Clinical Applications in Daily Practice and Models of Care

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Overview

- Natural history and complications of dementia
- Managing the disease and the patient
- Models of comprehensive care
  - Based in the community
  - Based in health systems
- Thinking broadly: a population approach

Natural History and Complications of Dementia

- Progression of cognitive decline
  - 3-4 points on MMSE/year
- Non-cognitive symptoms
  - Psychotic symptoms (20%)
  - Depressive symptoms (40%)
  - Agitation or aggression (80%)
- AD survival after symptom onset 3-12 yrs; other dementias have worse survival

Stages of Dementia

Mild Dementia (MMSE 21-25)

Functional impairments	• Managing finances • Driving • Managing medications
Cognitive changes	• Decreased insight • Short term memory deficits • Poor judgment
Behavioral issues	• Social withdrawal • Mood changes: apathy/depression
Complications	• Poor financial decisions • AEs due to medication errors

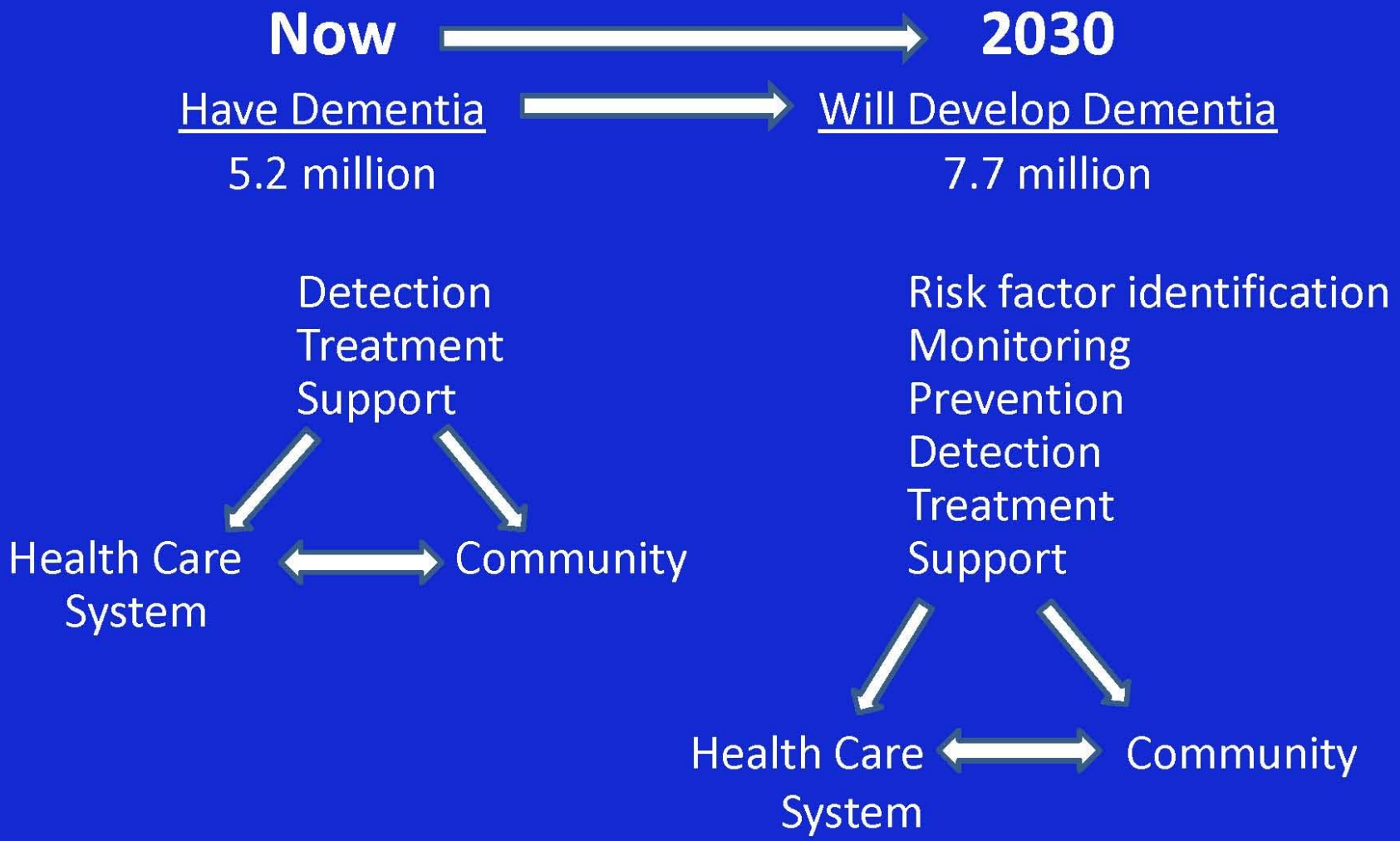
Moderate Dementia (MMSE 11-20)

Functional impairments	• IADL • Difficulty with some ADLs • Gait and balance
Cognitive changes	• Disoriented to date and place • Worse memory • Getting lost in familiar areas • Repeating questions
Behavioral issues	• Delusions/ Agitation/Aggression • Apathy/depression • Restlessness/anxiety/wandering
Complications	• Inability to remain at home/ALF • Falls

Severe Dementia (MMSE 0-10)

Functional impairments	• ADLs including continence • Mobility • Swallowing
Cognitive changes	• Little or unintelligible verbal output • Loss of remote memory • Inability to recognize family/friends
Behavioral issues	• Motor or verbal agitation/aggression • Apathy/depression • Sundowning
Complications	• Pressure sores • Contractures • Aspiration/pneumonia

Alzheimer's Disease:
A Two-Phase Strategy



Management

- Manage the disease
  - Cholinesterase inhibitors
  - Memantine
- Manage the patient
  - This is a lifelong disease
  - Play the ball where it lies
    - If disease is early, include patient
    - If late, rely on family and caregiver
  - Aim for the highest level of independence that works for everyone
  - Caregiver support

Caregiver Support

- Caregivers are the most important resource a demented patient has
- Over 50% develop depression
- The more knowledgeable and more empowered the caregiver is, the better care the patient will receive
- Caregiver resources are available
  - Alzheimer's Association and other community resources
  - Specific programs (e.g., REACH, NYU CI, Savvy Caregiver, Partnering With Your Doctor)

Evidence Behind Caregiver Support

- 200 interventions tested in RCTs
  - Care coordination
  - Behavioral management
  - Skills training
  - Counseling/psychotherapy
- Various interventions improve (small-med):
  - Knowledge
  - Well being
  - Confidence/self-efficacy
  - Time to institutionalization
  - Behavioral Symptoms

Caregiver Support

- Barriers and limitations
  - Focus only on the caregiver
  - Tested using traditional research not pragmatic designs
  - Cost ($2.50-$5/day for 6 months) and reimbursement
  - Poor integration with health care systems

Manage the Patient

- Manage hot-button issues (e.g., driving, living alone)
- Manage symptoms
  - Behavioral therapies
    - https://www.uclahealth.org/dementia/caregiver-education-videos
  - Drug management of complications
- Advanced care planning
- Manage co-morbidities

Manage Co-morbidities

- Dementia-related
  - Falls
  - Incontinence
  - Aspiration pneumonia
  - Immobility
  - Pressure sores
- Not dementia-related
  - All the diseases associated with aging
  - Complicated by dementia-influenced adherence, competing priorities, prognosis

New Models of Comprehensive Care for Dementia

- Focus on patient and caregiver
- Community-based
  - BRI Care Consultation
  - MIND at Home
- Health System-based
  - Healthy Aging Brain Center (HABC): Indiana University
  - The UCLA Alzheimer's and Dementia Care Program (UCLA ADC)

Community-based

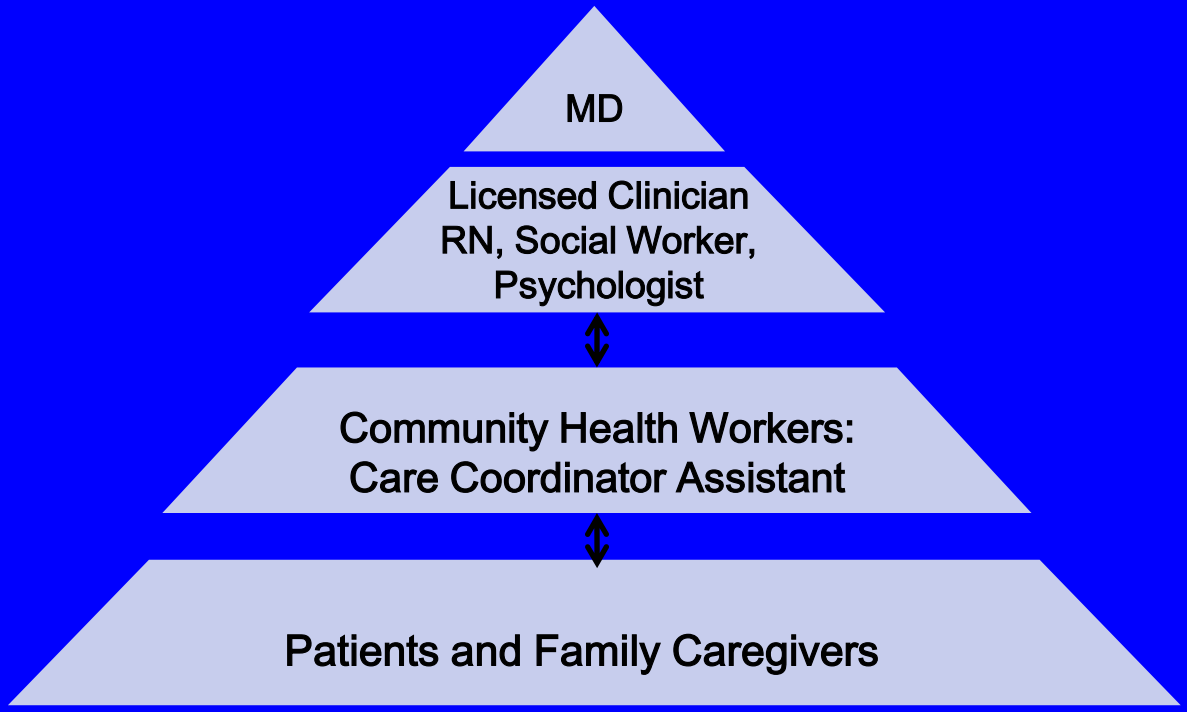
- Implemented at CBOs by SWs, RNs, MFTs
  - Systematic assessment
  - Care planning
  - Delivery or referral care, services, and support
- Reduce caregiver burden/strain/depression
- Better guideline care, QoL, behaviors
- Reduce NH placement
- No effect on health care use or costs

Healthy Aging Brain Center (HABC): Indiana University

- Care management services focused on improving self-management, problem solving and coping skills

1. Patient and family education and counseling
2. Data collection via standardized tools
3. Coordination of care transitions across multiple settings
4. Design and delivery of person-centered, non-pharmacological interventions
5. Modification of physical and social environment
6. Engagement of palliative/hospice care as appropriate

HABC: Multidisciplinary Care Team:



Non-licensed Care Coordinator Assistants are the primary liaison between the care team, our patients and their informal caregivers.

- Conduct visits anywhere in the community convenient to the patient and their informal caregivers
- Care is delivered through a variety of mechanisms including in person, phone and email

HABC Health Utilization

Acute Care Utilization	ABC	PCC
% patients with at least one ER visit	28%	49%
Total number of ER visits	124	1143
% patients with at least one hospitalization	13%	26%
Total number of hospitalizations	45	438
Mean/Median length of hospital stay	5 / 4	7 / 4

ABC; Aging Brain Care patients; PCC: primary care center patients

Boustani et al, Aging & Mental Health 2011

The UCLA Alzheimer's and Dementia Care Program (ADC)

- Approaches the patient and caregiver as a dyad; both need support
- Recognizes that this care is a long journey
- Provides comprehensive care based in the health system that reaches into the community
- Uses a co-management model with Nurse Practitioner Dementia Care Manager (DCM) who does not assume primary care of patient

UCLA ADC

- Works with physicians to care for patients by
  - Conducting in-person needs assessments
  - Developing and implementing individualized dementia care plans
  - Monitoring response and revising as needed
  - Providing access 24 hours/day, 365 days a year

UCLA ADC Partnerships with Community-based Organizations

- Direct services to patients and families
  - Adult day care
  - Counseling
  - Case management
  - Legal and financial advice
- Workforce development focusing on training family and caregivers
- Paid for using voucher system

UCLA ADC Benefits

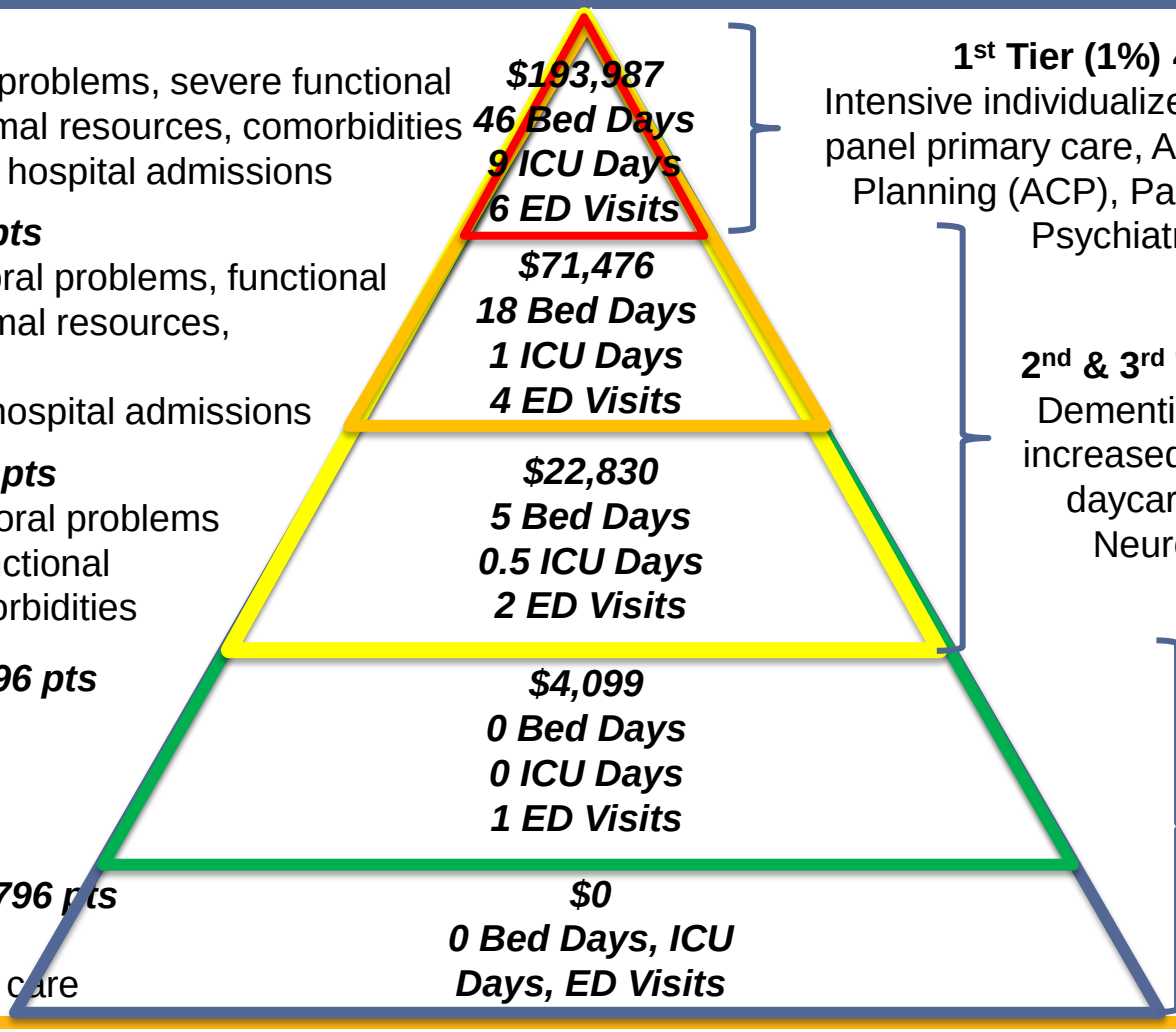
- Reduced behavioral symptoms at 1 year
- Less patient depression at 1 and 2 years
- Reduced caregiver distress at 1 and 2 years
- Less caregiver depression at 1 and 2 years
- Long-term NH placements reduced by 37%
- Lower overall costs to Medicare: $2400/year

Thinking Broadly: Population-based Dementia Care

- Defined population (e.g., MA, ACO, MSSP)
- Analytics to characterize the population
- Tailored interventions to different strata
- Providing appropriate resources efficiently
- Monitoring for transitions in strata and changes in needs

A Model for Dementia Risk Stratification

Risk Stratification	Total # & Yearly Avg. Utilization By Risk Tier	Dementia Plan of Care
1st Tier (1%) *45 pts* • Many behavioral problems, severe functional impairment, minimal resources, comorbidities • Frequent ED and hospital admissions	***$193,987*** ***46 Bed Days*** ***9 ICU Days*** ***6 ED Visits***	**1st Tier (1%) 45 pts** Intensive individualized care, small-panel primary care, Advanced Care Planning (ACP), Palliative Care, Psychiatry
2nd Tier (2-5%) *180 pts* • Frequent behavioral problems, functional impairment, minimal resources, comorbidities • Multiple ED and hospital admissions	***$71,476*** ***18 Bed Days*** ***1 ICU Days*** ***4 ED Visits***	**2nd & 3rd Tier (2-20%) 853 pts** Dementia Care program and increased social services (e.g. daycare programs), ACP, Neurology, Psychiatry
3rd Tier (6-20%) *673 pts* • May have behavioral problems and/or severe functional impairment, comorbidities	***$22,830*** ***5 Bed Days*** ***0.5 ICU Days*** ***2 ED Visits***	
4th Tier (21-60%) *1796 pts* • Mild dementia • Getting routine health care	***$4,099*** ***0 Bed Days*** ***0 ICU Days*** ***1 ED Visits***	**4th & 5th Tier (21-100%) 3,592 pts** Caregiver education, monitoring and usual care
5th Tier (61-100%) *1796 pts* • Mild dementia • Getting no health care	***$0*** ***0 Bed Days, ICU Days, ED Visits***	



Dementia population as of Jan 2018
Utilization: Feb 2017-Jan 2018

Conclusions

- The clinical implications of dementia affect most specialties
- Non-pharmacologic care remains the mainstay of dementia care
- The early generations of new models have demonstrated some effectiveness
- Research opportunities abound