Transforming the Delivery System for a Seriously Mentally Ill Population: Innovations in Care Coordination, Network Building, and Health Information Technology

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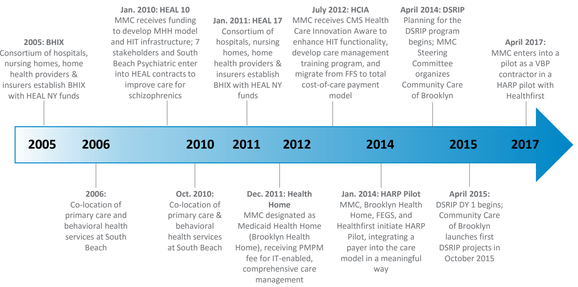
BACKGROUND

- Maimonides Medical Center (MMC) designed and implemented a program to improve the care and lives of adults with serious mental illness (SMI)—including schizophrenia, bipolar disease, schizo-affective disorder, and severe depression—in Brooklyn, New York.
- SMI patients:
  - Are more likely to suffer from medical co-morbidities, and more likely to smoke, have poor nutrition, and inadequate exercise.
  - Have a life expectancy up to 25 years less than the general population.
  - Generate (in NYS as of 2010) average per capita Medicaid expenditures of over $22,000 per year, double that of the average NYS Medicaid enrollee.
- In addition to higher baseline morbidity, poor health outcomes and high costs are related to a lack of provider coordination and excessive use of inpatient and emergency services, service duplication, and poly-pharmacy.
- In an effort to transform the system of care for this high-need, safety net population, improve outcomes, lower costs, and prepare for value-based payment, MMC implemented a care coordination model across a network of community-based providers to address social determinants of health, engage individuals in their care, and reduce costly, preventable and inappropriate health care utilization.

THE MODEL

Evolution of Model and Technology at MMC



Guiding Principles

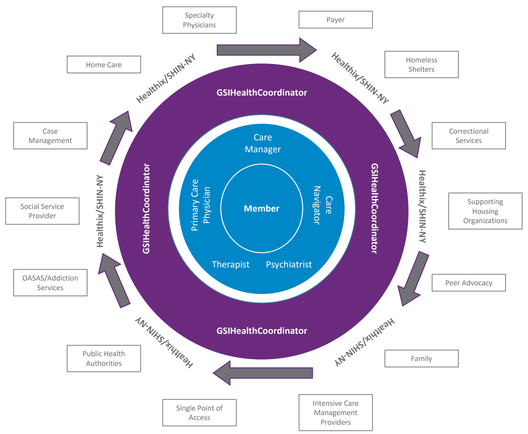
- Fully-informed and integrated medical care, mental health care, and connection to social services is especially critical for the SMI population.
- Sustainable improvement in the health of the SMI population is dependent on a care delivery system centered on the individual and his/her personal goals.
- Funding and workforce resources must be optimally deployed to care for the SMI population, enhance cost-efficiency, and drive measurable quality improvement.
- Integration of Health Information Technology (HIT) and Health Information Exchange (HIE) into clinical care delivery will be among the most significant breakthroughs in improving the treatment and management of care for the SMI population.

THE MODEL (cont.)

Expanding on the Brooklyn Health Home Model

- MMC developed and deployed an enhanced model of care for the SMI population, building upon the implementation of the Brooklyn Health Home (BHH), a NYS Medicaid care coordination program for individuals with complex chronic conditions, also administered by MMC.
- The cornerstone of the model is HIT-enabled collaboration among a multidisciplinary team, with a care manager as its node, ensuring access and coordination across medical, behavioral, and social domains, and working with the individual to develop a care plan, set goals, and make progress toward an optimal state of health, well-being, and self-management.

Brooklyn Health Home Model



- The CMMI innovation program enhanced the Health Home intervention by:
  - Including all payers (Medicaid, Medicare, and commercial insurance)
  - Emphasizing multidisciplinary collaboration that transcends care management alone
  - Advancing more specific standards relative to care management and the use of HIT

PROGRAM OVERVIEW

Patient Population	Program Components	Program Goals

• 8,237 individuals
  ○ 4,392 BHH members
  ○ 3,210 Coordinated Behavioral Care HH members
  ○ 635 non-HH members (Medicare and private insurers)
• SMI
• Adults (over 18) livings and/or receiving care in Brooklyn, NY
	• Develop integrated provider network
	• Partner with payers
	• Assign multidisciplinary care teams
	• Develop/maintain person-centered coordinated care plan to address medical, behavioral, and social needs
	• Implement uniform care standards (discharge planning, follow-ups with PCPs and psychiatrists, case conferences)
	• Utilize web-based care coordination platform
		• Improve patients' health and quality of life
		• Improve quality of care
		• Decrease inappropriate utilization and cost
		• Develop a sustainability model driven focused on the total cost of care

PERSON-CENTERED CARE PLANNING & CARE COORDINATION

- Care managers conduct a comprehensive assessment of each participant's medical and behavioral health, and social determinants of health to drive the joint development of a Coordinated Care Plan (CCP), a living, dynamic document that addresses needs and issues across all domains.
- Care managers' chief tasks include helping patients:
  - Schedule and keep appointments
  - Access timely follow-up care
  - Adhere to medication regimens
  - Maintain medical and social benefits
  - Coordinate among providers serving the patient
  - Provide patient education and support
- Care managers must also define a **core care team** for each patient, consisting of the care manager, a care navigator, primary care provider, psychiatrist and/or therapist (if needed), and other specialty providers as needed.

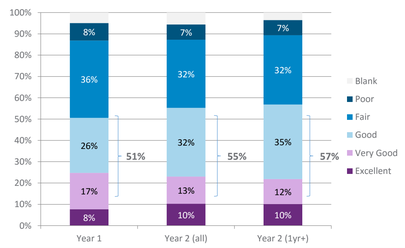
HEALTH IT: GSIHealthCoordinator & THE RHIO

- Virtual collaboration among the core care team is facilitated by the **case conference**, which ensures that team members are engaged in information sharing and shared decision-making processes.
- GSIHealthCoordinator, a web-based platform provided by GSIHealth facilitates the flow of clinical information, provides a platform for a single integrated plan of care, and alerts providers in real time to critical events such as ED visits and inpatient admissions.
- GSIHealthCoordinator:
  - Supports a dynamic interdisciplinary care plan
  - Integrates medical, social, and care management information to provide a holistic view of the patient and improve overall outcomes
  - Connects with Healthix and integrates with the SHIN-NY
  - Provides clear alerts at key transition points
  - Includes Clinical Decision Support, supporting evidence-based care

PROCESS & HEALTH STATUS OUTCOMES

- Various program evaluation activities were conducted to observe process and health status outcomes associated with the intervention, including a review of data entered into the care management platform and surveys of the beneficiaries enrolled in the program.
- Client surveys indicated that a larger number of patients reported being in good health in Year 2 of the program compared to Year 1.

In general, how would you rate your overall health now?



UTILIZATION & COST OUTCOMES

Data and Methods

- NYS Medicaid claim and encounter data for patients enrolled in the intervention for 2009-2015 includes utilization claims history for 4,789 BHH individuals (306,729 patient-months) and 2,318 CBC individuals (143,641 patient-months).
- TCOC models were estimated using panel fixed effects generalized estimating equations models with gamma distribution and log link. Utilization count models for the five utilization variables were estimated using poisson panel fixed effects models with robust standard errors.
- Each model incorporated person-level fixed effects and the following independent variables: observation occurring following program enrollment date (yes/no); dummy variables for season; dummy variables for year; a count variable for observed 30 day intervals, centered at zero for the 30 day window following patient enrollment; and an interaction of program enrollment and the time interval variable.
- The sensitivity of the results was examined by limiting the panel to individuals with a minimum of 12 post enrollment observation months and separately limiting observation-months included in the analysis to 36 months pre- and post-enrollment.

Findings

- **Internal Evaluation:** MMC's evaluation suggests a reduction in TCOC, IP, and ED utilization per month of enrollment. Over three years, the model projects a net 42.5% reduction in ED visits, 29.7% reduction in inpatient admissions, a 9% net reduction in cost of care over three years for the population. Based on an approximate base total cost of care of $2,000 per member per month, the model projects a potential savings of $50 million for the projected cohort of 7000 Medicaid beneficiaries with continuous participation over a three year program period.
- **External Evaluation:** Mathematica Policy Research also performed an independent evaluation of the program. Using a different methodology, this evaluation found results convergent with MMC's analysis. Mathematica concluded that the intervention saved Medicaid an average of $944 per member per month, for a total savings of $48 million over three years.

CONCLUSIONS

MMC's program demonstrates the benefit of care coordination in connection with both well-being and cost for a highly vulnerable population. Implementing this model for adults with SMI addresses one of the most urgent care and cost problems that must be overcome for health reform to succeed. Disseminating the intervention's features and impacts is a key part of supporting both providers and government agencies as they pursue or expand transformation efforts.

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