21st Century House Calls: Improving Quality and Access to Care for Medically Complex Patients

The Institute of Medicine of Chicago
Thomas Cornwell, MD
Javette Orgain, MD
John Hickner, MD
September 9, 2016
Learning objectives

1. Describe modern-day house calls and their value to patients, care-givers, clinicians, health systems and society

2. Understand the Independence at Home Medicare Demonstration

3. Learn the challenges and rewards of starting a house call program
The Decline of the House Call

House calls to the elderly—a vanishing practice among physicians. NEJM 12/18/97:

- 1930: 40% of visits
- 1950: 10% of visits
- 1996 984,000 house calls (< 0.5%)
Three Reasons for the Decline

1. Increased office/hospital based technology

2. Fear of increased liability

3. Financial disincentives
The Resurgence of the House Call

"This is the Mother of All Housecalls!"

Trends in House Calls to Medicare Beneficiaries
JAMA 11/16/05: 1998-2004

- 43% increase to 2,060,039 (0.9% of EM services)
- 2,659,358 house calls in 2014
- ↑97% in domiciliary visits (Assisted Living Facilities) from 1,579,197 in 2006 to 3,105,522 in 2014 (overtook house calls)
Three Reasons for the Resurgence

1. Improves the quality of life of homebound patients

2. Improves the quality of life of caregivers

3. Decreases health care costs: enables patients to remain at home, avoid expensive ED visits, hospitals & nursing homes
The Modern-Day House Call

- Home-based medical (primary) care
- Team-based care typically MD or NP led
- “Home-limited” vs. “home-bound” patients
- High-technology enabled
Smart Phone Technology

- Electronic Medical Records
- Search engines, Google and others
- Photos/Scans
- Accessibility to patient, staff, other providers
Smart Phone Technology

• Mobile apps
• Is Pocket Mobile Echocardiography the Next-Generation Stethoscope?

A Cross-sectional Comparison of Rapidly Acquired Images With Standard Trans-thoracic Echocardiography.

Liability not a barrier
## Medicare House Call Codes/Payments

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99341</td>
<td>$62.51</td>
<td>99341 (20)</td>
<td>$57.53</td>
<td>$55.50</td>
<td>$27.95</td>
</tr>
<tr>
<td>99342</td>
<td>$77.71</td>
<td>99342 (30)</td>
<td>$77.58</td>
<td>$79.84</td>
<td>$37.40</td>
</tr>
<tr>
<td>99343</td>
<td>$101.62</td>
<td>99343 (45)</td>
<td>$110.19</td>
<td>$131.04</td>
<td>$54.90</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>99344</strong>$^1$ (60)</td>
<td><strong>$140.50</strong></td>
<td><strong>$183.68</strong></td>
<td><strong>$70.55</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>99345</strong>$^1$ (75)</td>
<td><strong>$166.24</strong></td>
<td><strong>$222.70</strong></td>
<td><strong>$85.55</strong></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99351</td>
<td>$46.66</td>
<td>99347 (15)</td>
<td>$45.43</td>
<td>$55.85</td>
<td>$24.25</td>
</tr>
<tr>
<td>99352</td>
<td>$59.37</td>
<td>99348 (25)</td>
<td>$65.54</td>
<td>$84.86</td>
<td>$31.30</td>
</tr>
<tr>
<td>99353</td>
<td>$74.80</td>
<td>99349 (40)</td>
<td><strong>$94.92</strong></td>
<td><strong>$129.25</strong></td>
<td><strong>$47.50</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>99350</strong>$^1$ (60)</td>
<td><strong>$136.00</strong></td>
<td><strong>$179.38</strong></td>
<td><strong>$68.85</strong></td>
</tr>
</tbody>
</table>

1 Additional 1998 higher level Medicare house call codes
2 IHFS: Illinois Healthcare and Family Services Medicaid Rates

Shaded payments are most frequently used house call codes
Note: Medicare Payments vary by locality. These are for Locality 15.
Place of Service Code for Home = 12
## Domiciliary (Assisted Living) CPT Codes/ Payments

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99321</td>
<td>$43.19</td>
<td>99324 (20)</td>
<td>$62.80</td>
<td>$55.85</td>
<td>$18.60</td>
</tr>
<tr>
<td>99322</td>
<td>$60.92</td>
<td>99325 (30)</td>
<td>$91.76</td>
<td>$81.28</td>
<td>$26.70</td>
</tr>
<tr>
<td>99323</td>
<td>$75.00</td>
<td>99326 (45)</td>
<td>$132.71</td>
<td>$140.35</td>
<td>$34.85</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99327¹ (60)</td>
<td>$174.47</td>
<td>$187.26</td>
<td>$42.95</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99328¹ (75)</td>
<td>$215.85</td>
<td>$218.76</td>
<td>$51.05</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>99331</td>
<td>$38.14</td>
<td>99334 (20)</td>
<td>$48.73</td>
<td>$60.87</td>
<td>$16.00</td>
</tr>
<tr>
<td>99332</td>
<td>$48.30</td>
<td>99335 (30)</td>
<td>$76.88</td>
<td>$95.96</td>
<td>$21.00</td>
</tr>
<tr>
<td>99333</td>
<td>$59.10</td>
<td>99336 (40)</td>
<td>$118.22</td>
<td>$135.70</td>
<td>$26.05</td>
</tr>
<tr>
<td></td>
<td></td>
<td>99337¹ (60)</td>
<td>$173.63</td>
<td>$194.42</td>
<td>$31.05</td>
</tr>
</tbody>
</table>

1. Additional 2006 higher level Medicare house call codes
2. IHFS: Illinois Healthcare and Family Services Medicaid Rates

Shaded payments are most frequently used house call codes
Note: Medicare Payments vary by locality. These are for Locality 15.
Place of service code = 13
Home-Based Medical Care’s Perfect Storm

1. Demographics

2. The Medicare and Medicaid Fiscal Crisis

3. Health Care Reform

4. Federal Rebalancing Legislation

5. Evidence: Clear case for the value of Home-Based Medical Care

6. Quality End-of-Life Care

*Full Article: hccinstitute.org*
1. Demographics: Aging Society

Population 65+ by Age: 1900-2050

Source: U.S. Bureau of the Census

Number of Persons 65+

- Age 65-74
- Age 75-84
- Age 85+

Source: U.S. Bureau of the Census
2. The Medicare & Medicaid Fiscal Crisis

Health Spending Is Very Highly Concentrated Among the Highest Spenders

- Top 1% Median Cost $97,859
  Top 1% of spenders account for 23% of spending
- Top 5% Median Cost $43,038
  Top 5% of spenders account for 50% of spending
- Lowest 50% consume 2.7% of spending
  Median Cost $234

NIHM Foundation analysis of data from the 2012 Medical Expenditure Panel Survey.
3. Health Care Reform: Affordable Care Act

- Readmission Penalties
- Shift from fee-for-service “volume based” payments to “value based” payments through Medicare Shared Savings Program (several Accountable Care Organization models) and the Bundled Payments for Care Improvement Initiative
- Independence at Home Medicare demonstration program
Health Care Reform: ↓Readmissions / Value-Based Care

- 5/14/09 – 2/18/11
- 1 year, 9 months (645 days)
- 44 Emergency Department Visits (avg 16 days between visits)
- 27 Hospitalizations—over half required ICU days (avg 25 days between stays)

- HCP First Visit 3/2/11 (365 Days)
- Expected: 25 ED Visits, 15 Hospitalizations

- **Actual**: 1 ED visit + 1 Hospitalization (May 2011)

**Estimated Savings $176,000**
($1,500/ED visit; $8,000/hospitalization)
Independence at Home Demonstration

1. Focuses on the highest cost Medicare beneficiaries (10% of Medicare beneficiaries with \( \geq 5 \) chronic conditions account for \( \frac{2}{3} \) of Medicare spending)
   1. \( \geq 2 \) chronic conditions
   2. Emergent hospitalization in past year + post acute care services
   3. Functional dependence (\( \geq 2 \) ADL deficiencies) and frailty

2. Holds IAH provider organizations strictly accountable for three performance standards
   1. Minimum savings of 5%
   2. Good outcomes commensurate with the beneficiary’s condition
   3. Patient/caregiver satisfaction
Independence at Home Demonstration

- Savings beyond 5% are split 80% Practice / 20% Medicare
- IAH Results
  - First Year (ending 5/13, released 6/15): $25 million savings; $3,070 savings/beneficiary
  - Second Year (ending 5/14, released 8/16): $10 million savings; $1,010 savings/beneficiary
  - Improved quality
    - ↓ hospital readmissions and emergency department use
    - ↑ 48 hour hospital f/u; Medication reconciliation; Advance Directives
IAH legislation introduce July 6, 2016 S. 3130

IN THE SENATE OF THE UNITED STATES

Mr. Markey (for himself, Mr. Cornyn, Mr. Benshet, and Mr. Portman) introduced the following bill; which was read twice and referred to the Committee on

A BILL

To amend title XVIII of the Social Security Act to provide for a permanent Independence at home medical practice program under the Medicare program.

1. Be it enacted by the Senate and House of Representa-
2. tives of the United States of America in Congress assembled,
New Medicare Benefits

- 1972 End-Stage Renal Disease (Dialysis)
- 1986 the Medicare Hospice benefit (temporary 1982)
- 1997 PACE (Program of All-Inclusive Care for the Elderly)
- 2006 Medicare Part D prescription drug benefit
- 2016 or 2017 Independence at Home??
4. Federal Rebalancing Legislation

- Federal Rebalancing Legislation including Money Follow the Person (MFP) and the Balancing Incentive Program (BIP)
### 5. Evidence for the value of HBMC

**Costs of Care Before vs During HBPC for 2002**

(per patient per year) *includes HBPC cost

<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></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hospital</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outpatient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All home care</td>
<td>$2488</td>
<td>$13,588*</td>
<td>$11,100 (+ 460%)</td>
</tr>
</tbody>
</table>
### Costs of Care Before vs During HBPC for 2002 (per patient per year) *includes HBPC cost*

<table>
<thead>
<tr>
<th></th>
<th>Before HBPC</th>
<th>During HBPC</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>N=11,334</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>$103,048,728</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Cost of VA Care</td>
<td>$38,228</td>
<td>$29,136*</td>
<td><strong>-$9,092 (- 24%)</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td><strong>P &lt; 0.0001</strong></td>
</tr>
<tr>
<td>Hospital</td>
<td>$18,868</td>
<td>$7026</td>
<td><strong>$11,842 (- 63%)</strong></td>
</tr>
<tr>
<td>Nursing home</td>
<td>$10,382</td>
<td>$1382</td>
<td><strong>$9000 (- 87%)</strong></td>
</tr>
<tr>
<td>Outpatient</td>
<td>$6490</td>
<td>$7140</td>
<td><strong>$650 (+ 10%)</strong></td>
</tr>
<tr>
<td>All home care</td>
<td>$2488</td>
<td>$13,588*</td>
<td><strong>$11,100 (+ 460%)</strong></td>
</tr>
</tbody>
</table>
Evidence Supports Better Care at Lower Costs

- 2006 9,425 newly enrolled HBPC comparing VA + Medicare costs
  - 6,951 dually enrolled MC + VA: ↓ costs 13.4%
  - ↓ VA costs 16.7%; ↓ Medicare costs 10.8%;
  - ↓ Hospitalizations 25.5%
  - ↑ Patient and caregiver satisfaction (highest in VA)
- Washington DC 722 HBPC cases vs. 2,161 controls over two years
  - 17% lower Medicare Costs ($8,477 savings per beneficiary over 2 years; $6.1 million total savings)
  - ↓ Hospitalizations 9%; ↓ ED 10%; ↓ SNF 27%
  - ↑ Primary care visits; ↑ Home health; ↑ Hospice

Better Access, Quality and Cost for Clinically Complex Veterans with Home-Based Primary Care; Edes, et al JAGS 10/14; Effects of Home-Based Primary Care on Medicare Costs in High-Risk Elders; DeJonge, et al JAGS 10/14
6. End-of-Life Care

- 25.1% of the $556 billion Medicare dollars goes to care in last year of life  
  Riley, Lubitz; Health Services Research 4/2010

- From 2000 to 2009 deaths increased at home 30.7% to 33.5% and decreased at hospitals from 32.6% to 24.6%, use of hospice increased from 21.6% to 42.2%

- **BUT:**
  - ICU stays in last month increased from 24.3% to 29.2%
  - Hospitalizations in last 3 months of life increased from 62.8% in 2005 to 69.3% in 2009
  - Short hospice stays (<3 days) increased 22.2% to 28.4% (40.3% were preceded by hospitalization with ICU stay)

  Teno; *Change in End of Life Care for Medicare Beneficiaries*
  JAMA 2/2013
### End-of-Life Care

#### HomeCare Physicians Patient Deaths 2003-2015

<table>
<thead>
<tr>
<th></th>
<th>Number</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>2,477</td>
<td>100%</td>
</tr>
<tr>
<td>Home</td>
<td>1,847</td>
<td>75%</td>
</tr>
<tr>
<td>Hospital</td>
<td>473</td>
<td>19%</td>
</tr>
<tr>
<td>Nursing Home</td>
<td>120</td>
<td>5%</td>
</tr>
<tr>
<td>Unknown</td>
<td>37</td>
<td>1%</td>
</tr>
</tbody>
</table>
HomeCare Physicians and End-of-Life Care

• 2015: 230 deaths
  – 80% (184) died at home (compared to 33.5% nationally)
  – 76% (175) where on hospice (compared to 42% nationally)
  – Average length of stay 1.9 years (the highest cost years)
  – Median length of stay 1.2 years

• Decreased hospital mortality
  – 2015: 230 deaths
    • 184 (80% at home); Expected = 33.5% = 77; Thus 107 additional deaths at home than expected decreasing hospital mortality rate
    • Central DuPage Hospital had 239 deaths in 2015
Home Centered Care Institute

Mission: National expansion of house call programs / workforce

Mission: To expand home-based medical care through education and training in collaboration with national experts

Research Partners

The John A. Hartford Foundation
Chicago Network & Learning Collaborative

- Coalition of health systems, academic programs, house call programs, social service agencies and providers
- Dedicated to ensuring the most vulnerable area residents receive excellent care through a sustainable delivery model
- Quarterly events
- Next Meeting: September 29, 2016 | 10—2 pm | RUMC
  - West Health Institute: Research Project and Initial Findings
  - Bridge Program: Improving Linkage
  - Michael Gelder: The State of HCBS in Illinois
  - To register, visit HCCI website
The House Call Project

• Growing the Successful House Call Program
  • November 3-4, 2016 | HCCI, Schaumburg, IL
  • Key Content Areas
    – Clinical Care/Operations
    – Practice Management
  • 24-Month continuing support
    – Webinars
    – Online Modules
    – Virtual office hours
Our Next Presenters

• Javette Orgain, MD & John Hickner, MD
• Challenges and Rewards of House Call Program Development