The Boston University Geriatrics Services (BUGS) Home Care Program

History:
- Oldest Home Care program in US: Started in 1875 at Boston University Hospital with physicians and medical students
- Provides comprehensive primary care and intensive case management for homebound older adult patients
- Cares for approximately 600 patients

 Patients Served:
- Culturally diverse population living within the City of Boston
- 70 years or older: majority are very elderly with average age of 84
- Low income, low health literacy
- Very frail, functionally compromised patients who have difficulty getting out of home regularly for office visits
- >90% have Medicare; 60% have either primary or secondary insurance coverage through Medicaid

Program Infrastructure:
- Section of Geriatrics within Department of Medicine at Boston Medical Center
- 7 MDs (3 FTE total), 6 Nurse Case Managers (NCM), 2 Nurse Practitioners (NP), 1 administrator, 1 office manager and 4 administrative assistants
- Patients assigned to interdisciplinary teams of 1 MD, 1 NCM, 1 admin, +/- NP, +/- geriatric fellow
- Close collaborations with certified home health, hospice, and community agencies

Education:
- Strong commitment to training students, residents and fellows
- Required 4th year medical student clerkship: all medical students rotate through the home care program for 4 weeks
- Resident ambulatory subspecialty rotation: 2/3 Internal Medicine residents (PGY1-3) rotate through for 3 weeks
- Geriatrics Medicine Fellow longitudinal patient panel: fellows assigned 15 home care patients to manage during their first year of fellowship

The BUGS NP/MD Home Care Co-Management Model

Current Model:
- Started in 2010 as partnership with Senior Care Options (SCO) insurance plan
- Team structure: 1 NP, 1 MD, 1 NCM, 1 resource manager, 1 admin
- NP positions funded through pooled insurance funds

Eligibility Criteria & Current Enrollees:
- Must be member of Commonwealth Care Alliance (CCA) SCO insurance plan and enrolled in BUGS Home Care program
- ~ 125 patients currently enrolled, goal 150
- Medically complex and frail: 80% meet Medicaid’s “Nursing Home Certifiable” definition

Collaborative Care Model:
- Shared visits and decision-making among all team members
- Monthly team meetings to discuss patient progress and barriers
- More frequent visits, including 48 hour post-hospital visit
- Excellent relationship building with patients and families

Outcomes Measured by SCO:
- Utilization (ED, inpatient admits, LOS), preventable hospitalizations, 30 day hospital readmissions, quality measures (Star/HEDIS), expenses per member per month

Other BUGS NP-MD Co-Management Models:
- Nursing Home: 1 MD, 1 NP
- Geriatrics Inpatient Service (until 2014): 1 geriatrics attending, 1 geriatrics NP, 1 IM resident, 2 IM interns

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OBJECTIVES: To determine whether community-based primary care physician (PCP)–nurse practitioner (NP) co-management implementing the Assessing Care of Vulnerable Elders (ACOVE)-2 model: (case finding, delegation of data collection, structured visit notes, physician and patient education, and linkage to community resources) can improve the quality of care for geriatric conditions.

DESIGN: Case study.

SETTING: Two community-based primary care practices.

PARTICIPANTS: Patients aged 75 and older who screened positive for at least one condition: falls, urinary incontinence (UI), dementia, and depression.

INTERVENTION: The ACOVE-2 model augmented by NP co-management of conditions.

MEASUREMENTS: Quality of care according to medical record review using ACOVE-3 quality indicators (QIs).

RESULTS: Of 1,084 screened individuals, 658 (61%) screened positive for more than one condition; 485 of these were randomly selected for chart review and triggered a mean of seven QIs. A NP saw 49% for co-management. Overall, individuals received 57% of recommended care. Quality scores for all conditions (falls, 80% vs 34%; UI, 66% vs 19%; dementia, 59% vs 38%) except depression (63% vs 60%) were higher for individuals who saw a NP. In analyses adjusted for sex and age of patient, number of conditions, site, and a NP estimate of medical management style, NP co-management remained significantly associated with receiving recommended care (P < .001), as did NP estimate of medical management style (P = .02).

The Mount Sinai Visiting Doctors Program

History:
- Started in 1995 by three Mount Sinai Internal Medicine residents
- Provides comprehensive primary and palliative care for the homebound throughout Manhattan
- Now one of the largest academic home visit programs in the country
- Cares for over 1,200 patients annually
- Program goals, through intense care coordination, aggressive symptom control and early goals of care discussions, include avoiding unnecessary ER visits and hospitalizations and allowing patients to die at home

Patients Served:
- Medically complex patients with more than five chronic medical conditions
- Frailty, cognitive and functional impairments (60% have dementia)
- One-third of the patients have at least 12 hours of paid home care services daily
- Patients represent diverse ethnic and socioeconomic backgrounds
- 90% of the patients have Medicare as their primary payer and half have Medicaid.

Program Infrastructure:
- Part of Department of Medicine and Dept of Geriatrics & Palliative Medicine
- 21 physicians (11 FTE), 5 NPs, 2 RNs, 5 SWs and 8 administrative staff
- MDs are Internal Medicine and/or Geriatrics trained, 10 are certified in Hospice and Palliative medicine
- Divided into interdisciplinary teams consisting of several MDs, one NP, one SW and one administrative assistant
- Close relationships with community nursing and hospice agencies
- Successful collaboration with VNSNY to have a designated team of nurses for MSVD

Education:
- All third year medical students, second-year internal and family medicine residents, geriatric and palliative care fellows spend up to five weeks rotating with us, along with visiting physicians, medical students, residents, fellows, and NP and social work students.

Funding:
- 50% of program funding comes from the Mount Sinai Health Systems and the Icahn School of Medicine, 25% from billing revenues and another 25% from grants and philanthropy.

The Mount Sinai Visiting Doctors NP/MD Co-Management Model

What is the Co-Management Program:
- Created in January 2012 to improve care for a subset of the Visiting Doctors patient population
- Involves a physician and a nurse practitioner sharing the responsibility for the care of a patient. The Nurse Practitioner becomes PCP of record. All physicians participate, one NP acts as co-manager.
- Funded through multiple foundation grants

Target Population:
- High-risk patients including those with two or more emergency room visits or hospitalizations in the past six months and/or uncontrolled symptoms, including dyspnea, depression, anxiety, pain, dementia and wounds

Why the Program was implemented:
- To reduce emergency room visits/hospitalizations
- Share provider burden for the most medically and socially complex patients

Protocols:
- Patients identified through MD referral and through NP review of most frequently admitted patients
- Referral form completed by MD
- The nurse practitioner and physician alternate making visits to the patient, which increases visit frequency, care coordination and caregiver support
- Patient inclusion in the program is re-evaluated on regular basis. Patients are discharged back to MD once goals are met

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