The Health Care Workforce for Older Americans: Promoting Team Care
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Collaborative Care for Alzheimer's Disease

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Key Assumptions in 2001

- Technology will not save us from the need to provide hands-on care to millions of Americans with AD
- The foundation of the US health care system is primary care
- Primary care can't work harder
- We can't return to the past

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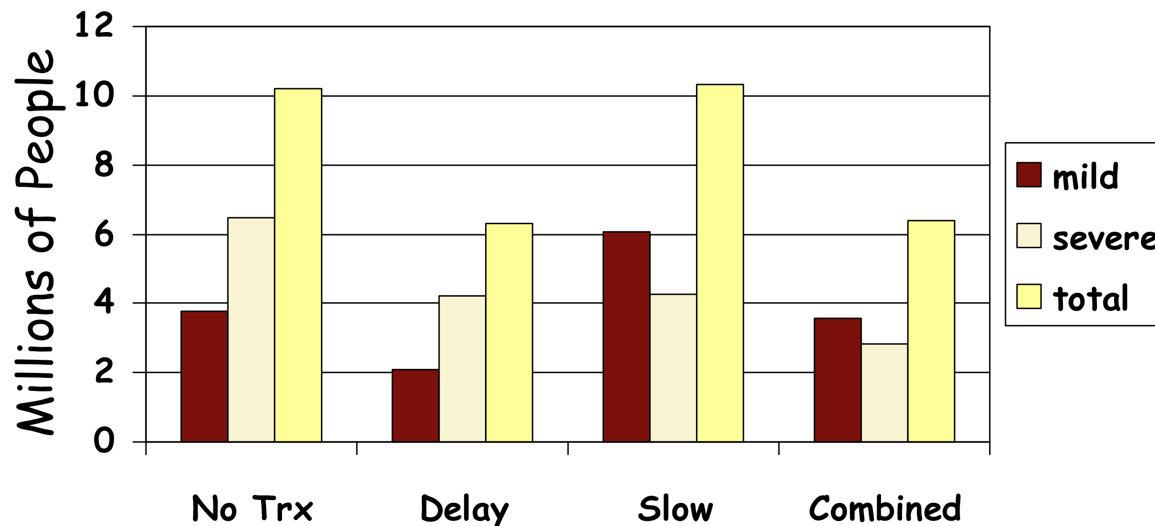
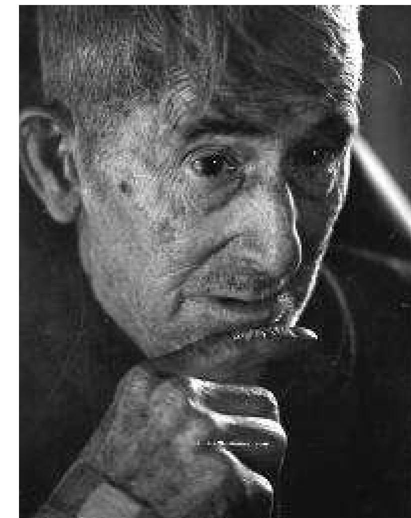
New Technologies Won't Save Us



Projections of AD prevalence based on three models of the effects of therapy advances introduced in 2010



Ann Intern Med

Sloane et al, Ann Rev PH 2002

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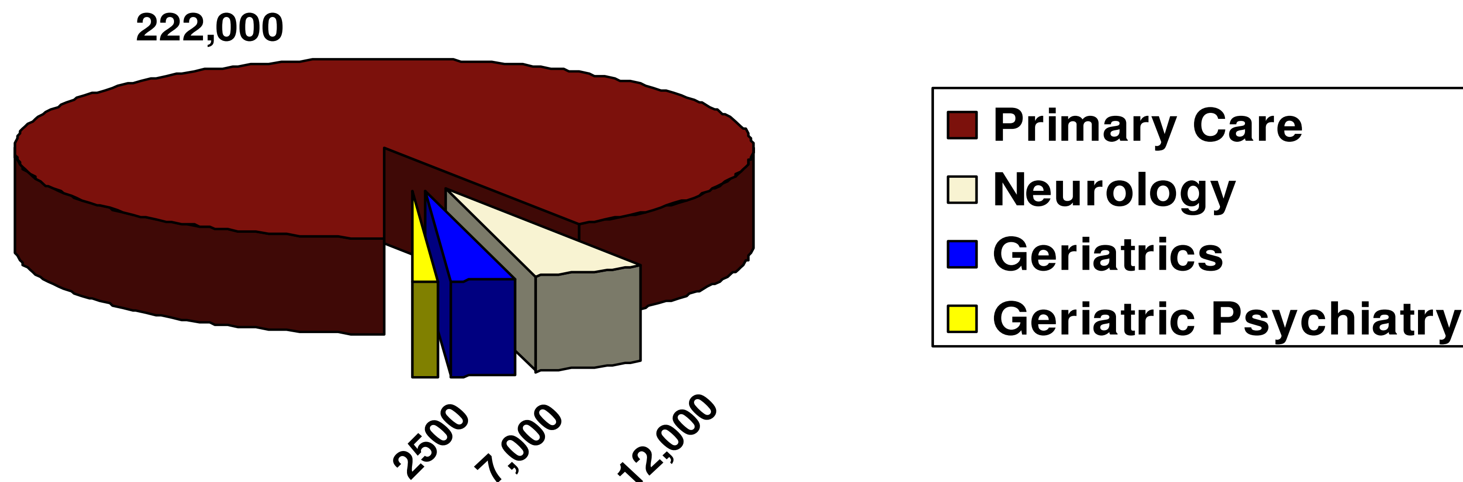
The Primary Care Infrastructure



80% of patient visits for chronic conditions are to primary care physicians
60% of primary care practices are comprised of 3 or fewer physicians

Xakellis GC. J Am Board Fam Pract. 2004
Grumbach JAMA 2002

Working Harder is Not an Option

- Primary care physicians need:
    - 10 hours per day to deliver recommended care for chronic conditions
    - 7 hours per day for preventive services
- Only 60% of a 9-hour day spent face-to-face with patients

Ostbye Ann Fam Med 2005;
Yarnall AJPH. 2003; Medder A J Prev Med 1992

We Can’t Return to the Past

No one wants 1950s-era care

- 44% of physicians adjudged to be delivering poor care
- 33% of physician’s offices rated “unacceptable” for patient care
- Home or office visit lasted 15 min
- Medical record is a 3”x5” card
- 30% all prescribed drugs were sedatives, antacids, or placebos

Peterson OL. J Med Educ 1956
Callahan & Berrios. Reinventing Depression. OUP. 2005

The Limits of Primary Care

- Primary care is paralyzed by 1,000 roles and the number is growing
- The basic structure of primary care is unchanged over past 50 years
- Primary needs more resources and new models of care

Callahan and Berrios. Reinventing Depression. OUP 2004
Boustani et al. J Gen Intern Med 2007

Collaborative Care in Primary Care

- What would happen if you provided guideline-level care to primary care patients with Alzheimer’s disease?
  - Patients will have less severe behavioral symptoms
  - Caregivers of patients will have less stress
  - Patients will be less likely to be placed in long-term care

Guideline-Level Care for Alzheimer's Disease

1. Make a diagnosis
2. Evaluate for treatable causes of cognitive decline
3. Consider for specialty referral
4. Educate patient and caregiver
5. Treat reversible disability due to other conditions
6. Treat behavioral disturbances without medications
7. Consider medications as appropriate
8. Coordinate care across the continuum of care
9. Track patient's outcomes longitudinally
10. Provide support for family caregiver's health

AAo Neurology. Neurology. 1994; 44: 2203-2206
Small GW et al. JAMA. 1997; 278: 1363-1371

Intervention

- Comprehensive screening and diagnosis program
- State-of-the-art caregiver education and support
- One year of care management led by a nurse practitioner working with the caregiver and primary care physician
- Access to primary care clinic-specific support group
- Enrollment in Alzheimer's Association safe return program
- Dementia medication if appropriate

Guerriero Austrom M et al. Gerontologist. 2004

Intervention

- At each contact, the care manager assessed current problems using symptom checklist
- Based on current problems, care manager could activate standardized protocols for behavioral problems
- Protocols emphasized non-drug management
- ~12 hours of contact (50% face-to-face) per year

Guerriero Austrom M et al. Gerontologist. 2004

Intervention

- Nurse care manager met with an interdisciplinary support team weekly to review new and/or difficult patients
- Patient's progress monitored with a web-based longitudinal tracking system
- Care manager served as ombudsman for patient's other chronic conditions (navigating the health care system)
- Care manager provided regular updates and care suggestions to primary care physicians

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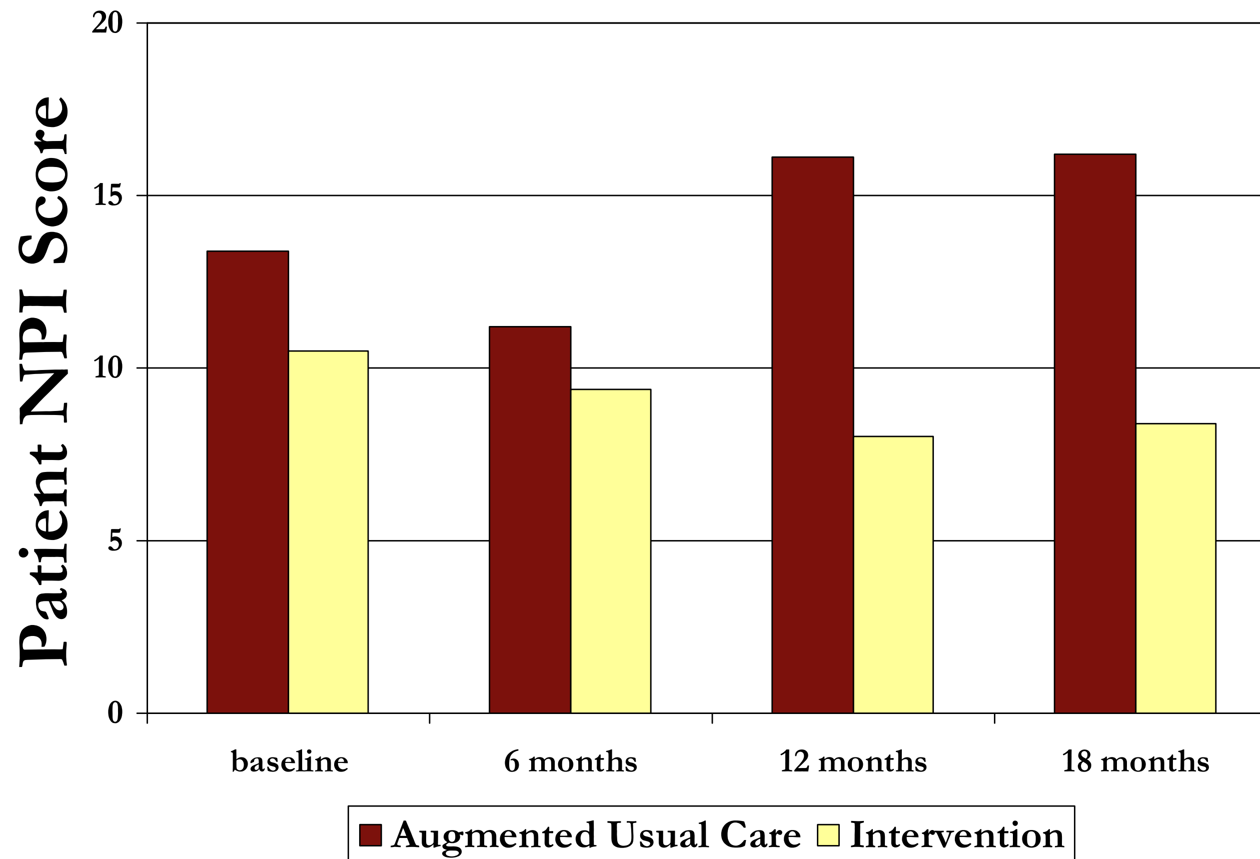
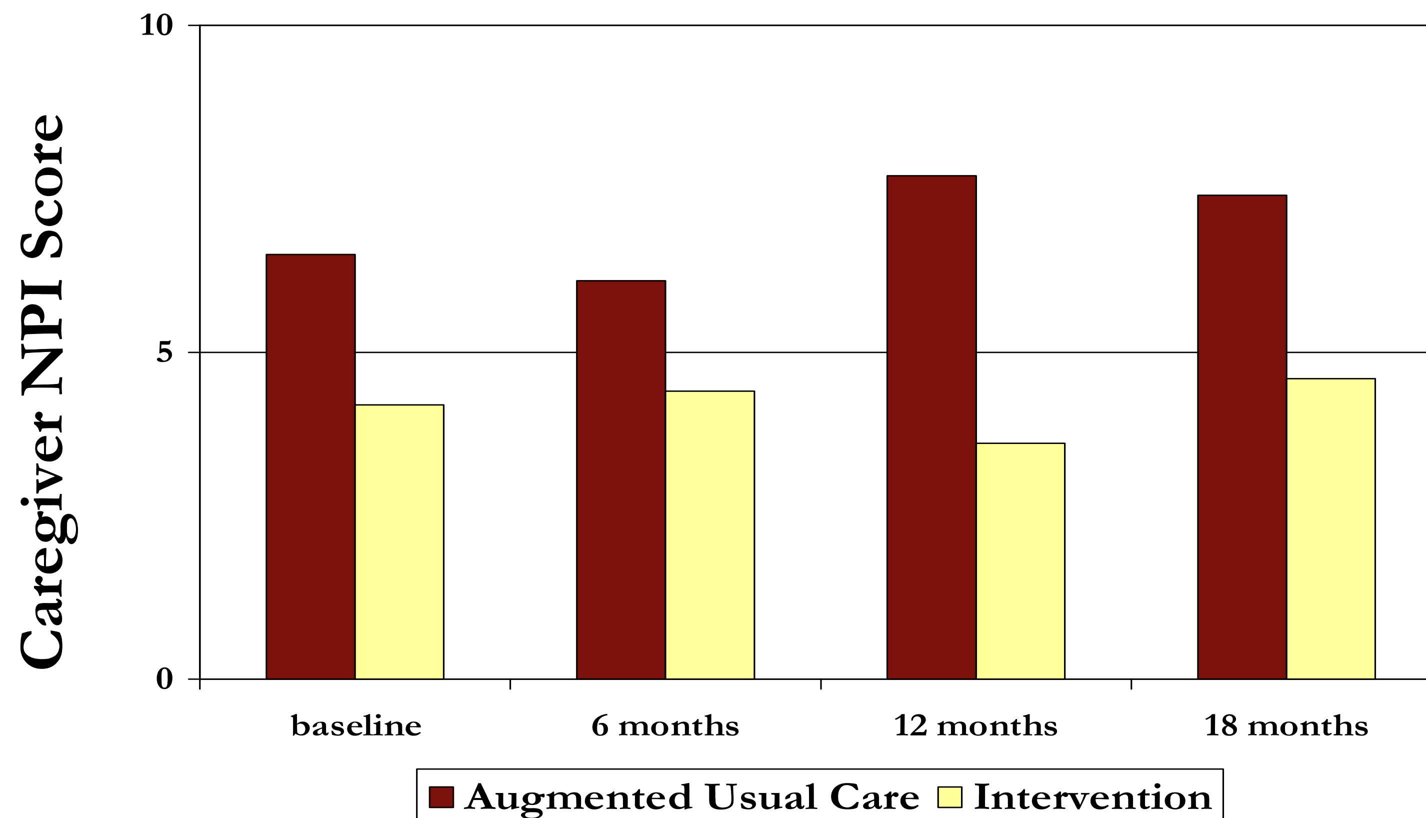
Improvement in Dementia-related Problem Behaviors



Callahan et al. JAMA 2006

IU Center for Aging Research

Improvement in Caregiver Stress



Callahan et al. JAMA 2006

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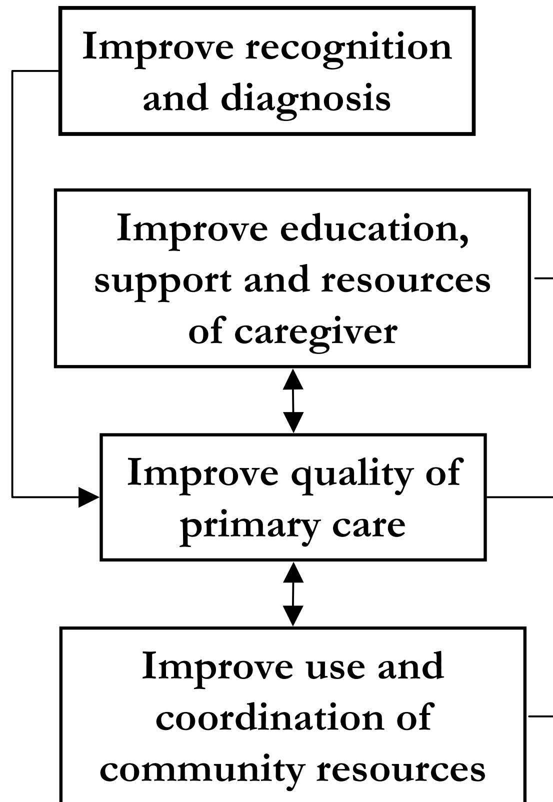
But Does it "Work"?



Mittelman et al. JAMA 1996; Neurology 2006

Callahan et al. JAMA 2006; Vickrey et al. Ann Intern Med. 2006

But Does it Save Money?

Improve recognition and diagnosis

Improve education, support and resources of caregiver

Improve quality of medical care

Improve use and coordination of community resources

Decrease Caregiver Stress

Decrease Neuropsychiatric Symptoms

Decrease Rate of Cognitive Decline

Decrease rate of Functional Decline

Decrease Hospitalization

Decrease Nursing Home Care

Decrease Health Care Costs

Improve patient's quality of life

Mittelman et al. JAMA 1996; Neurology 2006
Callahan et al. JAMA 2006; Vickrey et al. Ann Intern Med. 2006

Then What Does It Cost?

- Screening and diagnosis program
  - $130 per patient screened; $4,000 per patient diagnosed
- Advanced practice nurse care manager
  - $1000 per patient per year for panel of 60-80 patients
  - $150 per patient per year for primary care and specialty MDs
- Office space within primary care practice, longitudinal tracking system, clinic-based support group
- $500-$2000 per patient per year

Boustani et al. JGIM 2005
Callahan et al. JAMA 2006

Are There Potential Cost Offsets?

- 1 point improvement in NPI score = $250-$400 saved* or about ~$2500 "saved" by collaborative care

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- Nursing home care ~$5000 per month
- Atypical antipsychotics cost ~$1000 per year
- PEG tube feeding ~$15,000 per year**
- Episode of delirium ~$15,000 per episode†
- Head MRI ~$1000; functional imaging ~$2000

* Murman et al. Pharmacoeconomics 2005; ** Callahan et al. JAGS 2001
† Leslie et al. Arch Intern Med 2008

Future Research

- Interventions to more aggressively coordinate:
  - medical and psychosocial care
  - care across sites of care including hospital, ambulatory care, nursing facilities, assisted living, acute rehab, home health care, and family caregiving
- Interventions that directly target reduction in acute care and long-term care
- Interventions that directly target inappropriate care
- Earlier entry to end-of-life care paradigm