AGING THROUGH A PANDEMIC:

Impact of Social Isolation and use of Telemed in Geriatric Patients

William B. Orr, PhD, MD, DFAPA

Orr Memory and Geriatric Behavioral Clinic,

Mendota Heights, MN

Med.Dir., Senior Behavioral Unit, Mille Lacs Med. Ctr., Onamia, and Lakewood Geriatric Behavioral Unit, Staples, MN

- Dr. Orr Conflicts of Interest
  - None

- There will be discussion of “off label” use of medications.
  - Any off label use of a medication will be identified during discussion
  - Generic names of medications will be used

Learning Objectives:

1. Provide overview of differential effects of COVID pandemic on elderly, including increased susceptibility of illness, death, and social isolation.
2. Review barriers to health care and telemedicine in elderly mental health patients during increased utilization of telemedicine and rationed health care.
3. Discuss methods and strategies for successful utilization of telemedicine in elderly with cognitive and sensory impairment.
4. Describe changes in mental health care in the elderly, including coordination with primary care, families, and facilities.

RISKS of COVID-19 and AGE

Patient Age

	5-17	18-29	30-39	40-49	50-64	65-74	75-84	≥ 85
#Cases	Ref grp	3x	2x	2x	2x	2x	2x	2x
Hosp.	Ref grp	7x	10x	15x	25x	35x	55x	80x
Death	Ref grp	15x	45x	130x	400x	1100x	2800x	7900x

Elderly far more likely to be hospitalized and die.

www.cdc.gov/coronovirus

Data published 2/18/2021

Effects of COVID-19 on Elderly

- Social Isolation
- Mobility and sensory impairments create barriers to love ones
- Barriers to healthcare visits
- Residents aware of risks of mortality/morbidity
- Residents feel guilt/blame for economic loss
- Depression/anxiety
- Delirium/cognitive loss

Difficulty Diagnosing COVID-19 in Elderly

- Per 1,000 COVID positive < 50 y/o → almost none die.
- Per 1,000 COVID positive ≥ 70 y/o → 116 will die.
- Elderly males 2x as likely to die from COVID
- 60 y/o 50x more fatal than driving a car; delays in diagnosis

Nature, 585 16-17 (2020); doi.org/10.1038/d41586-020-02483-2

- Elderly hospitalized with COVID have increased mortality associated with fever, dyspnea, inflammation, and **delirium**
- COVID delirium independent risk factor for cognitive changes at discharge

Knopp et al. Eur Geriatic Med 2020 Dec; 11(6): 1089-1094

COVID-19 AND DELIRIUM

- Delirium major presentation of elderly w/ COVID
  - 817 pts at Mass Gen Hosp, 28% ≥ 65 y/o
  - 16% no fever, no SOB – **only confusion**
  - 26% NH or ALF; 30% already w/ dementia/cog impair
  - Highest risk: on psychoactive med; h/o CVA or Park dz
- Delirium ⟷ Dementia
  - Inouye: 70% recover, 30% spiral into cog decline
  - Single episode delirium; increased risk of dementia
  - Incidence delirium: No COVID=31.8%; COVID=55%

JAMA Netwopen 2020; 3(1): e2029540. doi: 10.1001/jamanetworkopen. 2020.29540

Management of Delirium

- Theories of etiology:
  - Neurotransmitter “imbalance”/disinhibition:
    - Ach/DA, Glut/GABA
  - Inflammatory/immune (e.g., “cytokine storm”)
- Minimize use of psychoactive meds/opiates
- Mobilization/minimize sedation
- One-to-one (e.g., families/caregivers)
  - H.E.L.P. program/Vanderbilt

COVID-19: Progression of Symptoms in Elderly

- Experts lobby CDC: add delirium to list of COVID symptoms
- Concern over long-term effects of COVID on elderly survivors: increased rate of dementia?
  - Increased delirium; long-haulers
- Increased rates depression/anxiety
  - Altered immune systems
  - Increased frailty

FRAILTY SYNDROME

- Common geriatric syndrome characterized by age-associated decline in physical reserve and function across multiple organ systems
- Leads to increased vulnerability and adverse health outcomes
- Pathology: chr inflamm → muscle, endocr, neuronal/CNS
- "Frailty phenotype" model (need 3 of 5 criteria)
  - Weakness, slowness, low-level phys activity, self-reported exhaustion, unintended wt loss
- "Frailty Index" (FI) used to assess risks:
  - Surgery, C-V disease, CA, immunodef., **vaccine effectiveness**

Ahmed et al. Am J Med 120(9), 748-753, 2007
Chen et al. Clin Intev Aging, 2014(9); 433-441, 2014

Frailty and Physical/Mental Vulnerability

Age-related Decline

- Weakness
- Fatigue
- Anorexia/wt loss
- Malnutrition
- Loss of muscle mass
- Decreased balance/gait
- Severe deconditioning

Outcome of Frailty

- Falls
- Injuries
- Acute illness
- Hospitalization
- Disability
- Cognitive decline
- Dependency
- Isolation/Institutionalization
- Death

Sternberg et al. J Am Geriatr Soc 2011; 59, 2129
Robertson et al. J Am Geriatr Soc 2014; 62, 2118

Effects of COVID on Long-Term Care Facilities

- Residents faced with forced isolation
- Staff shortages and stress
- No family help
- Increased risk of illness and death
- Decreased access to health care

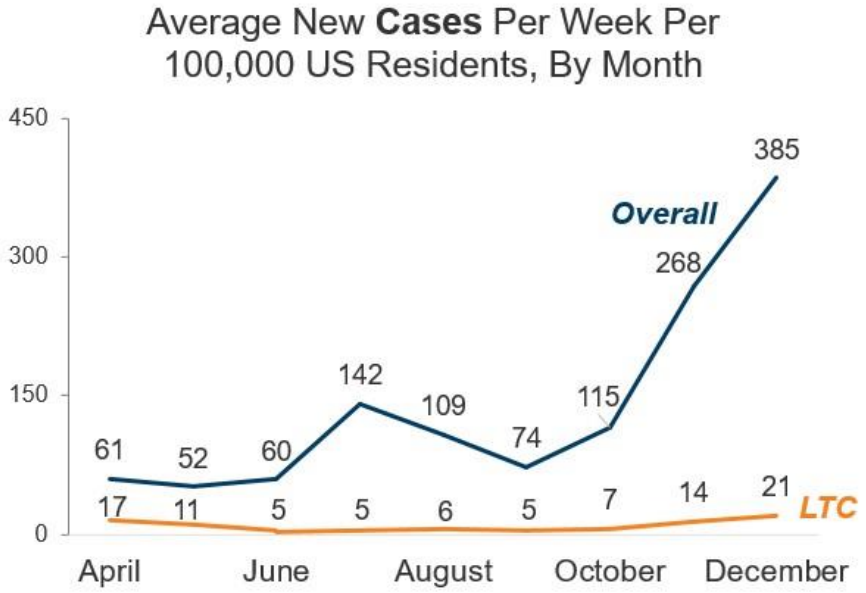
Families and Staff Provide:

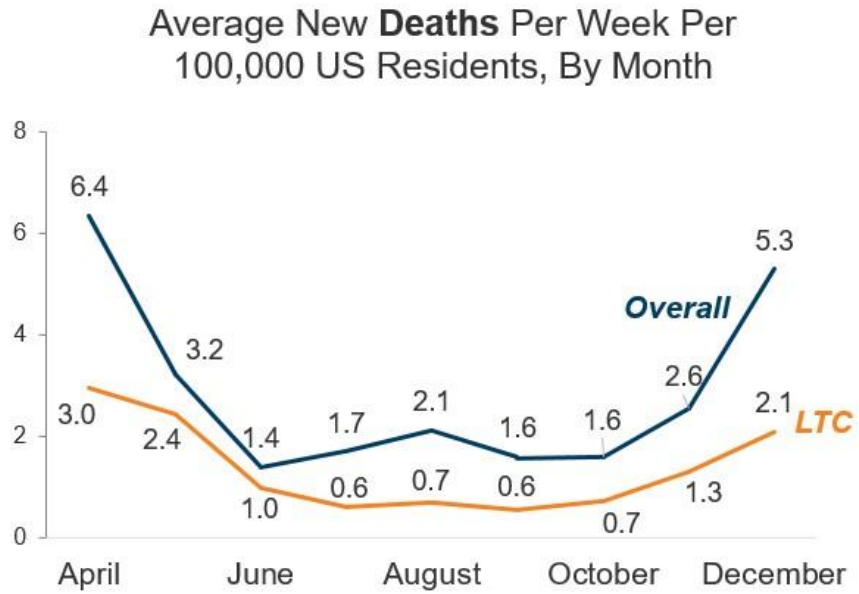
- Key to identification of cognitive impairment and depression
- Help with evaluation/telemed
- Help with caregiving and environment

COVID: Community vs LTCF

Figure 3

COVID-19 Cases and Deaths in Long-Term Care Facilities Compared to Overall COVID-19 Cases and Deaths





NOTES: Data for both LTC and National calculations include only data from states in which LTC data is available. Data is current as of the week of December 27th, 2020. See methods for more details on how these values were calculated. Population data is from 2019 US Census Bureau Estimates. US New Weekly Cases and Deaths data is based on analysis of COVID Tracking Project cases and deaths data.

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Impact of COVID and Enforced Isolation in LTC

- Manca et al. 2020 reviewed 15 studies:
  - 8 focused on psych sxs caused by COVID infection
  - 7 focused on impact of social isolation
  - 4 studies w/out dementia; 11 w/ dementia
  - All studies found worsening neuropsych sxs in elderly w/ and w/o dementia
  - Most common: delirium, agitation, apathy
- Simonetti et al. (2020) PubMed search studies reporting alterations in behavior triggered by protracted isolation
  - Apathy, anxiety, agitation
  - Rx: caregiver support, presence skilled staff, adjust tech support of pt needs

Manca et al. (2020) Front Psych 11:585540. doi:10.3389/fpsyt.2020.585540
Simonetti et al. (2020) Front Pysch 11:579842. doi:10.3389/fpsyt.2020.579842

Telemed and Geriatric Medicine

- Telemedicine has been in use >20 years
- CMS increased recognition/ added CPT codes 2020
- Research shows use practical, economical, and high utility compared with in-person, including for geriatric patients:
  - Shown to be highly useful in remote/rural settings

    Brignell et al. Age and Ageing 36(4) (2007) , **doi.org/10.1093/ageing /afm045**
  - Shown to produce highly satisfactory to satisfactory results

    Narasimbar et al. Telemed and e-Health 23(6) (2017), **doi.org/10.1089/tmj.2016.0178**
- Tremendous increased of telemed during COVID:
  - Found to be comparable to in-person in geriatric patients

    Hau et al. J Med Syst 44: 108 (2020), **doi.org/10.1177/0891989701014002O2**

Telemedine in Geriatric Psychiatry

Advantages

- Access to patient
  - Specialists to out-state
  - No travel
- Safety
  - Mobility/falls
  - Infection control
- Participation of staff and caregivers
  - Direct reports
  - Observe interactions

Disadvantages

- Access to technology
  - Wifi service poor
  - Operator error/confusion
- Sensory impairments
  - Hearing/vision
- Missing parts of physical exam
- Challenges to cognitive eval

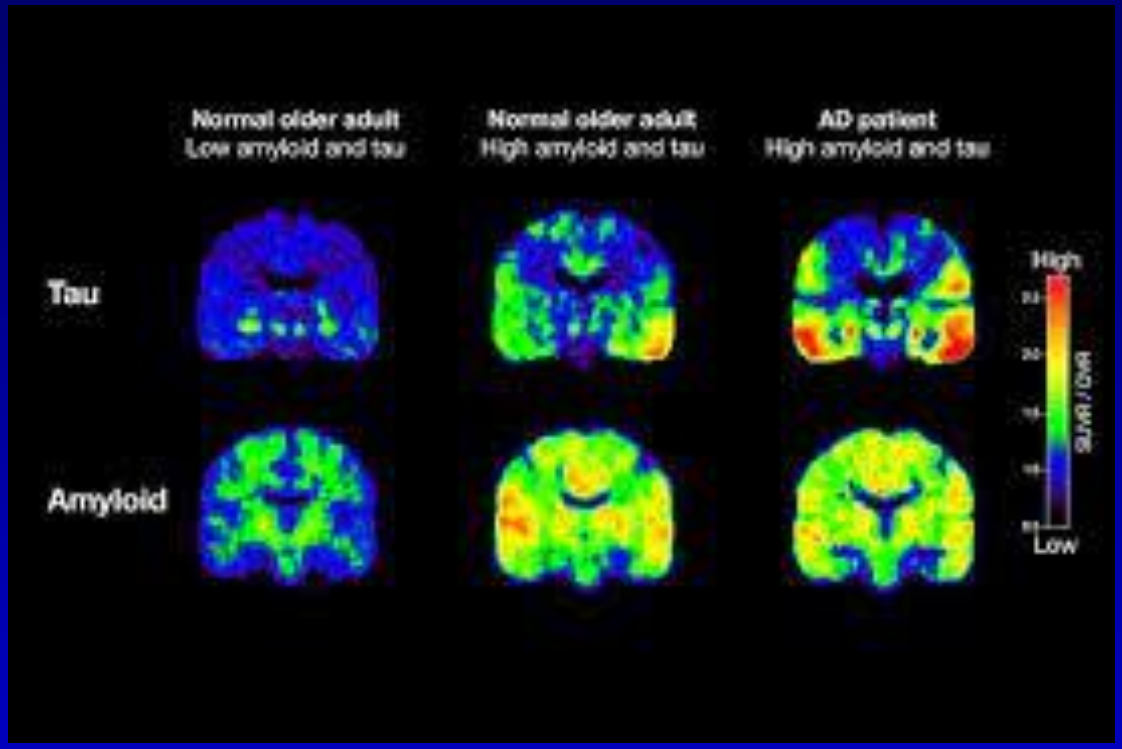
Telemedicine Recommendations

- Choose appropriate platform (HIPPA, simultaneous)
- Lighting; microphone and headset
- Practice connection ahead of first visit
- Designate co-participant who is with patient
  - Train co-participant: take prompts to repeat you/patient, not answer for patient; physically direct, e.g. ambulate, EPS
  - Must help patient with equipment and be present at all times if patient impaired or handicapped
- Be prepared with audio backup connection if video fails
- Use platform that allows group participants: families, caregivers, nurses, PCAs, etc.
- Obtain records/summaries prior to visits (e.g. MAR, behavioral summaries)

Cognitive Assessment and Care Planning (99438) Alz Assoc Expert Task Force

- Purpose: comprehensive cognitive assessment and plan for patients with suspected cognitive impairments (CoC)
- Performed by qualified health professional every 6 months
- Use to assess cognitive, behavioral, functional status
- Review safety issues
- Elements (can integrate with telemed):
  - Cognitive-focused exam
  - Medical decision making moderate or high complexity
  - Use standardized instruments: cognition, ADLs, behavior
- Key: provide written plan and resources to patient, caregivers
- **Send copies: PCP, therapists, LTC staff, families, etc.**

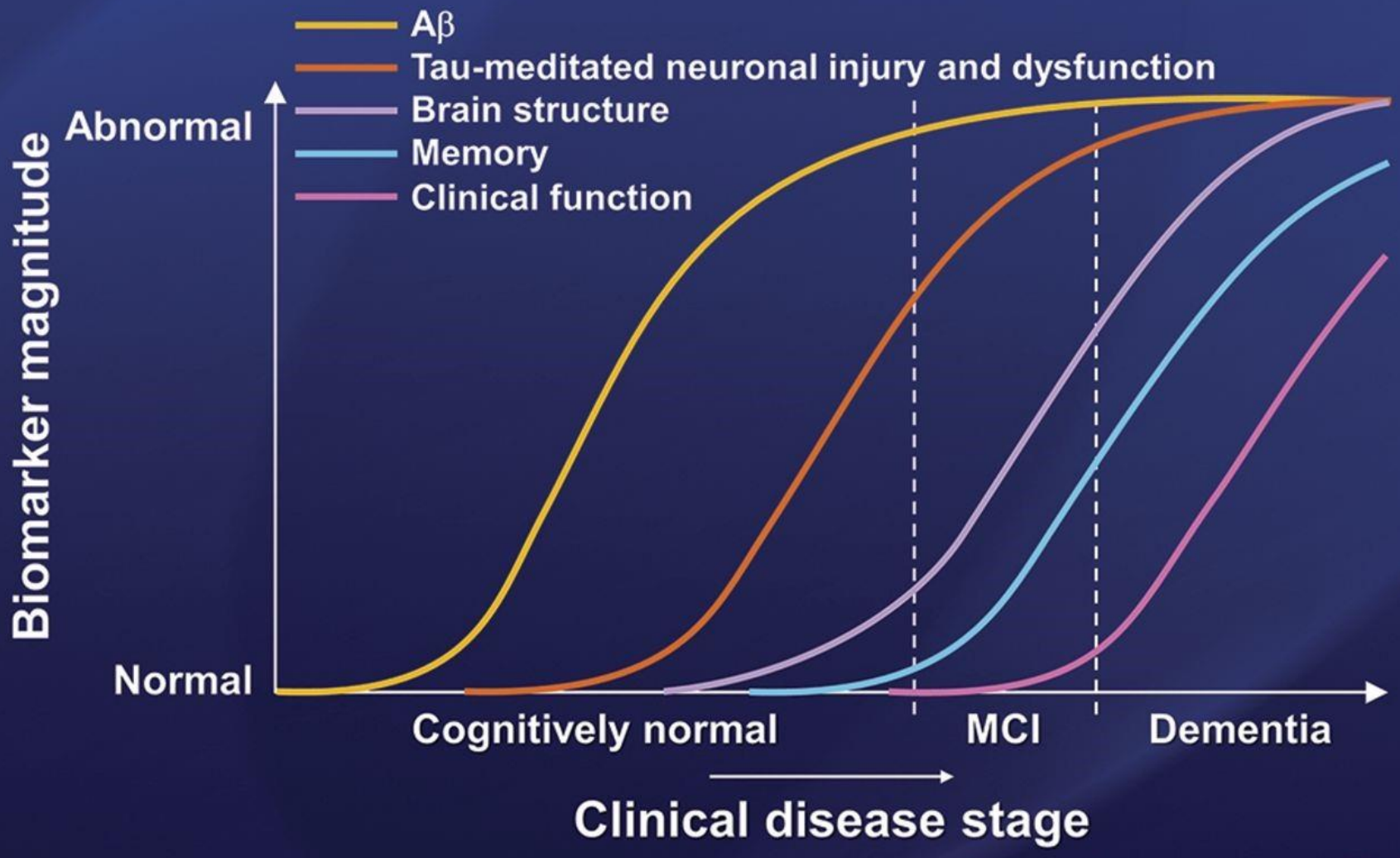
Advances in Dementia Detection



- PET imaging
- CSF
- Serum
- Genetic testing

Biomarkers now standard used to identify patients likely in earliest stage of Alzheimer's disease – before progression to dementia.

Hypothetical Model of Dynamic Biomarkers of the Alzheimer's Pathological Cascade



Jack et al: Lancet Neurol 2010

Diagnosis and Management of Dementia in Era of Pandemic

- Challenges with identification of sxs
  - Differential: dementia v delirium v depression
  - Must be innovative in obtaining family/LTC staff input and cooperation for diagnosis and treatment
- Challenges with access to patient
  - Utilize technology
  - Understand the additional stressors to patients, caregivers, and staff
- Challenges with treatment:
  - Always begin with nonpharmacological interventions
  - Requires management of environment and caregiving
  - Evaluating efficacy/side effects of medications

Advances in Treatments of Dementia and Dementia-Related Psychosis

- Emphasis on Modifiable Risks for Dementia
  - At least 30% reduced risk
  - Vascular injury, physical activity, sleep, diet, injury
  - Anti-inflammatory model/agents
- Dementia-Related Psychosis
  - Updated criteria from IPA
  - Pimavanserin – novel antipsychotic in phase III trials
- Anti-amyloid/anti-tau treatments
  - Aducanumab: seeking FDA approval 2021
  - Donanemab: Phase II, 76 weeks, slowed decline 32%

Summary

- COVID pandemic greatest negative impact on elderly
  - Social isolation, depression/anxiety, delirium/dementia
- Increased frailty, vulnerability, institutionalization
- Care in LTC facilities and staff stressed
- Utilization of telemedicine more important than ever; use to coordinate with facilities and PCP
- Hope on horizon for better treatments of dementia and dementia related neuropsychiatric symptoms
- On lookout for long-term/latent cognitive effects of COVID-19