# Decision Making Capacity Assessment Professional Training Program

Class 2 – October 15, 2025

**Aging Care Consultation Services**
Karin Taifour, MA LMHC GMHS
206.999.5934
Karin@AgingCareConsult.com

Elder Education Institute

SOUND generations

## Agenda

- Morning: capacity specific
  - Cognition
  - Impact of neurocog change, mental health, and other factors on cognition/DM
- Afternoon: work process
  - Consent/assent
  - Factors involved
  - Assessment approaches
  - Less restrictive alternatives
  - Supported decision making

| Time | Topic |
|---|---|
| 830a | Agenda, discussion from Class 1, polls |
| 840a | Breakout rooms: brainstorm impacts on DMC |
| 855a | Groups report back, discussion |
| 905a | Guest Speaker: Randy Routh |
| 925a | Areas of cognition and executive functioning |
| 940a | BREAK |
| 955a | Impacts on cognition and DMC: neurocognitive |
| 1050a | BREAK |
| 1105a | Impacts on cognition and DMC: mental health |
| 12noon | BREAK FOR LUNCH |
| 100p | Questions/thoughts from morning, afternoon agenda |
| 110p | Impacts on cognition and DMC: other factors |
| 140p | Case studies in breakout rooms |
| 200p | BREAK |
| 215p | Groups report back, discuss |
| 230p | Doing the work: consent/assent<br>Systemic, logistical, social/cultural, ethical factors |
| 310p | BREAK |
| 325p | Assessment approaches; collateral information<br>Less restrictive alternatives; supported decision making |
| 400p | Issues you've faced, questions/discussion |
| 425p | Recap, resources provided, events |

## Polls:

1. How much do you feel like you know about cognition and dementia?
   *very little–some–moderate–quite a bit–expert*

2. How much do you feel like you know about how cognitive impairment relates to the process of making decisions?
   *very little–some–moderate–quite a bit–expert*

## Brainstorm in breakout rooms

What kinds of things impact cognition as related to decision making?

Room 1: Brain (neuro/psych) related
Room 2: Other medical related
Room 3: Other non-medical

## Guest speaker: Randy Routh

Ohana & Amigos LLC: https://ohana-amigos.com
American Association of Daily Money Managers: https://secure.aadmm.com/

Randy is a Daily Money Manager working from Bothell, WA as Ohana & Amigos LLC. He is a member of the American Association of Daily Money Managers, a national profession society whose members fill a variety of personal financial needs for clients and small businesses.

Many of Randy's clients are seniors or special needs individuals who require some extra assistance with many of the "kitchen table" tasks and strategies to keep their finances safe from neglect or fraud. Depending on the situation, Randy works closely with family or various social service agencies to help keep clients secure.

Randy developed an interest in this work as he navigated supporting aging parents as well as his daughter who has a significant autism disorder. His previous career stops included CEO of the American arm of an Italian manufacturer and managing partner of a wholesale/retail consultancy. He formed his business standards while working his formative years at Nordstrom, which instilled a "client first" attitude and an insistence on integrity.

## Cognition and capacity

- Areas of cognition and executive functioning
- Cognition in tasks of decision making
- Relationship between cognition, memory, capacity

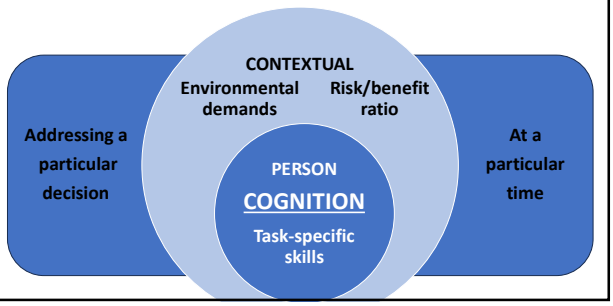
## Capacity vs cognition

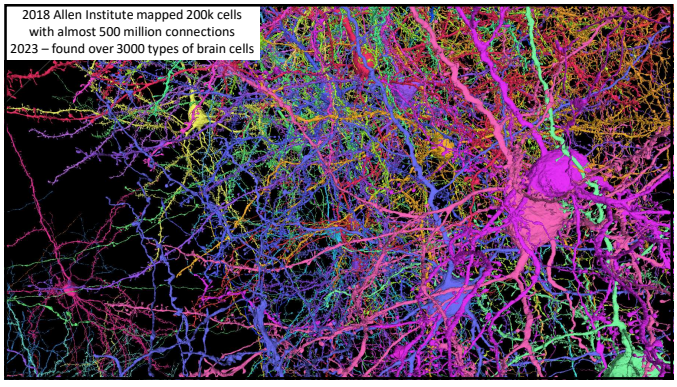
*(Marson & Ingram; Moye & Marson)*

- **Capacity** is related to …but is not the same as **cognition**:
  - a continuum of decision making abilities
  - mental processes of learning, understanding, acquiring, and using knowledge

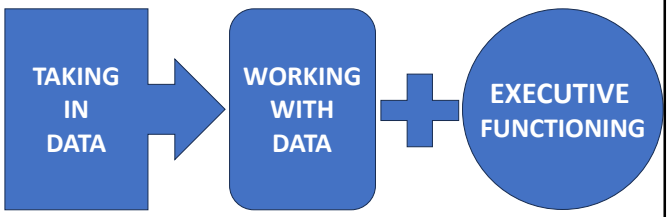
***So how does cognition relate to capacity?***

## Cognition is at the center of DMC questions



## Areas/aspects of cognition




## Taking data in

Alertness
Orientation

Sensation
Perception
Visual-spatial
Language: read, listen

Attention
Processing speed
Learning

## Working with data

- Short-term working memory
- Long-term retrieval
- Comprehension/knowledge
- Calculation
- Motor control
- Social cognition
- Creativity, imagination
- Judgment
- Insight
- Reasoning – fluid, logical, abstract
- Planning
- Problem solving

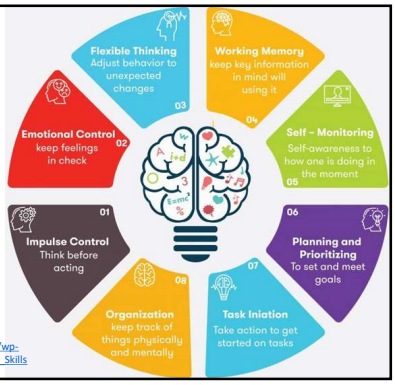
## Types of memory

- **Short-term:** taking in small pieces of info, using it for a brief period.
- **Long-term:** stored memory that is retrieved when needed – divided into procedural and declarative, then into episodic and semantic.

| | |
|---|---|
| **Procedural:** info used to perform or complete tasks that are done often, like paying a bill. | **Declarative:** facts and events such as a family member's birthday. |
| **Episodic:** contextual info from a specific experience, e.g. how they celebrated their last birthday. | **Semantic:** more general knowledge or factual based; learned subjects such as math. |

## Executive function

- A higher-level set of cognitive process that coordinate lower-level cognitive functions.
- Last to develop, first to decline: "Arrives late and leaves early"
- Filtering and prioritizing: What do I need to focus on to make this decision?




Source: https://sciences.ucf.edu/psychology/psychsociety/wp-content/uploads/sites/26/2022/03/Executive_Functioning_Skills_and_Strategies.pdf

## Executive functioning and cognitive processes

- Impulse control
- Emotional control
- Flexible thinking
- Working memory
- Self-monitoring
- Planning/prioritizing
- Task initiation
- Organization
- Abstract reasoning
- Inhibiting inappropriate responses
- Monitoring/managing time
- Recognizing a problem
- Foreseeing outcomes
- Evaluating the results
- Adapting to change

***Many happen subconsciously***

## APS view of executive functioning

**APS training cites Schillerstrom's definition of Executive Function:**

- The ability to plan, sequence, monitor, and inhibit complex goal-directed behavior;
- Involves judgment, insight, and problem solving; and
- Poor executive function is expressed behaviorally as lack of interest or disinhibition.

*(Schillerstrom, et al., 2013 – cited in APS TARC Capacity Screening in Adult Protective Services: Guidance and Resources).*

## Cognition – and DMC – can vary

- As a result of physical or mental stress.
- According to the complexity of the decision.
- From day to day.
- From morning to evening.

**Mornings:**
**BEST TIME**

**Evenings:**
**MORE IMPULSIVE**

## Related concepts to cognition and DM

- Cognitive load
- Decision fatigue
- Metamemory
- Cognitive reserve

## Cognitive load

## Subjective Cognitive Load Scale

inspired by Team Topologies — by Fabio Pereira and Jorge Galdino

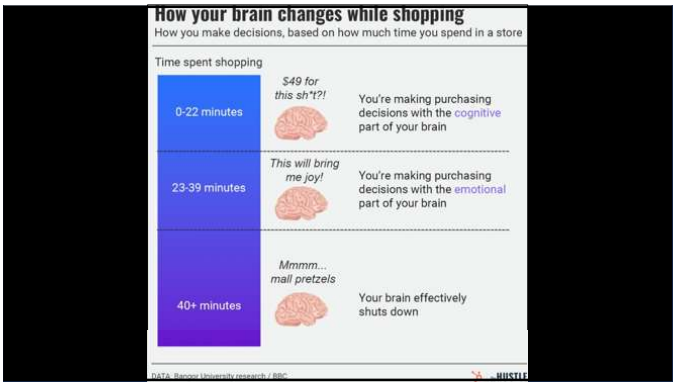

Source: https://openpracticelibrary.com/practice/cognitive-loadometer/

## Decision fatigue

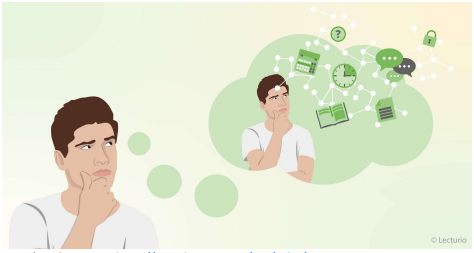
*"After a long day of making decisions… you just don't want to have to make any more decisions."*

- Dr Lisa MacLean *(Berg/AMA 2025)*


(Graphic source: https://blog.dropbox.com/topics/work-culture/workplace-tools-making-decision-fatigue-worse)




## Metamemory: thinking about how you think



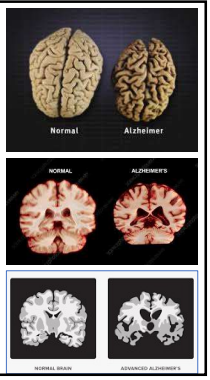
*Metamemory deficit in older adults is a potential indicator of impaired decision making.*

(graphic source: https://www.lecturio.com/inst/pulse/metacognition-do-you-really-know-what-you-think-you-know/ )

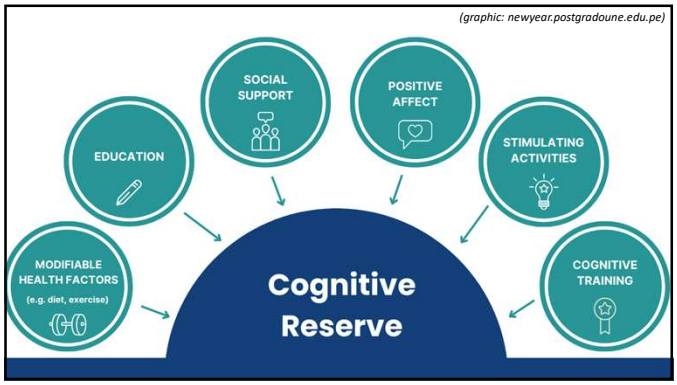
## Cognitive reserve

- Concept originated in the late 1980s
- Researchers studying autopsied brains that looked like advanced Alzheimer's, but from people who had no symptoms when alive.
- Thinking was they didn't have symptoms when alive because they had a large enough "cognitive reserve" to offset damage and continue to function as usual.

*(Harvard Health)*




*(graphic: newyear.postgradoune.edu.pe)*




## Cognitive reserve, continued

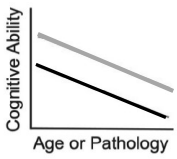
- Idea that if you take care of your brain over time by getting educated and staying active, you build its capacity to cope with changes as you age – more pathways to process information, which maintains thinking skills.
- Improved global cognition, executive functions, and attention.
- Protects against brain damage and dementia.
- Slows cognitive aging process.
- Reduces risk of psychiatric disorders.

"In the face of disruption caused by ageing or disease, some people's brains cope better than others."
- Dr Yaakov Stern of Columbia University *(from AgeUK 2022)*

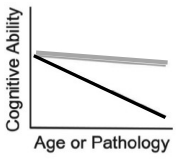
## Cognitive reserve and related concepts *(Kremen 2022)*

| | | |
|---|---|---|
| **Reserve** | Cognitive reserve | Total or overall cognitive resources |
| | Brain reserve | Total neural resources or neurobiological capital |
| **Maintenance** | Cognitive maintenance / maintaining cognitive reserve | Minimizing cognitive decline over time<br>Relative absence of deterioration over time in brain structure/function |
| **Resilience** | Cognitive resilience | Ability to maintain cognitive performance in face of adverse brain-related change |
| | Brain resilience | Brain structure/function better maintained given factors that risk/cause adverse brain change |
| | Resistance | Avoiding cognitive decline or brain pathology despite adverse factors |

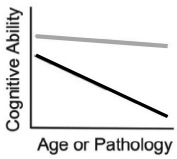
## How reserve/resilience plays out *(Kremen 2022)*




*Grey group has higher baseline cognitive reserve. Groups have same degree of resilience.*




*Groups have equal baseline cognitive reserve. Grey group has higher degree of resilience.*




*Grey group has higher baseline reserve and higher resilience.*

## Brain changes with age

- ↓ grey and white matter
- ↓ neurons
- ↓ neural connections
- ↓ brain volume
- ↓ ability to make new neural connections
- ↘ chemical reactions
- ↘ neurotransmitter production
- ↘ production of myelin

**Gray matter structure**
Superior frontal cortex
Middle frontal cortex
Superior parietal cortex

**Structural connectivity**
Superior white matter tracts
Anterior white matter tracts

**Functional connectivity**
Within-network connections

Susceptible to age-related degeneration

*(Source: Zamroziewicz 2017)*

## Physical health and the aging brain *(NIA/NIH)*

**Healthy brain/lifestyle behaviors:**

- ❑ physical activity,
- ❑ not smoking,
- ❑ not drinking heavily,
- ❑ following the Mediterranean-style diet, and
- ❑ engaging in mentally stimulating activities.

- 4-5 behaviors = 60% lower risk of Alzheimer's vs those with 0-1.
- 2-3 behaviors = 37% lower risk.
- Higher levels of physical activity = slower cognitive decline.

## So what's the secret?

- Verbal fluency correlates with longevity in old and very old age. *(Ghisletta)*


## Impact of aging on cognition

**Some things get better with age:**

- Vocabularies
- Knowledge/wisdom
- Meaning
- Learning and experiences

**Some things get worse:**

- Processing speed
- Reaction time
- Word finding
- Reasoning
- Name recall
- Multitasking
- Focus / attention

## Cognitive processes impacted by aging

- Less efficient at creating new memories so…
- Remembering yesterday is harder than longer term, ***and***
- It takes more time / effort to learn a new task. *(AgeUK)*

***Everyone's different –***

***influence of genes, lifestyle, and environmental factors***

## Executive function impacted by aging

- Working memory
- Processing speed
- Attentional control

- Slow down **starting in your 30s**
- Decline significantly beginning at age 60

*See handout: Conditions Associated with Executive Dysfunction*

## Executive function impacted by aging

- Executive functions depend on certain brain areas:
  - frontal lobes
  - prefrontal cortical regions
  - prefrontal-parietal networks
  - hippocampus

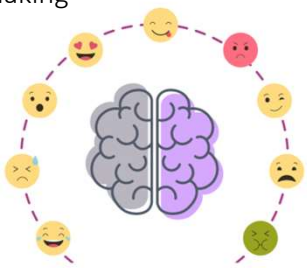
*Areas typically involved early in most dementias.*

- As these areas experience typical age-related changes, executive functions are impacted.

## Emotions and decision making

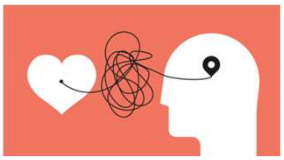
- Compared with younger adults, older adults use more emotional information when carrying out cognitive tasks.
- For younger adults, major focus of decision-making is "gain" – but focus changes to "prevent loss" in later life.

*(Samanez-Larkin 2015)*



*(graphic source: https://www.linkedin.com/pulse/when-emotions-prevent-you-from-making-right-decisions-enzo-artino/)*

## Emotions and decision making



*(graphic source: https://phchristian53.medium.com/deciding-with-your-head-vs-your-heart-9a832f1689b)*

- Older adults may be biased by stereotypes about memory in aging or beliefs about their own memory. *(Hertzog, Ryan)*
- This can cause lower confidence and use of different strategies, such as a greater reliance on (potentially misleading) external cues. *(Perman)*

## Decision making avoidance

*(Nolte & Lockenhoff)*

**Older adults are more likely to avoid making decisions than younger adults.**

- "avoid" = delay, evade, reject, or delegate to another decision maker, favoring passive decision making in a context when active DM would be possible. E.g. fail to act.
- They "respond to higher perceived demands with decreased willingness to engage in cognitively taxing tasks"
- Generally report less motivation for more effortful DM processes.

## Decision making avoidance

*(Nolte & Lockenhoff)*

- Cognitive factors: choice difficulty, cognitive effort involved in comparing options.
- Affective factors: emotional toll of making a decision, anticipated/feelings of regret.

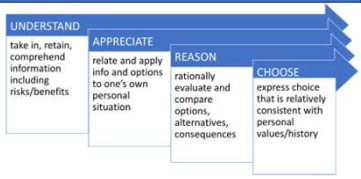
Lower levels of numeracy have been linked to more passive decision making patterns.

## Relationship between cognition and DMC

## Cognition and the decision making process

- What areas of cognition and executive functioning are involved at each step?

**DECISION MAKING CAPACITY**




**FUNCTIONAL ABILITY**

**Execute the communicated choice – carry out the stated decision.**

- Performance of the tasks involved.
- Ability to engage supports if/when needed to do so.
- Ability to adjust to change.

**SPECIFIC COGNITIVE TASKS LINKED TO DECISION MAKING STEPS**

| UNDERSTAND | APPRECIATE | REASON | CHOOSE |
|---|---|---|---|
| • Sensation<br>• Perception<br>• Alertness<br>• Orientation<br>• Concentration<br>• Processing speed<br>• Language: read, listen, naming<br>• Working memory, repetition<br>• Recall<br>• Episodic memory<br>• Visual recognition | ←*All of those, plus*<br>• Memory: working, episodic, retrieval, long-term memory<br>• Learning<br>• Comprehension/ knowledge<br>• Calculation<br>• Visual-spatial tasks<br>• Creativity, imagination<br>• Self-monitoring | ←*All of those, plus*<br>• Executive function<br>• Reasoning: fluid, logical, abstract<br>• Flexible thinking/ adjust to change<br>• Plan, prioritize<br>• Sequencing<br>• Impulse control<br>• Inhibition<br>• Emotional control<br>• Insight | ←*All of those, plus*<br>• Expressive language, writing<br>• Task initiation<br>• Organization<br>• Motor control<br>• Social cognition |

## Cognition and understanding

UNDERSTAND

| COGNITIVE TASK | IMPACTED BY (in additional to MCI/dementia) |
|---|---|
| Sensation | PTSD, psychosis, sensory impairment |
| Perception | Anxiety, PTSD, psychosis, sensory impairment |
| Alertness | Depression, psychosis, general aging |
| Orientation | Psychosis, loneliness |
| Attention | Depression, psychosis, general aging |
| Processing speed | General aging, depression, psychosis, sensory impairment |
| Language: read/listen, receptive | Depression, education, sensory impairment |
| Short-term working memory | General aging, depression, anxiety, PTSD, psychosis, loneliness |

## Cognition and appreciating

APPRECIATE

| COGNITIVE TASK | IMPACTED BY (in addition to MCI/dementia) |
|---|---|
| Memory, long-term retrieval | Depression, anxiety, psychosis<br>Loneliness, education |
| Learning | General aging (speed/effort), anxiety, education |
| Comprehension/knowledge | Education, life experience |
| Calculation | Education |
| Reasoning: fluid, logical, abstract | Depression, anxiety, psychosis, loneliness<br>General aging |
| Creativity, imagination | Depression, anxiety |
| Self- Monitoring | Depression, anxiety, psychosis |

## Cognition and reasoning

REASON

| COGNITIVE TASK | IMPACTED BY (in addition to MCI/dementia) |
|---|---|
| Visual-spatial | Psychosis, sensory/motor impairment |
| Reasoning: fluid, logical, abstract | Depression, anxiety, psychosis<br>General aging, loneliness |
| Problem solving | Depression, anxiety, psychosis |
| Flexible Thinking<br>Adjusting to change | Depression, anxiety, PTSD, psychosis<br>Psychosis, especially schizophrenia |
| Plan, prioritize, sequencing | Depression, anxiety, psychosis |
| Impulse control, inhibition | Depression, anxiety, PTSD, psychosis |
| Emotional control | General aging, depression, anxiety, PTSD |
| Insight | Depression, anxiety, psychosis |

## Cognition and choosing

CHOOSE

| COGNITIVE TASK | IMPACTED BY (in addition to MCI/dementia) |
|---|---|
| Expressive language, writing | Sensory/motor/communication disability |
| Task initiation | Depression, anxiety, psychosis |
| Organization | Depression, anxiety |
| Impulse control, inhibition | Depression, anxiety, PTSD, psychosis |
| Emotional control | General aging, depression, anxiety, PTSD |
| Insight | Depression, anxiety, psychosis |
| Motor control | Sensory/motor impairment |
| Social cognition | Psychosis |

## So...

- All of the cognitive tasks associated with each step of the decision making process can be impacted by many different factors.
- And functional capacity – carrying out the decision – involves all of these cognitive tasks and executive functions, which can be affected by all these factors as well.

## Look at a specific decision: doing a will


| *Capacity specific step* | Cognitive tasks |
|---|---|
| ***Understanding*** <br>• ***the act of making a Will, and*** <br>• ***its effects.*** | Semantic knowledge with regards to terms such as <br>• death, <br>• property, and <br>• Inheritance. |

## Look at a specific decision: doing a will


| *Capacity specific step* | Cognitive tasks |
|---|---|
| ***Understanding of*** <br>• ***the nature and*** <br>• ***extent of their property*** <br>• ***relevant to the disposition*** | • Long-term semantic and autobiographical memory related to assets. <br>• Short-term episodic and working memory for more recently acquired assets and property, or changes to the estate. <br>• Ability to form working estimates of assets. <br>• Comprehension of approximate value attached to one's estate. |

## Look at a specific decision: doing a will


| *Capacity specific step* | Cognitive tasks |
|---|---|
| • ***Evaluating claims of any who might expect to benefit.*** <br>• ***Appreciating the nature of any significant conflict.*** | • Historical and short-term episodic personal memory are required to recall nature of relationships with testator. <br>• Executive functions including planning and reasoning are required for distributing one's estate. |

## Look at a specific decision: doing a will


| *Capacity specific step* | Cognitive tasks |
|---|---|
| • ***Communicating clear, consistent rationale for plan*** | • Higher order executive functions such as judgement, reasoning, planning. |
| • ***Especially if any significant departure from prior Wills or expressed wishes*** | • Ability to connect one's beliefs and values to the disposition of assets.<br>• Language or ability to communicate choice and rationale. |

## Impact on cognition and DMC

| Neurocognitive Issues | Mental Health Issues | Other Issues and Factors |
|---|---|---|

- Delirium
- Mild cognitive impairment
- Dementia
- Subjective cognitive complaints

## Neurocog diagnostic complications

**Sharon K. Inouye, Harvard Med professor:**

- Cognitive impairment of any kind can affect each stage of diagnostic process.
- People with cognitive impairment may underreport or misreport their initial symptoms.
- These result in delay in seeking care or an accurate diagnosis.
- Very high rate of adverse drug reactions in older adults with cognitive impairment.
- Multimorbidity is often not fully considered.

*Together, all of this adds up to very high rates of diagnostic errors and worse clinical outcomes.*

*(NASEM)*

## Neurocognitive: delirium

- Delirium: up to 50% of hospitalized older adults
- Unrecognized approximately two-thirds of the time.
- See handout for more info
- Presentation:
  - Acute confused state
  - Disturbance in alertness, consciousness, perception and thinking
  - Sudden onset
- Can be caused by:
  - Infection, dehydration, chemical imbalance, head trauma, anesthesia, etc.

## Reversible cognitive impairment causes

- Drugs/substances
- Medication side effects
- Dehydration
- Mood/anxiety
- Electrolyte imbalances
- Emotional disorders
- Metabolic or endocrine disorders
- Nutritional deficiencies
- Trauma
- Tumor
- Infections
- Acute illness
- Arteriosclerosis complications
- Seizures
- Strokes
- Sensory deprivation

## Neurocog changes: dementia and MCI

**Dementia**

- Progressive decline in cognition and/or behavior caused by disease affecting the brain.
- Decline in **two or more** areas: memory, reasoning, language, visual perceptual processes, executive functions, social interpersonal behaviors, or personality.
- Interferes with customary activities and social relationships.

**Mild cognitive impairment (MCI)**

- Memory problems or decline in **one** area.

*About one-third of people living with MCI due to Alzheimer's disease develop dementia within five years.*

## Dementia lifetime risk – newer research

- After age 55 years: **42%**
- But 45-60% for women, Black adults and APOE carriers. *(Fang)*
- Number of people living with dementia will likely increase from 55 million in 2019 to 139 million by 2050. *(Nicholls)*

*"The relative growth in new dementia cases was especially pronounced for Black adults." (Fang)*

## For oldest-old, different risk profile *(Soleimani)*

- Age 90+ fastest growing demographic at highest dementia risk.
- Higher prevalence of mixed pathology dementia.
- Shift from known dementia risk factors in younger-old ages, such as hypertension, APOE genotype, hyperlipidemia, and elevated peripheral inflammatory markers – these appear to lose relevance in very late life.

## Dementia research is always advancing

**LATE, or Limbic-predominant Age-related TDP-43 Encephalopathy**

- Identified in 2019 – article in journal *Brain* in March 2022.
- Can be confused for Alzheimer's disease – also causes memory loss.
- But symptoms tend to progress slower than Alzheimer's.
- Completely different underlying pathology/cause.
- It only shows up in adults over 80 years old.
- **May occur in as many as 25% of adults over age 80.**

*"Science evolves and changes how we see disease and cognitive aging." – Jason Karlawish*

## Dementia and executive functioning *(Portley)*

- Research in Alzheimer's, ALS, and Frontal Temporal Dementia found cognitive performance can predict impaired decisional capacity.
- Decisional capacity is intrinsically related to executive function in these neurodegenerative disorders.
- Executive dysfunction is strongly correlated with disease severity and may predict a lack of decisional capacity, especially for informed consent.

*EF is good proxy, as neuropsych batteries are long and burdensome especially in people with cognitive and mobility/motor impairments.*

## Great quote

***"Just like dementia does not equal lack of capacity, people can lack capacity without dementia."***

*Laura Mosqueda*

## Dementia and COVID *(UK NHS, Ding)*

- Covid pandemic "had lasting impact" on cognitive function and working memory of people aged 50+ regardless of infection status.
- After having COVID-19, elders have significantly increased risk for new diagnosis of Alzheimer's disease within first year, especially in people age 85+ and in women.
- People with dementia were more likely to catch COVID.
- In people with existing dementia, COVID causes severe neurological complications – accelerates disease progression in all dementia types.

## Dementia and self-awareness/insight

- Some people may have shock and denial around a diagnosis that may impact their insight.
- **Anosognosia** is not denial, but an inability to recognize disease or deficits.

***Anosognosia***
- *60% of people with MCI*
- *80% of people with Alzheimer's*

## Dementia – impact of depression

- People with Alzheimer's disease and other dementias commonly experience depression: 37 to 41% *(Leung)*
- And they may be less likely to report it than someone without dementia.
- Suicide attempts may also increase in people recently diagnosed with dementia.
- Antidepressant medication has limited efficacy in treating depression that occurs in dementia. *(Costello)*

## Dementia – impact of psychotic symptoms

- 41% of people with major neurocog disorders experience hallucinations or psychotic symptoms. *(Tampi)*
- 20% of Parkinsons disease patients experience psychosis or hallucinations.
  - Risk likely influenced by PD duration and stage as well as cognitive status. *(Gkintoni)*

## Dementia – impact of psychotic symptoms

**For people with any dementia:**

- Psychotic symptoms linked to worse executive control and visuoperceptual deficits. *(Hopkins)*

**For people with Alzheimer's:**

- Psychosis linked to worse deficits in working memory and executive functioning, and to overall more severe cognitive decline.
- Presence of delusions or hallucinations associated with poorer clinical outcomes.
- Both together was worse than either alone. *(Murray)*

## Subjective cognitive complaints

- Person complains of cognitive impairment difficulties but they perform well enough on cognitive testing tools. It's possible they are aware of subtle changes not picked up in testing. *(Jessen)*
- One study showed subjective complaints predated MCI dx by 9 years. *(Kryscio)*

***However, may be unclear due to influence of mood disorders as well as anosognosia/lack of awareness in people who actually have cognitive impairments.***

## Subjective cognitive complaints

- Reported by 25% of people age 90+ in one study. *(Soleimani)*
- Reported by 28.1% in people age 85+ in an international study. *(Rohr)*
- Correlated with worse global cognition, executive function, and verbal episodic memory – but may be influenced by racial/cultural background. *(Soleimani)*

## Impact on cognition and DMC

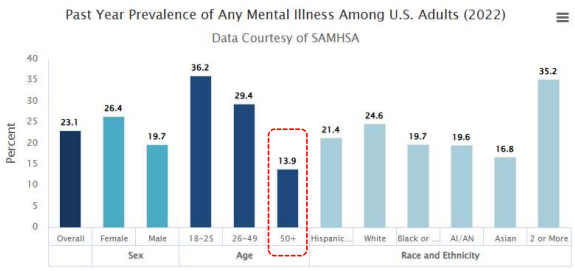
| Neurocognitive Issues | Mental Health Issues | Other Issues and Factors |
|---|---|---|

- Mood – depression, bipolar
- Anxiety and worry
- PTSD and stress
- Hoarding
- Psychosis – schizophrenia
- Delusions

## Aging and mental health stats *(WHO)*

- By 2030, one in six people in the world will be aged 60 years or over.
- Approximately 14% of adults aged 60 and over live with a mental disorder.
- Mental disorders among older adults account for 10.6% of the total years lived with disability for this age group.
- Globally, around a quarter of deaths from suicide (27.2%) are among people aged 60 or over.
- Loneliness and social isolation are key risk factors for mental health conditions in later life.
- One in six older adults experience abuse, often by their own carers. This has serious consequences and can lead to depression and anxiety.

## Mental illness rates in US: 23.1% in 2022



## Prevalence in older adults *(SAMHSA/WHO)*

- Depression (major depressive episode, 2021) 14%
- Anxiety (any anxiety disorder, 2003) 9%
- PTSD 1.0%
- Bipolar 0.7%
- OCD 0.5%
- Psychotic and other disorders 0.1 to 1.7%
- Delusional disorder 0.03 to 0.1%
- Substance use disorder 9.1%

***MOST UNTREATED***

***Less than half of older adults with mental health and/or substance use problems receive treatment***

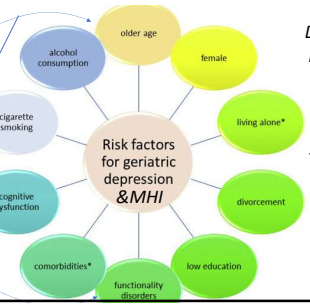
## Risk factors for mental health issues

*Impacts of earlier life experiences*

*Exposure to adversity*

*Aging/ageism*

*Physical/social environment challenges*




*Drop in income*
*Reduced sense of purpose*

*Loneliness*
*Social isolation*

*Bereavement*

*(Source: CR Martin)*

## Depression prevalence

- Depression in general older population 12-14%. *(NIMH)*
- Depression prevalence in people with MCI living in the community is almost double that, at 25%. *(Ismail)*
- Adults 55+ less likely to experience MDD than younger adults, but more likely to experience sub-threshold depressive symptoms. *(Biella)*

***Often undiagnosed or under-diagnosed in older adults***

## Depression, dementia intertwined *(Yin; Helvik)*

- Depressive symptoms appeared to be associated with poorer memory at baseline and contributed to faster memory loss over time.
- And in reverse, poorer memory seemed to be associated with greater depressive symptoms at baseline and greater change in depressive symptoms over time.
- Numerous studies have demonstrated that depression, particularly when persistent over time, is a well-established risk factor for cognitive decline and dementia.

## Impact of depression on cognition *(Niu)*

- Late-life depression (LLD): cognitive impairment appears earlier in depressed individuals.

| EARLY ONSET<br>first episode < 60yo | LATE-ONSET<br>first episode > 60yo |
|---|---|
| Lower global cognition at baseline (Ly) | More rapid decline in verbal skills and delayed recall (Ly)<br>Significantly greater decline in executive function (Loyal) |

## Depression and cognition

- Often undiagnosed or under-diagnosed in older adults
- Depressive symptoms can affect cognition and DMC:
  - Sleep disturbance
  - Loss of energy and/or loss of interest in usual activities
  - Sense of hopelessness, worthlessness or suicidal ideation

***Cognitive – and capacity – issues caused by depression can fluctuate and may be reversible with appropriate treatment***

## Depression impact on cognition

- Fluid intelligence and information processing significantly affected. *(Forbes)*
- Moderate deficits in executive function, attention and memory. *(Rock)*
- Impaired verbal fluency is common. *(Szymkowicz)*
- Deficits in executive function occur in nearly 40%. *(Alexopoulos)*
- Deficits in selective attention, working memory, and long-term memory persist even in remission from a major depressive episode. *(Forbes)*

## Depression and Hopelessness

- Hopelessness is a more severe level of depression – important to monitor, as it is repeatedly found to be associated with poor health outcomes. *(Do)*
- Baseline hopelessness showed a trend for faster decline in episodic memory. *(Soleimani)*
- Severity of hopelessness associated with worse executive function. *(Soleimani)*

## Bipolar disorders impact on cognition *(Forbes)*

- Cognitive impairments similar to those in depression are common, but progression of cognitive decline is not a general rule with bipolar disorders.
- However, people with bipolar disorders who experience a greater number of manic or hypomanic episodes may have more neurocognitive impairment.

## Depression and anxiety *(Chau; Persaud)*

- Depression and anxiety can contribute to impaired affective and executive control.
  - Supports resource allocation model, e.g. maladaptive thinking styles deplete available resources for goal-directed tasks.
- Anxiety superimposed on late life depression (LLD) results in greater changes to prefrontal and medial temporal brain regions compared to depression alone.

## Anxiety *(Gulpers)*

- Lifetime prevalence rates of anxiety disorders in older adults: 15%.
- 18.5% for subsyndromal anxiety complaints.

***In older adults, higher anxiety levels are associated with worse cognitive functioning and increased risk for dementia.***

## Anxiety impact on cognition *(de Vito, Pietrzak)*

**High scores on the GAD-7 (worse anxiety) associated with:**

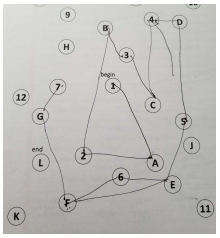
- Worse executive functioning
- Slower processing speed
- Higher odds of cognitive impairment.

**Sub-clinical "worry" reduced performance in several areas:**

- Executive functioning
- Episodic memory
- Learning and memory

## Specific anxiety impacts on cognition

- **Agoraphobia:** worse scores on all cognitive domains including executive functioning, higher odds of cognitive impairment.
- **Panic disorder:** significantly associated with worse memory.
- **Men with any anxiety symptoms:** more likely to have substantial worsening in Trails B completion time vs men with no baseline anxiety. *(Kassem)*




## PTSD and stress-related disorders

- Stress impacts cognitive flexibility and processing speed. *(Fang)*
- Cognitive flexibility is often dysfunctional in PTSD. *(Clancy; Disner)*
- Reduced cognitive flexibility shortly after stressful/traumatic event is predictive of PSTD symptom severity a full year later. *(Ben-Zion)*
- Stress exposure led to more disadvantageous and risky decisions than nonstress conditions. *(Starcke & Brand)*

## Hoarding

- Estimated prevalence of clinically significant symptoms: 2.0 to 5.3%. *(Makin)*
- Especially in elders: combination of self-control deficits and refusing to seek help can lead to acute illness and extreme self-neglect, suggesting a potential influence on capacity. *(Kim)*

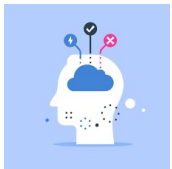
## Hoarding and cognitive functions *(Makin)*

- People with hoarding disorder:
  - commonly have traits of indecisiveness, difficulty with categorization, disorganization, and slowness in completing tasks,
  - often report difficulties with memory, concentration and attention.
- Higher incidence of cognitive impairment on measures of visual memory, visual detection, and visual categorization.
- Relative strengths on measures of verbal and visual abstract reasoning.

## Psychotic disorders

- 25% of people with schizophrenia age 55+ *(Golas)*
- Aging with these disorders: illness burden compounded by multiple medical comorbidities, loss of supports, and higher risk of institutionalization. *(Cohen).*
- Cognitive deficits are common, including attention, working memory, verbal learning and memory, and executive functions. *(Kalache; Lowenstein; Rajji)*

## Psychotic disorders and decision making



- Individuals with schizophrenia spectrum disorders (SSD) exhibit less adaption to changing information about risk, which may reflect risk imperception. *(Dong)*
- Disorganization may be related to overall decision making deficits – worse deficits cause further deviation from optimal decisions in a complex, dynamic risk-taking task.
- Difficulty in integrating information and adjusting decisions accordingly. *(Sterzer)*

## Psychosis plus dementia *(Gkintoni)*

- In people with psychotic diagnoses, dementia worsens symptoms like hallucinations and delusions.
- Co-occurrence of cognitive impairments with psychosis can worsen cognitive impairments, change disease progression, and affect therapy responses.

## Psychotic disorders

- Domains of cognitive impairment in schizophrenia: attention, memory, executive function, social cognition, and perceptual–motor function. *(Fang)*
- Cognitive remediation improved executive function, did not significantly impact global cognition or MOCA test score. *(Golas)*

**Neuromodulation for improving cognition in schizophrenia** *(Hung)*

| | |
|---|---|
| Repetitive transcranial magnetic stimulation (rTMS) | Working memory<br>Language function<br>Executive function<br>Social cognition |
| Transcranial direct current stimulation (tDCS) | Working memory<br>Attention<br>Social cognition |
| Transcranial alternating current stimulation (tACS) | Working memory<br>Processing speed |
| Electroconvulsive therapy (ECT) | General<br>(not specified) |

## Delusional disorders *(Rootes-Murdy)*

- Mean age of onset 40 years
- Women up to 3x more than men
- Women more erotomanic type – men more paranoid type
- Older adults, particularly women, are at a higher risk, possibly due to age-related brain changes and increased vulnerability to stressors.
- May be dopamine circuit disruptions causing mixup of salient and non-salient information, error processing deficits, and cognitive biases.

## Delusions impact on cognition *(Díaz-Caneja)*

| | |
|---|---|
| **Attention/ Memory:** | Sustained attention, encoding and retrieving info, ability to learn and remember new things. |
| **Executive Functions:** | Planning, problem-solving, managing daily tasks, adapting to changing situations. |
| **Social Cognition:** | Misunderstanding social cues, misinterpreting others' intentions, difficulty forming and maintaining relationships. |
| **Jumping to Conclusions:** | Tendency to draw conclusions prematurely based on limited information, which can further reinforce their delusional beliefs. |
| **Poor Insight:** | Unable to recognize that their beliefs are unrealistic or unfounded |

*"Symptom domain and verbal memory performance affect global functioning… above and beyond the severity of the paranoid idea"*

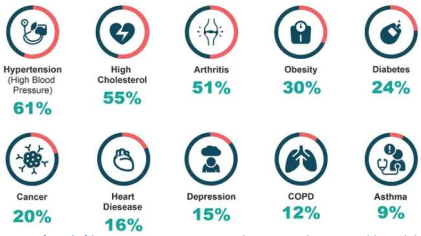
## Impact on cognition and DMC

| Neurocognitive Issues | Mental Health Issues | Other Issues and Factors |
|---|---|---|

- Medical
- Physical / mobility
- Environmental
- Literacy / language
- Social / cultural / spiritual
- Loneliness

## Medical conditions common in older adults

- 93% (age 65+) have at least one chronic condition
- 79% have two or more




*Graphic source: https://www.ncoa.org/article/the-top-10-most-common-chronic-conditions-in-older-adults/*

***Also see handout: Medical Conditions Affecting DMC***

## Medications in older adults - stats

*(Ruscin, CDC)*

- 90% regularly take at least 1 prescription medication.
- 43% take at least 5 different prescription meds.
- When over-the-counter and dietary supplements are included, these rates are even higher.
- Older adults who are frail, hospitalized, or in a nursing home take the most meds.
- Around 3.5% did not get or take meds due to cost.

## Meds impact on older adults

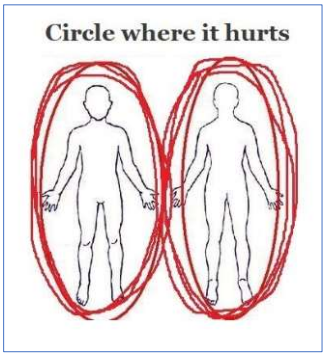
- Normal changes with aging affects how meds work:
  - Liver and kidneys less efficient
  - Meds can build up to high levels or stay in the body for too long.
  - Leads to side effects and even toxicity.
- 15-25% of Rx use in older adults in considered unnecessary or inappropriate. *(APS)*
- 28% of hospitalizations related to meds. *(APS)*

***Beers List:***

*American Geriatrics Society Beers Criteria for Potentially Inappropriate Medication Use in Older Adults*

## Pain

- CMS study found 78% of Medicare enrollees have chronic pain
  - 82% of women
  - 74% of men
- Impacts mobility, quality of life.
- Often co-occurs with symptoms of depression and anxiety.



## Physical/mobility factors *(Cao, Martins)*

- Mobility limitations and decline significantly correlate with cognitive decline.
- Cognitive impairment significantly linked to lower muscle strength, reduced functional mobility, reduced cardiorespiratory fitness.
- Environment, autonomy, and engagement in daily activities influence cognitive impairment.

## Environmental factors *(Baniassadi)*

- Indoor temperature range between 68°F and 75°F minimized cognitive issues.
- Deviations of 7°F or more in either direction doubled the likelihood of reported attention problems.

*"This research highlights the need for public health interventions and housing policies that prioritize climate resilience for older adults. As global temperatures rise, ensuring access to temperature-controlled environments will be crucial for protecting their cognitive well-being."*

-- Study author Amir Baniassadi PhD, Marcus Institute for Aging Research

## Literacy / language

- For non-native English speakers:
  - age / formal learning of English, or
  - access to qualified interpreters.
- Communication impairments: needed supports, devices, accommodations
- Reading comprehension
- Education level
- Financial literacy
- Health literacy

## Social / cultural / spiritual factors

"Traditional capacity assessment tools, developed primarily within Western medical paradigms, may not adequately capture the complexity of decision-making processes in diverse cultural contexts. Research indicates that cultural beliefs, values, and practices significantly influence how individuals understand illness, death, and medical decision-making."

*(Francis et al, 2025)*

## Spirituality and cognition

Spiritual well-being more positively related to cognitive flexibility in older adults than younger people. *(Halder)*

**Religious attendance by race:** *(Sauerteig-Rolston)*

- For Hispanic older adults, associated with a slower rate of cognitive decline.
- For non-Hispanic white older adults, associated with lower initial levels of cognitive function.
- No association for non-Hispanic Black respondents.

## Loneliness

- Distressing feeling that social needs unmet by quantity and particularly quality of one's social relationships – different from but may coincide with social isolation, a depressive episode, or both. Endorsed by 25% of older adults. *(Camacho)*
- Loneliness by itself, aside from other factors, raises dementia risk comparable to having a single APOE4 gene. *(Oken)*
- For every one-point increase in loneliness, the risk of developing dementia increased by 40%. *(Camacho)*

## Loneliness and cognitive impairment

- Bidirectional association between loneliness and memory function. *(Yin)*
- Loneliness may lead to lower cognitive functioning, particularly among people willing to disclose or recognize their feelings of loneliness – but atypical results among Latinos. *(Camacho)*
- Loneliness is associated with cognitive decline and volumetric reduction in the frontal white matter. *(Lee)*

## Work process topics – about doing this work

- Assessment visit(s)
  - Consent/assent
  - Factors related to assessment: systemic, logistical, social/cultural, ethical
  - Assessment approaches
- Collateral information
- Less restrictive alternatives
- Supported DM models

## Process of assessment

| Gather Info | Visit(s) for Interview/ Assessment | Consult Collaterals | Document Findings |
|---|---|---|---|
| • Problem?<br>• What to assess, legal standard(s)?<br>• What report is needed?<br>• Health status.<br>• Limited info/ background. | • Consent/Assent.<br>• Thorough assessment with probing questions on DM steps, values, historical choices, etc.<br>• Use appropriate cognitive tests, decision aids, supports, etc. | • Get info from family, care providers, etc.<br>• Review records or other history.<br>• Validate what was reported by person/others. | • Clearly record observations.<br>• Discuss interview<br>• Explain analysis of various data.<br>• Clearly state findings and recommendations. |

## Consent vs assent

**CONSENT** is formal agreement given by an individual who has the capacity to make an informed decision.

**ASSENT** is an agreement given by a person who is not legally empowered to give consent, such as a child or an adult with impaired decision making abilities.

## Informed consent vs assent: EJI Panel

| | |
|---|---|
| Dan Marson | • Important to get "assent" and establish alliance.<br>• In more adversarial situations, informed consent is more important. |
| Laura Mosqueda | • Assume capacity unless proven otherwise.<br>• "We might have someone sign a consent in order to do testing that proves they don't have the capacity to sign the consent." |
| Eric Drogin | • You don't know if they're capable of consent until you explore it. "Unwillingness to participate is not tantamount to disability in and of itself."<br>• Without it, can make some observations, but need to be cautious, reflective on what can/can't be observed. |

## Other factors in assessment process

| SYSTEMIC | LOGISTICAL | SOCIAL/ CULTURAL | ETHICAL |
|---|---|---|---|




**SYSTEMIC** | LOGISTICAL | SOCIAL/ CULTURAL | ETHICAL

**Awareness of other factors and involved parties in the person's life.**

| | |
|---|---|
| **Legal/systems** | Law enforcement<br>Adult Protective Services<br>Guardianship/conservatorship process<br>Other court proceedings |
| **Legal/status** | Important decisions<br>Documents to complete |
| **Health/medical** | Recent hospitalization<br>New diagnosis<br>Unmanaged conditions<br>Access to care, medications, services |

SYSTEMIC | **LOGISTICAL** | SOCIAL/ CULTURAL | ETHICAL

**Factors to take into consideration before and at the visit**

- Visits at person's home:
  - Comfortable or distracting?
  - Things/people that impact autonomy and engagement?
  - Safety issues for you?
- Visits at hospital, clinic, or elsewhere in community:
  - Do they feel at ease or insecure?
  - Private, calm space?

SYSTEMIC | **LOGISTICAL** | SOCIAL/ CULTURAL | ETHICAL

**Factors to take into consideration before and at the visit**

- Schedule – time and day when the person is at their best.
- Supports – people:
  - Family, friends, caregivers that help them feel ok.
  - These can be helpful informants for you as well.

SYSTEMIC | **LOGISTICAL** | SOCIAL/ CULTURAL | ETHICAL

**Factors to take into consideration before and at the visit**

- Supports – things:
  - Multiple copies of tools/tests.
  - Thicker pens, markers, clipboard.
  - Large print materials or page-size magnifiers.
  - Communication aids like pocket-talkers.

SYSTEMIC | **LOGISTICAL** | SOCIAL/ CULTURAL | ETHICAL

**Factors to take into consideration before and at the visit**

- Physical impairments:
  - Mobility limitations/decline and cognitive decline are significantly correlated.
  - Impact on testing of fine motor skills, strength, and flexibility, endurance – accommodate as needed.
- Sensory impairments:
  - Can they see and hear you?
  - Do they have their glasses, hearing aids?

SYSTEMIC | LOGISTICAL | **SOCIAL/ CULTURAL** | ETHICAL

**Respect for a person's personal identity, culture, and social role**

- Language – for non-native English speakers:
  - Fluency/comfort with English, or
  - Access to qualified interpreters.
- Literacy
  - Education level is kind of an indication, but not…
  - Reading comprehension
  - Financial literacy
  - Health literacy

SYSTEMIC | LOGISTICAL | **SOCIAL/ CULTURAL** | ETHICAL

**Respect for a person's personal identity, culture, and social role**

- Background and history – how their experience influences their interactions with others.
- Positive supports, or negative factors:
  - Family and culture of origin.
  - Current family/cultural context.
  - Community connections – friends, neighbors, senior centers, spiritual orgs, etc.

SYSTEMIC | LOGISTICAL | SOCIAL/ CULTURAL | **ETHICAL**

**Both person centered and clinically/professionally appropriate.**

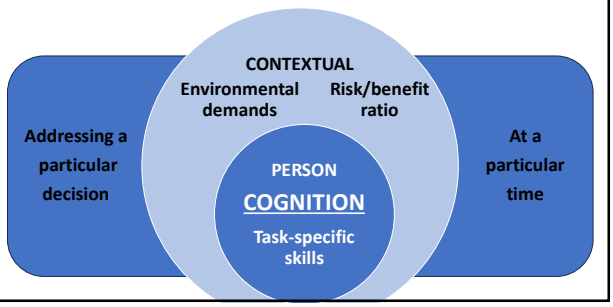
- We're obligated to present the assessment and testing process in an honest way.
- Involve whoever requested the assessment to facilitate/support the visit.
- Be strategic with language and framing, without false reassurance.
- Try for consent, or at least assent.

## Assessment approaches

- Bio-psycho-social with focus on capacity question/situation
- APS training guidance
- 5M framework

***Also refer back to the ABA/APA handbooks for what assessments in general should cover, as well as what to include for specific capacity questions.***

## Bio-psycho-social / Person In Environment




## APS guidance: capacity eval should include

*(APS Module 17)*

- A physical and neurological examination.
- Short- and long-term memory assessment.
- Assessment of executive function:
  - Set of abilities that control and regulate someone's ability to anticipate outcomes and to adapt behavior to changing situations.
- Examination for any existing psychological disorders.
- Diagnosis of any existing addictive syndromes.
- All should be included, if unavailable, the most possible.

## Assessment of geriatric wellbeing – 4/5M's

- **4M model:**
  - Developed in 2017 by the Institute for Healthcare Improvement, to support Age-Friendly Health Systems.
  - Goal is to ensure older adults receive care based on four evidence-based elements:
- **4M-BH model** tailored for use by mental health and substance abuse clinicians in diverse settings.
- **5M model** developed by geriatric specialists, adds Multicomplexity.

What **M**atters
**M**edication
**M**entation
**M**obility

| Multicomplexity | Geriatrics healthcare professionals[1] focus on these 4Ms... | When caring for older adults, all health professionals should consider... |
|---|---|---|
| Multicomplexity describes the whole person, typically an older adult, living with multiple chronic conditions, advanced illness, and/or with complicated biopsychosocial needs. | Mind | ■ Mentation<br>■ Dementia<br>■ Delirium<br>■ Depression |
| | Mobility | ■ Amount of mobility; function<br>■ Impaired gait and balance<br>■ Fall injury prevention |
| | Medications | ■ Polypharmacy; deprescribing<br>■ Optimal prescribing<br>■ Adverse medication effects and medication burden |
| | What Matters Most | ■ Each individual's own meaningful health outcome goals and care preferences |

*Graphic source: https://www.healthinaging.org/sites/default/files/media/pdf/HIA-TipSheet%20Geriatric%205Ms.July20_0.pdf*

## Collateral information

- Get info from family, care providers, etc.
- Review records or other history (depending on situation).
- Validate what was reported by person and others.
- Look at consistency in person's decisions/functioning over time.
- Privacy concerns: you may not be able to share info, but others may be able to provide you with info/records.

## Collateral information

- Collaterals corroborate. Use whenever possible!
- **Not everyone will have an "identified informant"** (spouse/partner, family, friend, caregiver).
- Consider neighbors, apartment staff, community contacts, anyone that has had more than occasional contact with the person.

***Person's report*** + ***Clinician's observations*** + ***Informant information*** = ***most robust picture of the person's situation.***

## Less restrictive alternatives and supported decision making

## Less restrictive alternatives

- Guardianship and/or conservatorship should be last resorts as they:
  - remove the individual's legal rights
  - restricts the person's independence and self-determination.
- Less restrictive alternatives can include a range of strategies, from supported decision making to other formal and informal arrangements.

***Guardianship / Conservatorship should be used only when there are no suitable less restrictive options.***

## Less restrictive alternatives

**Education interventions:**

- Info simplified with alternate forms of communication, e.g., visual aids. *(Tymchuk)*
- Improved DMC in severely depressed patients. *(Lapid)*
- Assists psychiatric patients in achieving capacity to consent. *(Palmer)*

**Legal/procedural:**

- DPOA, representative payee, fiduciary, trust.
- Protective arrangements – can be tailored to the situation.
- Legal aid, financial advocate

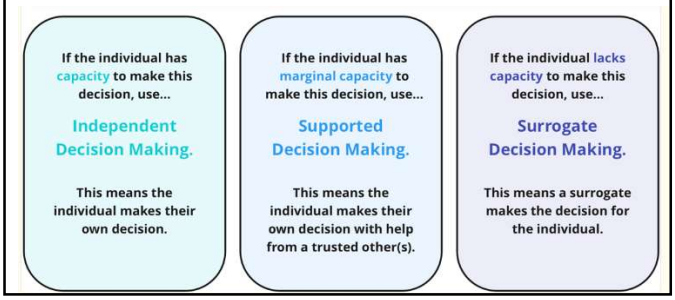
## More alternatives: functional supports

- In-home support for personal care, meals, medication, and transportation
- Home health care services
- Adult day health programs
- Assistive devices: memory calendar/clocks, smart home tools, reminder services
- Home modifications: ramps, grab bars
- Supportive housing / assisted living
- Case management or care coordination services
- Bill paying services / daily money manager
- Community/senior centers for social supports
- VA supports for veterans/spouses
- Respite services for caregivers
- Private assistance services

## Supported decision making

- We all use supported decision making every day!
- SDM is where a person with marginal capacity identifies a trusted person or network of persons to aid them in making their own decisions. *(Largent)*
- Even where not formally recognized, it can be practiced informally, helping individuals, care partners, and clinicians strike an appropriate balance between respecting autonomy and recognizing vulnerability.

## Supported decision making *(Largent)*



## SDM: factors to consider

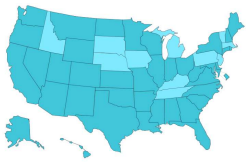
- Cultural approaches to decision making and supports
- Power dynamics in relationships
- Financial pressures
- Spiritual/religious values
- Guidance from social or spiritual leaders

## Supported decision making by state

Recognized by law in 39 states and DC, with provisions in other states via court rules, state regulations, or policy.

Comprehensive SDM Agreement Legislation in **23 States and DC**

SDM as Less Restrictive Option: in **17 states** and Uniform law



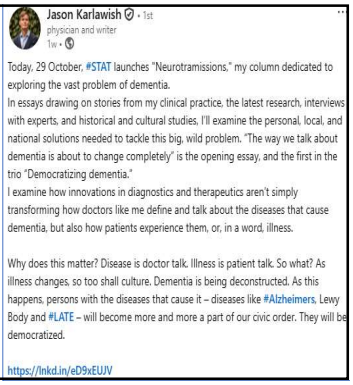
Source: https://supporteddecisions.org/resources-on-sdm/state-supported-decision-making-laws-and-court-decisions/

## Coming up – mark your calendars

| Capacity Consultation Group | Older Adult Mental Health Consult Group |
|---|---|
| Hosted by Dr Adria Navarro of USC<br>12noon to 1pm on zoom<br>Next on Oct 23 (Nov/Dec TBD)<br><br>(to sign up, email Adria.Navarro@med.usc.edu) | Sponsored by GRAT/ACCS<br>12noon to 1:30pm on zoom<br>on selected Tuesdays<br>Next on Oct 21<br>Register at<br>https://us02web.zoom.us/meeting/register/tZYuduChrzMtHdwZFNfXLh8vnk_CDPb6Nq6J#/registration |

## Also

- Dr Karlawish STAT column "Neurotransmissions" →
- Justice for Tribal Elders: A Resource Roundup – on Tuesday, October 28 at 11-12PT / 2-3ET. Register at https://us06web.zoom.us/webinar/register/97175915548 46/WN_BkvXjEJT2uvlY7Ho2Tizg#/registration



Jason Karlawish • 1st
physician and writer
1w •

Today, 29 October, #STAT launches "Neurotramissions," my column dedicated to exploring the vast problem of dementia.
In essays drawing on stories from my clinical practice, the latest research, interviews with experts, and historical and cultural studies, I'll examine the personal, local, and national solutions needed to tackle this big, wild problem. "The way we talk about dementia is about to change completely" is the opening essay, and the first in the trio "Democratizing dementia."
I examine how innovations in diagnostics and therapeutics aren't simply transforming how doctors like me define and talk about the diseases that cause dementia, but also how patients experience them, or, in a word, illness.

Why does this matter? Disease is doctor talk. Illness is patient talk. So what? As illness changes, so too shall culture. Dementia is being deconstructed. As this happens, persons with the diseases that cause it – diseases like #Alzheimers, Lewy Body and #LATE – will become more and more a part of our civic order. They will be democratized.

https://lnkd.in/eD9xEUJV

## Our next classes

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| **October 29** | Cognitive testing and other assessment tools, and documenting findings |
| **November 5** | Email your case studies to me! *(format will be provided in Oct 29 class)* |
| **November 12** | Case studies and discussion, and next steps for your work |