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

Now

Have Dementia 5.2 million

Detection
Treatment
Support

Health Care System

Community

2030

Will Develop Dementia 7.7 million

Risk factor identification
Monitoring
Prevention
Detection
Treatment
Support

Health Care System

Community
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
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

% patients with at least one ER visit

Total number of ER visits

% patients with at least one hospitalization

Total number of hospitalizations

Mean/Median length of hospital stay

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

**1st Tier (1%) 45 pts**
- Many behavioral problems, severe functional impairment, minimal resources, comorbidities
- Frequent ED and hospital admissions

**2nd Tier (2-5%) 180 pts**
- Frequent behavioral problems, functional impairment, minimal resources, comorbidities
- Multiple ED and hospital admissions

**3rd Tier (6-20%) 673 pts**
- May have behavioral problems and/or severe functional impairment, comorbidities

**4th Tier (21-60%) 1796 pts**
- Mild dementia
- Getting routine health care

**5th Tier (61-100%) 1796 pts**
- Mild dementia
- Getting no health care

### Total # & Yearly Avg. Utilization By Risk Tier

**1st Tier (1%) 45 pts**
- $193,987
- 46 Bed Days
- 9 ICU Days
- 6 ED Visits

**2nd & 3rd Tier (2-20%) 853 pts**
- $71,476
- 18 Bed Days
- 1 ICU Days
- 4 ED Visits

**4th & 5th Tier (21-100%) 3,592 pts**
- $4,099
- 0 Bed Days
- 0 ICU Days
- 1 ED Visits

### Dementia Plan of Care

**1st Tier (1%) 45 pts**
- Intensive individualized care, small-panel primary care, Advanced Care Planning (ACP), Palliative Care, Psychiatry

**2nd & 3rd Tier (2-20%) 853 pts**
- Dementia Care program and increased social services (e.g. daycare programs), ACP, Neurology, Psychiatry

**4th & 5th Tier (21-100%) 3,592 pts**
- Caregiver education, monitoring and usual care

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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