The House Call
Past, Present and Future

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Medical Practice in Mid-Nineteenth Century America

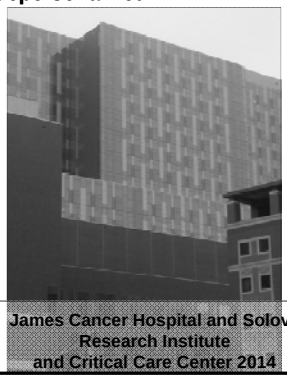
- Family practice: the eminent physician aimed to have a permanent personal relationship with an estate; made regular visits and treated the family, servants and guests
- Most physicians visited more modest households – farms, villages
- Care of the sick provided in the home, by the family
- Other sites of practice: hospitals, almshouses
- Training: apprenticeship, proprietary schools

What happened to the house call?

- **Urbanization and shrinking household size**
- **Telephones and cars – easier for patients to get to the office**
- **Doctors wanted to be near hospitals (lab, diagnostics, inpatient rounds, colleagues)**
- **Insurance – incentivizes volume-based practice**
- **Change in professional culture – image, lifestyle expectations**
- **Early 20th century: office-based practice (house calls after hours)**
- **Emergency medicine (1970's)**
- **Home health (1980's)**
- **"Too busy!"**

In the past one hundred years, our health care system has become exponentially larger, more specialized and more technological with far greater capacity to treat and manage disease. It has also become exponentially more complex, fragmented and depersonalized.

Ohio State University Medical Center – until about 1950

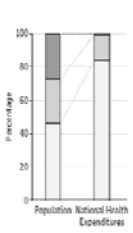


James Cancer Hospital and Solove Research Institute and Critical Care Center 2014

Patients who fall through the cracks

- **Multimorbidity – challenge for patient of managing multiple doctors, medications, self-care tasks**
- **Disability – limited mobility, impaired communication, lack of transportation, inadequate caregiver support**
- **Poor access to care - health insurance, availability of PCP, travel distance**
- **Personal factors – competing demands, limited comprehension, high symptom burden, lack of motivation, drug / alcohol abuse**
- **Impact of change – new disease or symptoms, change in medicines, loss of caregiver or medical provider**

Figure 8. National Health Expenditures (NHEs) by Patient Group, 2011



Patient Group	Population, In Millions (%)	National Health Expenditures, $, In Billions (%)
Well[a]	85 (27)	20 (1)
Acute self-limited conditions[b]	82 (26)	412 (15)
Chronic conditions	144 (46)	2269 (84)
Total	311	2701

Moses, Matheson et al JAMA 2013

Table 2. Summary of Chronic Disease Prevalence and Annual Costs by Age Group

	Age Group, y											
	65-69		70-74		75-79		80-84		≥85		Total	
No. of Chronic Conditions*	% Age Group	Mean Expenditures, $	% Age Group	Mean Expenditures, $	% Age Group	Mean Expenditures, $	% Age Group	Mean Expenditures, $	% Age Group	Mean Expenditures, $	% Beneficiaries	Mean Expenditures, $
0	25.7	195	18.9	203	15.2	205	12.6	222	12.2	303	18.0	211
1	28.4	999	18.0	1073	16.0	1175	14.9	1271	15.0	1579	17.3	1154
2	22.2	2055	22.5	2186	21.6	2348	20.9	2677	21.0	3084	21.8	2394
3	16.0	4227	18.7	4328	19.9	4597	20.4	4997	20.4	5929	18.8	4701
≥4	15.7	14 109	21.9	13 774	27.3	13 857	31.2	13 975	31.4	14 282	24.1	13 973
Overall age group	100.0	3609	100.0	4548	100.0	5424	100.0	6160	100.0	6660	100.0	5015

*Mean number of chronic conditions for age groups were as follows: 65–69 years, 1.88; 70–74 years, 2.25; 75–79 years, 2.52; 80–84 years, 2.71; >85 years, 2.71; and total group, 2.34.

Analysis of 1,217,103 Medicare beneficiaries > age 65
Wolff and Starfield, Arch Int Med, 2002

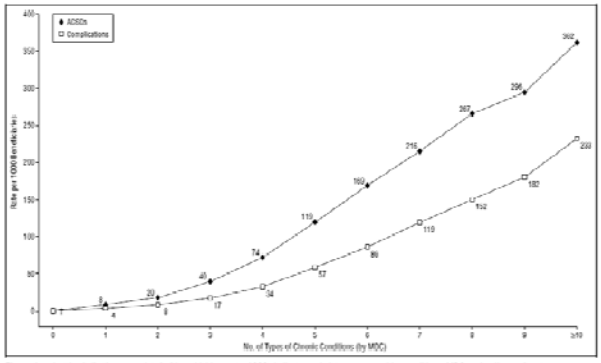
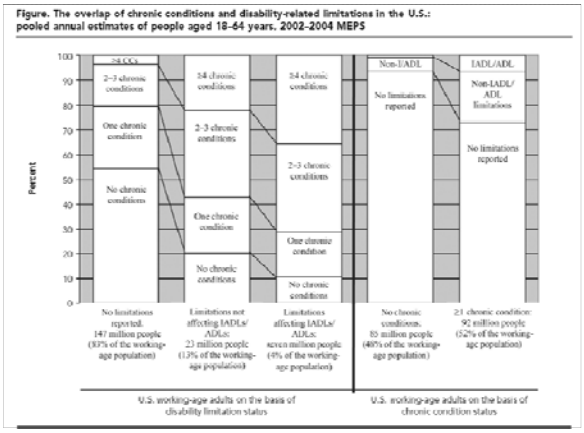
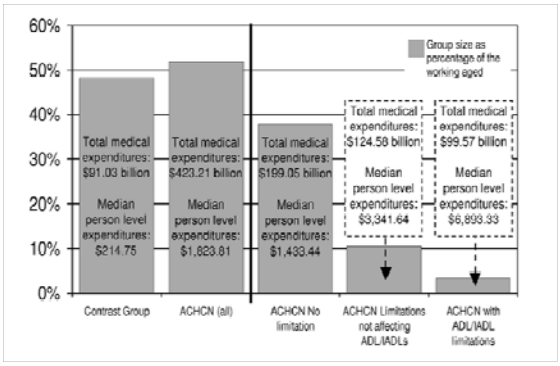


Figure. Inpatient hospitalizations associated with avoidable events. ACSCs indicates ambulatory care sensitive conditions; MDC, major diagnostic category.

Wolff and Starfield, Arch Int Med, 2002



Gulley, Rasch, Chan - Public Health Reports, 2011



Gulley, Rasch, Chan – Medical Care, 2011

Days without readmission by unmet ADL need *DePalma, The Gerontologist, 2013*

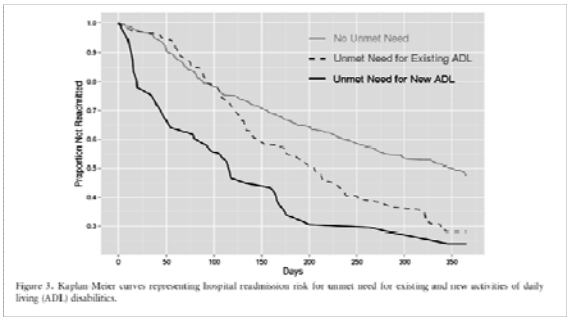


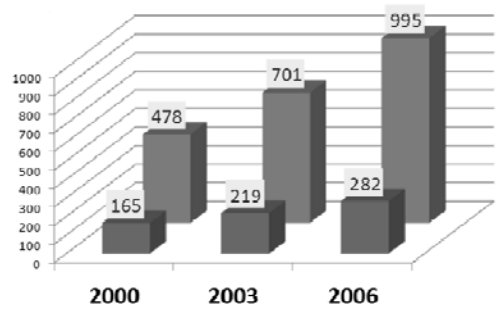
Figure 3. Kaplan Meier curves representing hospital readmission risk for unmet need for existing and new activities of daily living (ADL) disabilities.

Renewed interest in home visits

- **Better management of complex patients**
- **Target disabled persons, who may find it difficult to get to the doctor's office**
- **Hospitals facing penalties for 30-day readmissions**
- **Health insurers interested in "hot-spotters"**
- **Accountable care organizations and interest in population health management – modify systems of care to meet the needs of specific patient subgroups**
- **Primary care providers finding office practice less rewarding**
- **Medicare pays for home visits**
- **Technology makes them easier**

Tools of the Trade

Increase in Home Visits, 2000 – 2006
Peterson LE et al JABFM 2012 25(6)



Home visit codes billed to Medicare
Number of house calls (thousands)
Number of patients receiving house calls (thousands)

Veteran's Affairs Medical Centers Home Based Primary Care Program
Cooper DF et al Home Healthcare Nurse May 2007

- **Team: Medical Director, Program Director, Nurse Practitioners and/or Physician Assistants, RNs and LPNs, Social Worker, Dietician, Occupational or Physical Therapist, Pharmacist, Program Assistant**
- **Regular interdisciplinary team meetings**
- **Develop plan of care for each patient and revisit every 3 months**
- **NP or PA usually serves as primary care provider and makes regular home visits**
- **Physician attends all team meetings and oversees care**
- **Continue home-based primary care for as long as patient and providers feel there is benefit**

Impact of a Home-Based Primary Care Program in an Urban Veterans Affairs Medical Center
Chang C et al J Am Med Dir Assoc. 2009 Feb;10(2)

Table 2. *ED and Hospital Utilization Rates: Six Months Pre-HBPC Enrollment versus First Six Months HBPC Primary Care Management (January 1, 2001, to December 31, 2002) (n = 183)*

Utilization	Pre-HBPC	HBPC Primary Care	% Change
Total no. of ED Visits	130	106	–18.5%
Total no. of hospitalizations	126	71	–43.7%*
Total no. of days in the hospital	1033	518	–49.9%*

ED, emergency department; HBPC, home-based primary care.
* Six-month HBPC admission is associated with a significant decrease in number of hospital episodes (t value –3.41, P value .001) and total number of hospital days (t value –3.22, P value .001) by Paired Score Analysis using t test.

CMS Independence at Home Demonstration

Affordable Care Act Section 3024

http://innovation.cms.gov/initiatives/independence-at-home/

- **Began August 2012**
- **Fourteen practices and 3 consortia**
- **Home-based primary care allows health care providers to spend more time with their patients, perform assessments in a patient's home environment, and assume greater accountability for all aspects of the patient's care.**
- **The Independence at Home Demonstration will build on these existing benefits by providing chronically ill patients with a complete range of primary care services in the home setting.**
- **The Independence at Home Demonstration also will test whether home-based care can reduce the need for hospitalization, improve patient and caregiver satisfaction, and lead to better health and lower costs to Medicare.**

Organizational Characteristics of House Call Practices

N = 35

Landers SH et al Care Mgt J 2009 10(3)

Organizational / Financial Model	Percent
Affiliated with hospital or health system	37
Affiliated with medical school or residency program	31
Current or past grant support	29
Owned by venture capitalists or private investors	9

Clinician Motivation for House Calls

N = 36

Landers SH et al Care Mgt J 2009 10(3)

Factor	Median Ranking on 10 point scale
Improved patient care	9.0
Autonomy	8.5
A positive experience with a house call	8.0
Fewer patients	4.5
Interest in portable medical devices	3.5
Training received during residency	3.0
Specific mentor	2.5
Training received during medical school	1.5

Hypothesis
OSU Healthy at Home

Home visits will eliminate an important barrier to care for disabled, chronically ill patients. The result will be improved continuity, chronic disease management and patient self-care ability. This will have positive downstream consequences with regard to health status, health-related quality of life and health care service utilization.

OSU Healthy at Home Clinical Goals

- Provide ongoing primary care for disabled patients with multiple chronic conditions
- Provide full spectrum of service (medical, social, mental health)
- Reduce emergency room use and hospital readmission
- Improve health-related quality of life

CPT Codes For House Calls

New Patient	Established Patient
• 99341 • 99342 • 99343 • 99344 • 99345	• 99347 • 99348 • 99349 • 99350

Home visits in an era of accountable care organizations

Healthy At Home

Established 2012

Angela Hoff, DNP, NP-C
Family Nurse Practitioner
OSU Healthy at Home
The Ohio State University Wexner Medical Center

The History of Healthy at Home

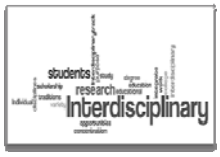
- **OSU Healthy at Home is a home-based primary care program based in the Division of General Internal Medicine at the Ohio State University Wexner Medical Center.**
- **December, 2012: program began**

Healthy at Home Grows!

- **A nurse practitioner and RN joined the team in 2013**
- **A medical assistant was added a few months later**
- **In the last 6 months we have added an LPN, Social Worker, and a second NP**

Interdisciplinary Team

- **In addition to our interdisciplinary staff, we have the following students:**
  - **Advanced Practice Nursing Students**
  - **Medical Students**
  - **Social Work Interns**
  - **Residents**



Statistics About HAH

Number of patients enrolled (April 2014)	182
Race distribution	Caucasian 52% African American 40% Other 9%
Mean age	62.5
More than 6 chronic conditions	76%
Taking more than 9 medicines	80%

Statistics Continued

Number of diagnoses per patient
Healthy at Home

Number of Diagnoses	Number of Patients
0 or 1 diagnosis	0
2 Diagnoses	5
3 diagnoses	8
4 diagnoses	9
5 diagnoses	17
6+ diagnoses	112

Statistics Continued

Number of medications per patient
Healthy at Home

Medications	Patients (n)	Patients (%)
0-5	4	2.8
5-10	24	16.9
10 or more	114	80.3

Case Study #1
The Transition Patient

- **TM is a 54 year old male referred to HAH for a short period of time s/p hospital admission**
- **He is a type 2 diabetic**
- **He is found to be illiterate**
- **After several visits and a great deal of education, he was transitioned back to his PCP**

Case Study #2
The Chronically Ill Patient

- **CM is a 36 year old AAF with a diagnosis of spastic quadriplegia secondary to a MVA.**
- **She also has asthma, an indwelling Foley catheter, colostomy, and g-tube.**
- **Due to her disabilities she is seen in the home.**

Case Study #3
Another Chronically Ill Patient

- SA is a 68 year old white female with a diagnosis of diffuse interstitial rheumatoid lung disease, cirrhosis, HTN, and many other co-morbidities
- Video of SA

Case Study #4
The Geriatric Patient

- J.H. is a 103 year old female with mild dementia, HTN, & hypothyroidism
- She lives in an independent living facility and receives home health aid services twice weekly.
- Due to her frail status and inability to ambulate, she is seen in the home

Barriers

- Safety
  - Guns
  - Drugs
  - Alcohol
  - Criminals
  - Neighborhood crime

Barriers Continued

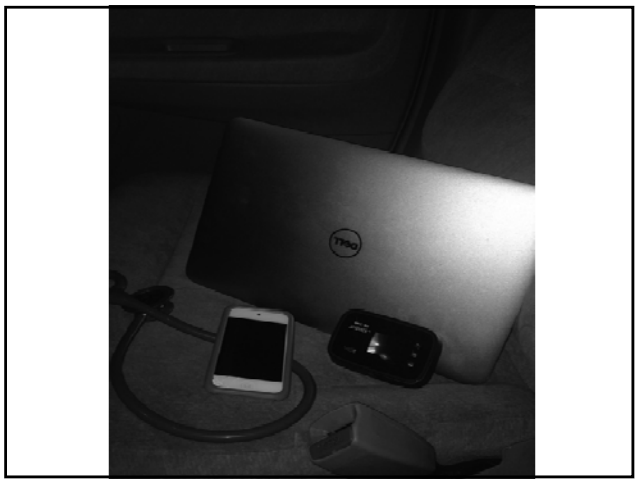
- Low income patients
- No heat
- No air conditioning
- Bed bugs
- Inability to afford medications
- No shows for appointments
- Large geographic areas

Barriers Continued

- **Internet issues**
- **Traffic**
- **Supplies**
- **Labs**
- **Mother Nature**

Improving Efficiency Breaking Down Barriers

- **Reminder letters**
- **Reminder phone calls**
- **Making geographic territories**
- **Map Quest**
- **Working with home health agencies**
- **Adding a social worker**
- **Developing relationships with other departments**



Benefits of Home Based Primary Care

- **Relationships**
  - **With patients**
  - **With family members**
- **Decreased ED visits**
- **Decreased re-admissions**

Results of Our Work!