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Costs and Cost-effectiveness of Home Medical Care

Home-base primary care (including house calls) is one solution to rising costs of chronic care.

While one house call costs more than one office visit, house calls are more likely to prevent unnecessary and far more costly ER visits and hospitalizations. At \$1,500 per ER visit, the cost of 10 house calls is offset by one ER visit prevented.

House calls also prevent costs associated with office visits: special transport; lost caregiver productivity from accompanying patients to the office.

Rigorous studies that compare a treatment group (mobile medical care) with similar individuals (conventional care) have shown cost-effectiveness in patients with high-cost chronic conditions.

Consider Naylor et al, "Comprehensive discharge planning and home follow-up of hospitalized elders" (JAMA. 1999; 281:613-620). This randomized controlled trial showed 65% reduction in hospital days and 50% cost savings. Similar findings with this model were reported using historical control data at Virginia Commonwealth University (Boling et al. J American Geriatrics Society 2004).

Also see Rich, MW, "A Multidisciplinary intervention to prevent the readmission of elderly patients with CHF" (New Engl J Med. 1995; 333:1190-1195.) There a randomized controlled trial of post-hospital care for high-risk CHF patients produced 50% reduction in re-hospitalization.

A house call program with 91 clients in a Nevada Social HMO produced 62% reduction in hospital days, saving \$439,825 per year in acute, skilled, and subacute days, with net savings of \$261,225. (SL Phillips et al, "Chronic Home Care: A Health Plan's Experience" (Annals of Long Term Care; 2004). A follow-up study of Moderate Risk (PRA category) patients compared outcomes for 432 members treated by a geriatric care team with 266 members in standard community practices. The geriatric team saved \$760/member/year, projecting to \$760,000 annually for each 1,000 Moderate PRA members. (SL Phillips, et al, American Geriatrics Society 2004 Annual Meeting).

A 2006 George Washington University conference highlighted two other studies:

- Dr. Thomas Edes presented a national study of VA home and community based care programs (HBPC) with savings in inpatient care (62%) and nursing home days (88%), such that the program was expanded.
- Dr. Bruce Kinosian presented the Pennsylvania ElderPACT program. For 11 years, this program blended house calls with Area Agency on Aging case managers to produce savings surpassing those in PACE programs.

Private practitioner Dr. Gresham Bayne also reported information contrasting ER visits and home care medicine:

- There were 110 million emergency room visits in 2006.
- 85% did not need immediate physician attention.
- 67% of the elderly arrive by ambulance.
- 80% of admissions were patients older than 75 years.

Frail elderly and disabled persons use emergency departments for primary care with an average ambulance transport cost of \$1,200, plus ER fees, x-rays, and tests. An emergent house call to an established patient in Dr. Bayne's practice with labs, EKG, oximetry, and cardiac impedance costs under \$300. In addition, a costly hospitalization is likely to follow. Giving patients what they want (to stay at home) can save Medicare money.

Earlier, the Call Doctor Medical Group in California compared treating pneumonia in the home rather than the hospital, using 2001 Medicare data. Average cost for hospital treatment was \$5,159 while home treatment cost \$1,000. Estimated annual savings to Medicare for this diagnosis could reach \$1 billion. (H. Finnelli, "House Care and the Housecall," 2001, at www.1800CALLDOC.com)

Summaries of data presented by Edes, Kinosian, and Bayne are posted by the AAHCP at www.aahcp.org (Meetings/"Upending the Triangle" April, 2006).

In recent years, CMS recognized the cost-saving and care improvement potential of house calls:

- Findings from the "Home Hospital" study at Johns Hopkins University were reported in 2004. This study involves acutely ill elders with high cost conditions (pneumonia CHF, COPD and cellulitis) that met criteria for inpatient hospital care but were treated at home after initial ER evaluation. Good clinical outcomes were paired with costs equal to or lower than hospital care costs. CMS funded a broader demonstration of the model.
- CMS funded the multi-state CareLevel Management demonstration in which high-risk seniors are offered the alternative of medical house calls in a model which rewards physicians for cost-effectiveness. Flaws in the construction of this demonstration make success less likely.