

Our November Roundtable began with a welcome from Dr. Brancati, then introductions from the ~20 participants who were able to attend either in person or remotely via phone.

This session began with a presentation and discussion by  
Bruce Leff, MD, Professor JHU School of Medicine  
Joint Appointment in Health Policy and Management, Bloomberg School of Public Health  
Director, The Center on Aging and Health (COAH) East and the Program in Geriatric Health Services Research  
Faculty, Lipitz Center for Integrated Health Care, Bloomberg School of Public Health

Dr Leff spoke on his career journey to deliver quality care to the geriatric population, and concentrated on his initiative:

### **"Hospital at Home"**

#### Why do we need it?

He began with a case study on Walter, an 82-year old male suffering from COPD who is part of the geriatric community who is often too frail to come in for ambulatory care. These individuals receive medical services through Elder Care, a home-based outpatient care system.

- There is a shared savings arrangement
- Hospital-based care averages 50-70K per year
- These patients are frequently admitted because exacerbations of illnesses do not receive treatments on time at home

Background on hospital safety:

- 4% rate of errors all admissions
- 27% errors due to negligence
- 3% result in permanent injury
- 13% resulting in death

(Investigations into hospital safety were repeated last year in North Carolina data – and no improvement was found in these numbers, despite its status as a leader in hospital safety initiatives)

Administrative Flow Plan of “Hospital at Home”

1. Assessment (patient can choose home-care option)
2. Transport (with nurse or doctor and equipment)
3. Nurse stays with patient
4. Discharge

This model is present in single payer systems, and has been studied in Europe in randomized trials.

#### How can it help?

Steps to execution of the pilot program:

1. Focused on 4 illnesses thought to be causes of significant morbidity:
  - CAP
  - Heart failure
  - COPD
  - Cellulitis
2. Determined who to treat through medical eligibility criteria.

3. Evaluated patient eligibility
4. Early experience with CMS
5. Pilot studies: clinical/econ feasibility
6. RFP to managed care organization
7. National demonstration and eval study

How can we spread the success?

Dissemination of Hospital at Home:

- Initial implementation at VA hospitals: age requirement changed to 18 (from 65),
  - Hospital at home consulted to set up at-home inpatient services in New Orleans after Hurricane Katrina devastated all inpatient facilities.
- Medicare managed care model (Albuquerque, NM)
- Medicare fee for service
- Expanding into home health care
- ACOs (more highly motivated to keep people out of the hospital)
- Public-private partnerships:
  - Clinically Home (3 innovations: remote virtual physician presence, manage acute to subacute care transition over 35 days rather than only during “hospitalization,” home-based care for social needs during acute-care period.

**Hospital at home: feasibility and outcomes of a program to provide hospital-level care at home for acutely ill older patients.**

Leff B et al.

Ann Intern Med. 2005 Dec 6;143(11):798-808.

<https://docs.google.com/open?id=0B-OYM53-04zLYTJiMDdiNjYtMzk2Yi00ZGQwLWI4ZTYtYjZmYjUxMTk2MWE3>

- 3 medicare managed care plans (2 plans in Buffalo, NY, 1 in Worcester, MA) and a VA Hospital in Portland, OR.
- 61% chose Hospital at Home care within study setting (in current applied programs, acceptance for at-home care is > 90%)

Discussion:

Hunter Young: Why isn't Walter (case study) bringing in money to the institutions when he is hospitalized?

Bruce Leff: There is either only a small margin of profit, or the hospital loses money. Our goal and mindset should be: we have to do everything we can to close the hospital down [keep patients healthy and out of the hospital. A lot of patients in-house can be managed at home.

Niharikha Khanna MD (Associate Professor, School of Medicine, University of Maryland): Although you're keeping patients out of the hospital, there is no attention to continuity of care. Ideally, the primary care physician and nurse can extend care comprehensively.

B. Leff: I agree. We were focused on the acute hospitalization, but contacted the PCP routinely. The new protocol works with primary care physicians from the initial admission decision. It would be difficult for the PCP to cover primary care during the entire “acute period.” We need to make sure the PCP is well-integrated into care.

Edgar (Pete) Miller MD, PhD (Associate Professor of Medicine): How are metrics of success evaluated? Is it a cost analysis or patient satisfaction?

B. Leff: We started in 2005-6. All have adopted cost and satisfaction measures (e.g. modified Press Ganey questionnaire). Some have used illness-specific quality measures.

P. Miller: They might be interested in cost-neutral outcomes from the study. If we take out these unnecessary hospitalizations, we can fill beds with other patients who definitely require hospitalization.

Fred Brancati, MD, MHS (Division Director, General Internal Medicine): Concerns for litigation. Are there any particular adverse events that have been litigated?

B. Leff: We haven't had any particular events that have been litigated.

F Brancati: Are you worried if the interaction is electronic, that this may change the quality of care.

B. Leff: I am slightly worried about that, but in a small study it did not appear to be dangerous, and telemedicine is supported by nurses and NPs going into the home.

F. Brancati: The main study was not a randomized trial?

B. Leff: We were forbidden by CMS, under Medicare Managed Rules to perform an RCT (cannot randomize a "benefit") Internationally, there are many RCTs to show this benefit. 10 RCTs in Cochrane meta-analysis. 3 studies had 6-month mortality. OR 0.62 (risk reduction in mortality).

F Brancati: In the Annals paper, what did you have to do to account for cost?

A: Pre-post and intention to treat analyses. We captured all people during an 11-month period who would be eligible, took 1-month break, then during a subsequent 11-month period we offered Hospital At Home. We looked at total cost, so this probably underestimated the effect.

Tony Boonyasai (Assistant Professor of Medicine): Was there any measure of conversion? (People enrolled at HAH who then had to be hospitalized? Any readmission rate?

B. Leff: 2-5% in the international literature. 2 people in our study. In our study, there was no change in readmission rate. In newer study, there was a ~50% reduction in 90-day readmission rate. Medication reconciliation at home is most likely more effective, and this is being protocolized now.

Our next talk was presented jointly by:

Hunter Young, MD, MHS  
Assistant Professor of Medicine  
Core Faculty, Welch Center for Epidemiology and Prevention

Linda Dunbar, BSN, MS, PhD  
Vice President of Care Management for Johns Hopkins HealthCare

Regina Richardson, Noreen Krause and Vita Moore kindly joined from EBMC for the presentation.

### **"East-Baltimore Medical Center: A Community-Based Care Model"**

#### Origins:

Working with Priority Partners members who are medically complicated and have substance abuse issues.

CJ Murray paper: Eight Americas

20-yr difference in mortality by ethnicity

The 1999<sup>th</sup> out of 2000 groups = inner city African-American men in Baltimore

ICHABOD (2000-2004) at JHH

Patients with severe hypertension followed for mortality  
5-yr mortality 44%  
Average age at death: 52  
Factors associated: nonadherence, substance abuse  
Reasons for nonadherence: poor access to care, ambivalence

Care delivery (wisdom from life lessons):

1. Process efficiency depends on steps. If all steps are taken care of, the entire operation improves.
2. Successful delivery of care takes a team.

#### Community-based care management

- Principles
- Supervision: Clinical and Operational
- Tailor intensity, frequency & mode of delivery
- Algorithm-guided care
- Maximize benefit/cost
- Extend into community
- Build community capacity

Workforce:

Includes community care coordinators, medical assistants, mentors

#### Current Work:

- Clinical issues (complex patients, find patients with HEDIS gaps)
- Embedded nurse case managers (4)
- Community care coordinator team – mainly outreach (9)

Complex patients = Diagnosis of COPD, Asthma, Diabetes, sickle cell, HIV, lupus

PPMCO Value: HEDIS Value-based Measures

- Problem areas:
  - Well-child and adolescent well care require major emphasis
  - Cervical cancer, Asthma, Diabetic eye exams goals
- Potential solutions
  - Illness-specific clinics on Saturday morning to which transportation is provided
  - School-based clinics for adolescents

#### Early look at cost:

Population: 33529 PPMCO members

Place: EMBC vs. other clinics in Baltimore

Analysis adjusted for age, gender, disease severity

Per member cost:

- Immediately after initiation of embedded case management, decrease in cost
- Other clinics' costs have increased

Focused on follow-up for Emergency Dept. visits, and what needed to prevent this.

#### Discussion:

P. Miller: if the intervention is to get young people in for screening, you would think the cost per member would be higher, because these people don't generally cost money to the health system.

Noreen Krauss: A majority of ED visits are children, with a wide range of causes.

B Leff: Would you think it would be helpful to do a stratified analysis? Is this a coaching, or "I'll do for you" philosophy?

Regina Richardson: The idea is to make these people self-sufficient, so a coaching philosophy by the nurse case managers and community care team.

T. Boonyasai: Is there a predefined length of care?

H. Young: It is based on needs of the patient.

N. Khanna: There may be a lead-time from when these types of interventions (embedding nurses) are implemented before cost-savings is shown. Should we look at cost more broadly? What are the early wins?

L. Dunbar: Still need to get into the data to look at what is driving the changes.

Future Directions:

IT – integrate data, algorithms to guide care, remote data entry, workflow optimization, social networking

P50 Study 2: Community-based care management algorithm-guide

EBMC and blood pressure management

Goals:

- Deliver more care in the community
- Community activities: Care-A-Van
- Latrobe housing project to recruit community mentors

Discussion:

F. Brancati: Nurse case managers are generalists. How is it handled if there is more than one complex condition?

H. Young: Tend to consult specialists more.

F.Brancati: And if there is conflicting advice?

R. Richardson: We facilitate the providers on the phone at the same time to work out the details. We have frequent meetings with whole care coordination group, but these are mostly decisions about social issues.

F. Brancati: What is the investment that JHHC puts into the programs?

L. Dunbar: This is a payer-based model, and the return on investment is from cost savings on medical side.

Admin costs are 10% of overall \$ in medical care, the rest are medical costs. Vision 20/20: If you are making or requesting an investment > \$100K, it has to go through a management team. RTI from medicare cost-savings. Also have to show quality and satisfaction improvements.

N. Khanna: In the past PCMH models, there have been decreased utilization and hospitalizations found, but they haven't stood up to scrutiny in the long-term. So, what are the early wins? We're looking for insurance to consistently pay for primary care.

L. Dunbar: Our thought is that it is decreased ED visits and inpatient costs (which make up 60% of the costs). We usually see increases in medications/pharmacy costs and initial screening costs.

Our next Roundtable will be on January 17<sup>th</sup>, 2012.

Speakers:

Niharika Khanna, MBBS, MD  
Associate Professor  
University of Maryland School of Medicine  
Leader, Education and Training: Maryland Patient Centered Medical Home Pilot Program

Scott Berkowitz MD, MBA  
Assistant Professor of Medicine  
Medical Director for Accountable Care