Geriatric Medicine and the Value Proposition

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Virginia Commonwealth University

Objectives
- Describe key elements of the current health policy debate that are critical to the future of geriatric medicine
- Outline several innovative models of geriatric care
- List specific strategies by which geriatricians can make a difference in health care of the elderly

Quality and Cost
- Study of variations
  - Cost
  - Best practice adoption
- Sources of valid information
- Key stakeholders – setting a national agenda
Medicare and Medicaid Costs

- Per CBO (Congressional Budget Office) on multiple occasions
  - Unsustainable, overwhelming the economy
  - Medicare “trust fund” bankrupt in 2017
  - Major deficits in Medicare Parts A, B and D
  - States struggling with Medicaid costs
  - Far exceeds the Social Security problem

Current Care Delivery

ORGANIZED
IN SILOS

DANGEROUS

FAR FROM PATIENT CENTERED

Dartmouth Atlas

- Valuable resource
- Study variation
- Debate about drivers and causes
- Little debate about basic concept validity
- Major influence on health policy
Mid Course Corrections

- 1997 BBA
  - $400 B reduction in Medicare (10 years)
- 2003 MMA
  - $500 B increase - Medicare drug bill (10 years)
- 2010 PPACA
  - $500 B Medicare/Medicaid reduction (10 years)
  - PPACA estimated to reduce spending by $150 B
Health Care Process and Outcomes

- Systematic use of proven strategies
  - End of life care
  - Cardiovascular prevention
  - Geriatric prescribing
- Life expectancy (from birth, from age 65)
  - U.S. 50th in the world
  - Since 1970 gained 3.5 years in life expectancy from age 65

![U.S. Life Expectancy Graph]

Quality: Information Sources

- [http://www.aoa.gov/AoARoot/CLASS/index.aspx](http://www.aoa.gov/AoARoot/CLASS/index.aspx)
- [http://www.kff.org/](http://www.kff.org/)
- [http://www.cdc.gov/nchs/health_policy/ADL_tables.htm](http://www.cdc.gov/nchs/health_policy/ADL_tables.htm)
- [http://www.cdc.gov/nchs/](http://www.cdc.gov/nchs/)
- [https://www.cms.gov/MMRR/](https://www.cms.gov/MMRR/)
- [http://www.qualityforum.org/Home.aspx](http://www.qualityforum.org/Home.aspx)
- [http://www.ncqa.org/](http://www.ncqa.org/)
- [http://www.dartmouthatlas.org/](http://www.dartmouthatlas.org/)
Geriatric Co-Morbidity

- Not addressed well in national measures
  - Difficult to measure
- Frail older patients are at risk
- ACOVE measures
  - VES-13 survey

National Quality Forum

- Key organizer at national level
  - Data driven
- National Priorities Partnership driving the agenda

NPP Strategy
National Priorities Partnership: Pillars

Approaches to End of Life Care

- 5-fold variation
  - Hospital days in last 6 months
  - ICU days in last 6 months
  - Use of hospice
  - Specialist care (more)
  - Primary care (less)

Readmissions to Hospital
Readmissions and Continuity


Figure 2. Patients for Whom There Was No Bill for an Outpatient Physician Visit between Discharge and Rehospitalization. Data are for patients in fee-for-service Medicare programs who were discharged to the community between January 1, 1993, and December 31, 1995, after an index hospitalization for a medical condition. Data are derived from the California Hospital outpatient Data Warehouse of the Centers for Medicare and Medicaid Services.

Readmission Reduction

• $25 billion opportunity
• 836,000 admissions annually

Readmission Reduction (NPP)
National Quality Strategy: 3 three broad aims

- **Better Care**
  - patient-centered, reliable, accessible, and safe

- **Healthy People/Healthy Communities**
  - Support proven interventions to address behavioral, social and, environmental determinants of health

- **Affordable Care**
  - Reduce the cost of quality health care for individuals, families, employers, government

**Improved Models of Care**

- CMM Innovation Center

**PPACA, Coordinated Care Models**

- Medicare Community-Based Care Transitions Program
- Incentives to reduce Medicare hospital readmissions
- Medicare Independence at Home demonstration
- Medical Home models in Medicare and Medicaid
- Community Health Teams to support Medical Homes, regardless of payer type
Categories of PCMH Performance

- 1. Access and Communication
- 2. Patient Tracking and Registry Functions
- 3. Care Management
- 4. Patient Self-Management and Support
- 5. Electronic Prescribing
- 6. Test Tracking
- 7. Referral Tracking
- 8. Performance Reporting and Improvement
- 9. Advanced Electronic Communication

ACO

Section 1899

(1) Not later than January 1, 2012, the Secretary shall establish a shared savings program that promotes accountability for a patient population and coordinates items and services under parts A and B, and encourages investment in infrastructure and redesigned care processes for high quality and efficient service delivery.

Under such program—(A) groups of providers of services and suppliers meeting criteria specified by the Secretary may work together to manage and coordinate care for Medicare fee-for-service beneficiaries through an accountable care organization (referred to in this section as an ‘ACO’); and (B) ACOs that meet quality performance standards established by the Secretary are eligible to receive payments for shared savings under subsection (d)(2).

Being Accountable Isn’t Easy

JAMA, August 17, 2011—Vol 306, No. 7, p. 758

Implementing Accountable Care Organizations
Ten Potential Mistakes and How to Learn From Them

Sara Shapiro, PhD, MBA
Stephanie M. Shaward, PhD, MPA, MBA

Achieving the triple aim—improving the patient experience, strengthening population health, and lowering costs—will require fundamental change in the US health care system. Accountable care organizations (ACOs) as outlined in the Affordable Care Act represent an innovative initiative to restructure health care. Accountable care organizations accept responsibility for the total costs and quality of care for a defined set of patients. Some physicians have the ability to manage and receive payments for quality care. For the Medicare shared savings program and other private payer demonstrations requiring a single risk bearing entity, the ACO is to manage the entire care continuum. The challenges will be to merge hospital and physician operations, eliminate waste, and transform care, while providing care that is both patient centered and cost-effective.
Figure 4.
Distribution of High-Cost Months Over the 1997-2001 Period

Median: high cost in 22 out of 60 months

Source: CBO May 2005 report
Why Care Coordination Programs Fail

• Not connected to primary care
  – “call center” model
• Intervention too weak
• Team members not experienced enough
• Poorly targeted

CMS Readmission Reduction

• FY 2012 start
  – incentive to reduce readmissions and improve transitional care
  – Medicare payments reduced by 1% rising to 3% for avoidable readmissions above threshold to be determined
  – expanded to seven conditions in FY 2015
  – hospital-specific readmission rates publicly available - Medicare Hospital Compare Web site.

When are HHA Patients (28%) Hospitalized?

<table>
<thead>
<tr>
<th>Time</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 days</td>
<td>10%</td>
</tr>
<tr>
<td>3 months</td>
<td>20%</td>
</tr>
<tr>
<td>6 months</td>
<td>30%</td>
</tr>
</tbody>
</table>
How Strong is the Linkage?

**HOSPITAL**
- Eligible Patients Identified?
- Home Health Referral Made?

**HOME HEALTH AGENCY**
- Given Clinical Information?
- Connected to Amb. Care?

**AMBULATORY CARE**
- Informed of Plan?

Handoff…

**HOSPITAL**
**POST ACUTE CARE PROVIDER**

**PRIMARY MEDICAL CARE TEAM**
(MEDICAL HOME)

Or pass?

**HOSPITAL**
**POST ACUTE CARE PROVIDER**

**PRIMARY MEDICAL CARE TEAM**
(MEDICAL HOME)
Naylor 1999 Transitional Care Paper

- Randomized controlled trial at U. Penn
- 363 patients enrolled ≤ 48 hours after hospital admit
  - 186 control
  - 177 intervention
- Mean age 75, 5 medical problems
- 57% fair to poor baseline health
- Advance practice nurse intervention

Eligibility

1. Admission diagnosis
   - CHF
   - Angina
   - MI
   - Resp. infection
   - CABG
   - Valve replacement
   - Major bowel procedure
   - Ortho procedure, lower extremity

2. Risk for poor post-discharge outcomes
   - Age ≥ 60 yrs
   - Weak support system
   - Chronic health problems
   - Depression
   - Functional impairment
   - Multiple hosp, 6 months
   - Hosp. in past 30 days
   - Fair/poor health (per pt)
   - Non-adherence

Control
- standard discharge planning
- Medicare HHA services if referred

Intervention
- gerontological APN’s
- discharge planning, phone contact
- home visits for 4 weeks (minimum = 2)

<table>
<thead>
<tr>
<th></th>
<th>Intervention</th>
<th>Control</th>
</tr>
</thead>
<tbody>
<tr>
<td>HHA nurse visits</td>
<td>3.1</td>
<td>7.1</td>
</tr>
<tr>
<td>APN visits</td>
<td>4.5</td>
<td>0.0</td>
</tr>
<tr>
<td></td>
<td>7.6</td>
<td>7.1</td>
</tr>
</tbody>
</table>
### Re-admissions

<table>
<thead>
<tr>
<th>When Re-admitted</th>
<th>Intervention (n=177)</th>
<th>Control (n=186)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 – 6 weeks</td>
<td>17</td>
<td>32</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>6 – 24 weeks</td>
<td>32</td>
<td>60</td>
<td>.02</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time in Hospital</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Total days</td>
<td>270</td>
</tr>
<tr>
<td>Days/pt</td>
<td>1.53</td>
</tr>
<tr>
<td>Days/re-admit</td>
<td>7.50</td>
</tr>
</tbody>
</table>

Naylor et al. JAMA. 281(7):613; 1999

### Costs in Dollars

<table>
<thead>
<tr>
<th>Utilization category</th>
<th>Intervention (n=177)</th>
<th>Control (n=186)</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Re-admits</td>
<td>427,217</td>
<td>1,024,218</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Other acute care</td>
<td>34,075</td>
<td>37,721</td>
<td>.74</td>
</tr>
<tr>
<td>Home visits</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurses</td>
<td>101,697</td>
<td>101,049</td>
<td>0.72</td>
</tr>
<tr>
<td>Other</td>
<td>79,606</td>
<td>75,940</td>
<td>0.70</td>
</tr>
<tr>
<td>Total</td>
<td>642,595</td>
<td>1,238,928</td>
<td>&lt;.001</td>
</tr>
<tr>
<td>Mean/patient</td>
<td>3,630</td>
<td>6,661</td>
<td>&lt;.001</td>
</tr>
</tbody>
</table>

Naylor et al. JAMA. 281(7):613; 1999

### VCU Transitional Care

<table>
<thead>
<tr>
<th></th>
<th>6 Mo. Post</th>
<th>6 Mo. Pre</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inpt. days</td>
<td>296</td>
<td>871</td>
<td>- 66%</td>
</tr>
<tr>
<td>ICU days</td>
<td>40</td>
<td>200</td>
<td>- 80%</td>
</tr>
<tr>
<td>Admits</td>
<td>43</td>
<td>99</td>
<td>- 47%</td>
</tr>
<tr>
<td>ER visits</td>
<td>49</td>
<td>61</td>
<td>- 20%</td>
</tr>
<tr>
<td>Avg. LOS</td>
<td>6.9</td>
<td>8.8</td>
<td>- 27%</td>
</tr>
<tr>
<td>Cost ($)</td>
<td>470,872</td>
<td>1,469,569</td>
<td>- 68%</td>
</tr>
<tr>
<td>Outpt. visits</td>
<td>200</td>
<td>170</td>
<td>+ 24%</td>
</tr>
</tbody>
</table>
Transitional Care

- HHS grants to hospitals with community partners
- Multiple stakeholders, include consumers
- Preference to medically under-served, small communities rural
- $500 million per year starting 2011
- Grantees must deliver at least one transitional care intervention, such as arranging post discharge services, providing patient self-management or caregiver support, or conducting medication management review.

Why Transitional Care Programs Fail

- Team not strong enough
  - Inexperienced
  - Not led by strong champion
  - Not intensive enough
  - Don’t make house calls
- Linkage to hospital and physicians not strong enough
- Targeted wrong patients

Potential Problems:
Transitional Care Based on NPs

- Workforce
  - NPs are great in this role, but…
  - These patients are really sick and complex
  - So, NPs need physician support
  - Also, few NPs have the full skill set to jump into this role
After Transitional Care

• What happens when patients fail to get better and can’t go back to office?
  – “Failed” transition

• At VCUHS → house calls

MGH Demo (2006-2010)

• High risk, high cost patients
  – 2,500 patients
• Office-based, embedded nurse case managers (not a home health study)
  – Ratio 200:1
  – Active case load = 20-30:1
• 12% gross cost savings
• 7% net cost savings
The "Duals" (9.2 million in 2008)

Share of Medicaid Enrollment and Costs Associated with Medicare-Medicaid Enrollees

Department of Health & Human Services
Centers for Medicare & Medicaid Services

7500 Security Boulevard
Baltimore, Maryland 21244-1850

SNP?

VA Home-Based Primary Care (HBPC)

• Comprehensive, longitudinal primary care

• Delivered in the home

• By an Interdisciplinary team: Nurse, Physician, Social Worker, Rehabilitation Therapist, Dietitian, Pharmacist, Psychologist

• Targets patients with complex, chronic, disabling disease

• When routine clinic-based care is not effective

• "Too sick to go to clinic"
HBPC is NOT like Medicare Home Care

• Different
  – target population
  – Processes
  – outcomes
• HBPC provides longitudinal comprehensive, interdisciplinary care to veterans with complex chronic disease

Characteristics of HBPC

“Too sick to go to clinic” -

Mean age 78.4 years; 96% male
More than 8 chronic conditions
47% dependent in ≥2 Activities of Daily Living (ADL)
47% married; 30% live alone;
Caregivers: 30% limited in ADLs themselves
Mean HBPC time = 315 days; 3.1 visits/mo; 28 visits/yr

Disease Prevalence in HBPC

<table>
<thead>
<tr>
<th>Disease</th>
<th>Percent of patients with disease</th>
</tr>
</thead>
<tbody>
<tr>
<td>Heart disease</td>
<td>72%</td>
</tr>
<tr>
<td>Diabetes</td>
<td>48%</td>
</tr>
<tr>
<td>Depression</td>
<td>44%</td>
</tr>
<tr>
<td>Heart failure</td>
<td>35%</td>
</tr>
<tr>
<td>Dementia</td>
<td>33%</td>
</tr>
<tr>
<td>Substance abuse</td>
<td>29%</td>
</tr>
<tr>
<td>Cancer</td>
<td>29%</td>
</tr>
</tbody>
</table>
• 130 centers, nationwide  
• 23,000 enrolled  
• Systematic development and investment  
• Interdisciplinary team  
• Longitudinal, holistic, comprehensive care  
• Standardized practice model  
• Average annual HBPC IDT cost about $10,000 per patient

• HCC scores calibrated on VA costs (2006)  
• Deciles of all new VA HBPC participants in 2006 by VA-HCC score  
  – Mean CMS-HCC score per decile at bottom  
  – Blue bar = actual total costs (VA+CMS) in CY06 (some HBPC time and some not)  
  – Brown bar = predicted costs  
  – Green bar = annualized costs once in HBPC  
  – Brown minus Green = predicted savings

2006 HBPC: 942 participants per decile; n = 9,425 for total  
(Annualization is adjusted for 1-yr Mortality of 24%)  
Mean Observed $45,980; Mean Predicted $45,948
Costs of Care Before vs. During HBPC (per patient per year)

<table>
<thead>
<tr>
<th></th>
<th>Before HBPC</th>
<th>During HBPC</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Cost of VA Care</td>
<td>$38,168</td>
<td>$29,036*</td>
<td>- 24%</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>P &lt; 0.0001</td>
</tr>
<tr>
<td>Hospital</td>
<td>$18,868</td>
<td>$7026</td>
<td>- 63%</td>
</tr>
<tr>
<td>Nursing home</td>
<td>$10,382</td>
<td>$1382</td>
<td>- 87%</td>
</tr>
<tr>
<td>Outpatient</td>
<td>$6490</td>
<td>$7140</td>
<td>+ 10%</td>
</tr>
<tr>
<td>All home care</td>
<td>$2488</td>
<td>$13,588*</td>
<td>+ 460%</td>
</tr>
</tbody>
</table>

Why Home-based Medical Care?

- Immobile patients (and families) prefer
- Much better information for provider
- More timely
- Less bricks + mortar, lower overhead cost
- Avoids risks associated with hospitals
- Reduces discontinuity
- Saves money

Office-Based Medicine Fails These Patients

- Access hassles and transport costs
- Not available when needed
  - “Next available appointment...”
  - “Squeeze them in...”
  - Refer to ER
  - Try to manage over the phone
- Unprepared for urgent care management
Why isn’t home care model flourishing?
• $$$
• Awareness of concept
• Vested interests, set in older ways
• Political will

Independence at Home
• HB 7114 + S 3613 (2009, Markey & Wyden)
  – PPACA section 3024
• Team, medically led (Physician or NP)
  – Housecalls + portable technology
  – 24-7-365 coverage
  – EHR
  – Expertise
• Existing Medicare benefit (A,B,D)
• Savings
  – First 5% to Medicare
  – Of remainder, portion goes to IAH team

IAH Patient Selection
• Two or more advanced chronic illnesses
  – CHF, COPD, diabetes, Alzheimer’s, stroke
  – CAD, PVD, pressure ulcers, neurodegenerative
• High-risk (utilization), high cost, “sick”
  – Hospitalization (within 12 months)
  – Plus post-acute care (Part A)
• Functional impairment
  – HHA (OASIS); SNF (MDS); Rehab (FIM)
• NOT required
  – Homebound
  – Skilled need
IAH Finance and Coverage
- Patients enroll in IAH
  – May dis-enroll at any time
- Medicare A, B, and D unchanged
- Costs are predicted (age, sex, illness, prior use of care)
- IAH providers paid usual fee-for-service
- Gain sharing

IAH Protection Against Under-service
- Beneficiary can withdraw at any time
- Satisfaction measures
- Risk-adjusted clinical quality indicators, condition-specific
- Ineffective IAH programs dropped within 3 years

IAH Workforce Development
- New incentive for best and brightest physicians, NPs, and PAs to pursue geriatrics
  – Grow the field, quickly
  – Analogy to hospitalists
- Teams should prosper while giving better care
- Build from the ground up
  – Start with existing community provider teams
  – Does not require large capital investment
Key IAH Attributes

- Voluntary
- Medical care in the home = access
  - Right care where you want it, when you need it
- Medically led, adjust to changing condition
- Less time in ER, hospital = better for patient
- Longitudinal, continuous, comprehensive
- Self-funded = accountable
  - No added cost for CMS
  - Immediate savings (1 to 2 years)

American Academy of Home Care Physicians

AAHCP.org

AAHCP IAH development team
Gresham Bayne, MD
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RETOOLING FOR AN AGING AMERICA

FIGURE 1-1: Projected number of needed geriatricians.
What Can Geriatricians Do?

- Participate and lead in system change
- Patient safety agenda
  - Know the literature and its weaknesses
  - Learn the quality language
  - Modify care paths for frail elders
- Apply health IT
- Improve care transitions and continuity
- Reduce readmissions
- Promote preventive gerontology

What Can Geriatricians Do?

- Direct patient care
  - Primary target = multi-morbid subset (20%)
    - Ambulatory care
    - Home care
    - Institutional LTC
    - Inpatient care
What Can Geriatricians Do?

• Advocate
  – If you do not participate in the process, don’t complain about the result
  – Political arena
  – Regulatory arena
  – Educational arena

• Innovate
  – System re-design

What Can Geriatricians Do?

• Teach and write
  – Conduct and publish research
  – Engage in professional and public education