delivery, social supports, and intensive patient engagement — led to a notable improvement in patterns of service use for PD during his first year in the demonstration.

Montefiore's Care Management Model

Montefiore designed a model that would change the way providers work together to deliver care while encouraging patients to participate in their own care. Each patient would receive a baseline assessment of physical and behavioral health challenges, cognitive abilities, demographic characteristics, social supports, and prior patterns of care (including barriers to accessing care and compliance with treatment recommendations). Information gathered in this assessment would be used to create an individual care plan to be shared with the patient, his or her primary care team, and with other providers and community-based organizations providing health care or social services. In addition, the model calls for an interdisciplinary care management team — staffed by doctors, nurses, and social workers — to focus on managing and treating high-cost Medicaid beneficiaries and those at risk of becoming high-cost patients. The team would work with clinicians to understand the interrelationships between the patient's health challenges and the social factors that may affect the patient's health and ability to use health care services.

Montefiore and Bronx-Lebanon proposed changes in their organizational approach to providing services to participating high-cost Medicaid beneficiaries. They would establish sites that co-located medical, psychiatric, and substance abuse treatment to increase access to care and integration of services; invest in a facility-wide database of high-cost patients to make coordination more effective and patient tracking more efficient; and develop links to social supports, including housing, to improve patients' life circumstances as well as their health. They also would post case managers in their emergency rooms to assess patients' needs — for medical, psychiatric, substance abuse, social, or housing services — and to redirect them to the appropriate care setting with the

goal of potentially averting a hospital admission. These system-level changes would involve building a collaboration across disciplines and organizations serving these patients in a way that coordinates care management support, rather than creating duplicative roles for specialized case managers with more limited focuses.

A distinguishing feature of Montefiore's model is its acceptance of a Medicaid payment for case management services that would place hospitals at financial risk for their high-cost patients. Such an arrangement stipulates in advance a case management payment, with the expectation that better care coordination would reduce duplicative or unnecessary services and improve the experience of high-cost patients. The total Medicaid costs of participating beneficiaries would be compared to the costs of a control group, with an expectation that savings would not only cover the case management fees paid by the state but also would reduce overall Medicaid expenditures. The state would agree to share resulting savings with hospitals. On the other hand, hospitals would be at risk for repayment of some portion of the case management fees if total expenditures for the intervention group were not lower than those of the comparison group.

Implications for Service Delivery and Financing

Designing and implementing new approaches to service delivery for high-cost patients is a vital step in improving how Medicaid cares for some of its most complex and challenging beneficiaries. However, without policy changes focused on health care financing and reimbursement, these models are unlikely to be sustainable, scalable, and replicable. One major obstacle to developing, refining, and implementing models to reduce spending on high-cost patients is that such interventions are generally not in hospitals' financial interest. Reimbursement through FFS continues to dominate Medicaid's financing of hospital inpatient services: of the estimated \$8.5 billion in Medicaid payments for hospital inpatient services in FFY 2007, 77 percent (\$6.5 billion) were FFS and only 23 percent (\$2.0 billion) flowed through MMC plans.⁹

⁹ United Hospital Fund analysis of CMS Form 64 data. MMC plan payments to hospitals for inpatient services are estimated at 30 percent of MMC premiums. Disproportionate share hospital payments are not included in this estimate.

FFS payment systems have become more effective over time. Diagnosis-related group (DRG) payments, which are pegged to the patient's expected rather than actual consumption of hospital resources, give hospitals an incentive to deliver services efficiently during a hospital stay. But FFS reimbursement has major structural flaws. It translates an additional hospital stay into additional hospital revenue, and it equates forgone admissions — including avoidable admissions that are successfully prevented — with forgone revenue. As a result, standard FFS arrangements encourage providers to deliver additional and more expensive services.¹⁰

The managed care model is premised on an underlying business case for reducing Medicaid inpatient spending by making costly hospital admissions a liability, rather than a revenue source, for the health plan. However, New York's MMC model is compromised in practice. Most MMC plans in New York also pay hospitals FFS reimbursement for inpatient services — so whether they are treating FFS or managed care patients, hospitals almost uniformly have incentives to admit more, rather than fewer, Medicaid beneficiaries. With hospitals owning many of the largest MMC plans in New York State, and with few plans seeking to put hospitals financially at risk for inpatient services, it is unlikely that plans will begin to pay hospitals differently without a change in policy. Overall, as long as Medicaid continues to pay hospitals under a financing framework that treats each admission as a reimbursable event, hospitals' revenue models will treat each Medicaid admission as a source of potential revenue rather than a cost to be avoided.

Changing how Medicaid pays hospitals for inpatient services requires a new equation. However, any new approach designed to realize Medicaid savings would have a substantial financial impact on hospitals — because Medicaid provides 23 percent of hospital revenue statewide, and 33 percent within New York City.¹¹ Despite the magnitude of this challenge, some leaders are beginning to craft potential solutions. New York's Medicaid

¹⁰ Orszag PR and P Ellis. November 8, 2007. Addressing rising health care costs — a view from the Congressional Budget Office. *New England Journal of Medicine*. 357(19):1885-1887.

¹¹ United Hospital Fund analysis of 2005 institutional cost reports. Hospital patient revenue includes all hospital-based services, excluding skilled nursing facilities. Medicaid patient revenue excludes Health Care Reform Act pool payments and distributions, intergovernmental transfers, and bad debt.

policymakers are exploring new approaches to purchasing hospital inpatient services that realign incentives and deliver better value to the program and its beneficiaries. At the same time, certain hospitals are considering new business cases that “flip the math” to align with new payment systems — so hospitals can benefit from preventing or avoiding unnecessary admissions, reducing repeat hospital stays, and refraining from “backfilling” newly empty beds. While it is too early to predict how much or how fast real reform will be achieved, there are reasons to be hopeful.

Designing solutions that advance financing reforms and service delivery innovation in a complementary and coordinated fashion — and implementing them cost-effectively to make them sustainable, scalable, and replicable — would be a colossal achievement for health policy and practice. But there are substantial barriers to progress: Medicaid’s high-cost patients are extremely complex; New York’s delivery system is under financial stress; the framework for paying providers is in many ways counterproductive; and hospitals have strong incentives to preserve the status quo. Given these constraints, shaping positive change will require a sustained and collaborative leadership effort among state officials, health care providers, and independent analysts who are committed to fiscally sound solutions in the best interest of patients and health care providers alike.

¹¹ United Hospital Fund analysis of 2005 institutional cost reports. Net hospital patient revenue includes all hospital-based services, excluding skilled nursing facilities. Medicaid patient revenue excludes Health Care Reform Act pool payments and distributions, intergovernmental transfers, and bad debt.