

DEMOGRAPHICS AND EPIDEMIOLOGY: MENTAL ILLNESS IN OLD AGE

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National Institute
of Mental Health

Disclaimer

- The data in this presentation are not from NIMH
- The figures in this presentation have been adapted from the American Association of Retired Persons (AARP) National Data Book on Aging Communities and Brain Health
- The AARP National Data Book includes more than 100 original sources, which are cited throughout these slides and in the Appendix section

OUTLINE

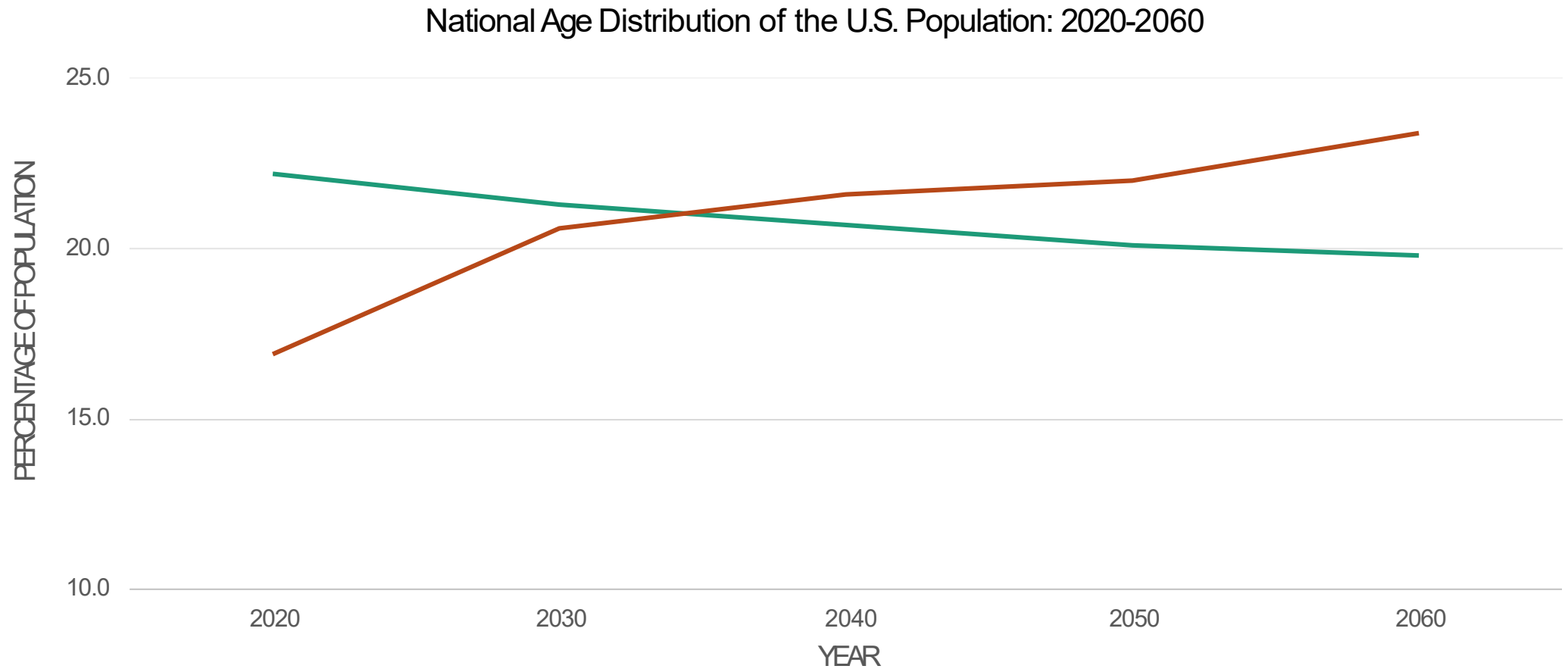
- INTRODUCTION
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INTRODUCTION

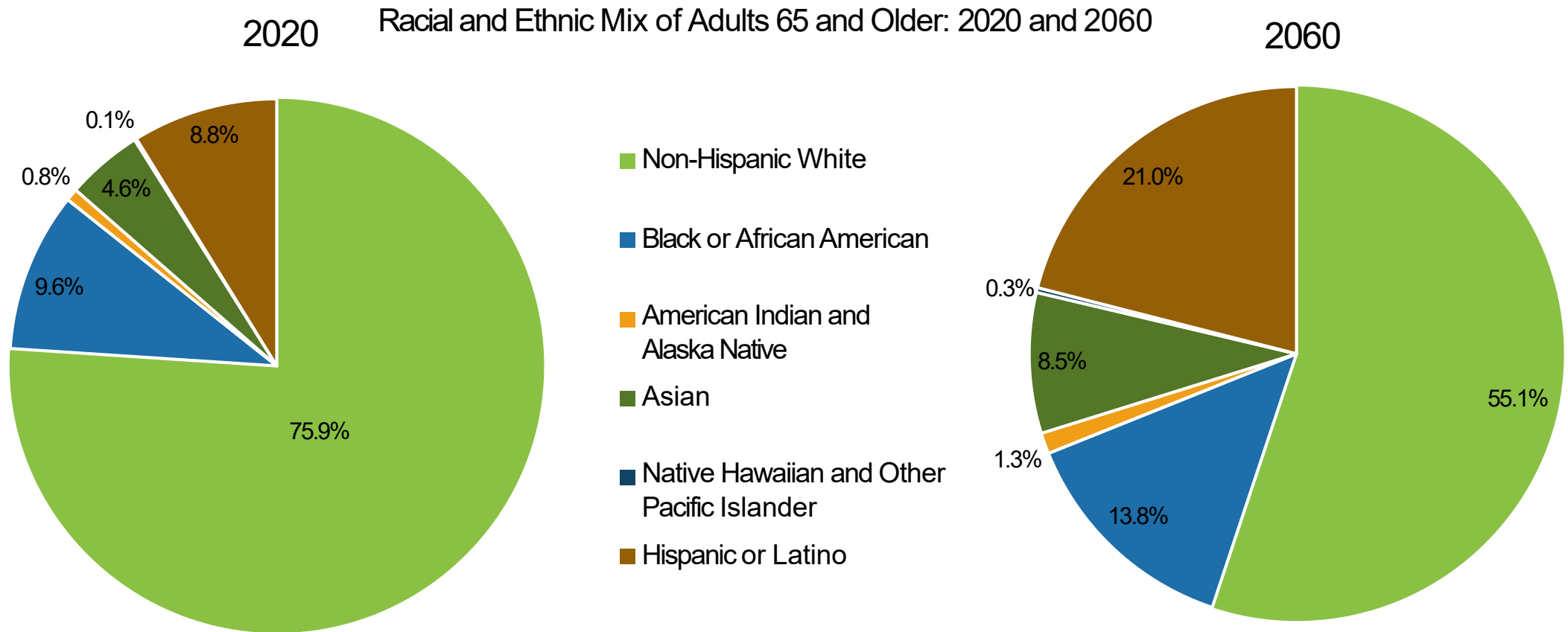
- These slides compile national demographic and epidemiological information on brain health of older adults
- Both cognitive and behavioral (mental health and substance use) health are considered as parts of overall brain health
- Only the most up-to-date information, reported in reliable websites and peer reviewed scientific articles have been included
- All citations and explanations are stated in the Appendix section

The U.S. Population Is Aging Rapidly

Over the Next 40 Years the Proportion of 65+ Adults in the Total U.S. Population Will Rise from 16% to 23%, Outnumbering the Proportion of Children¹

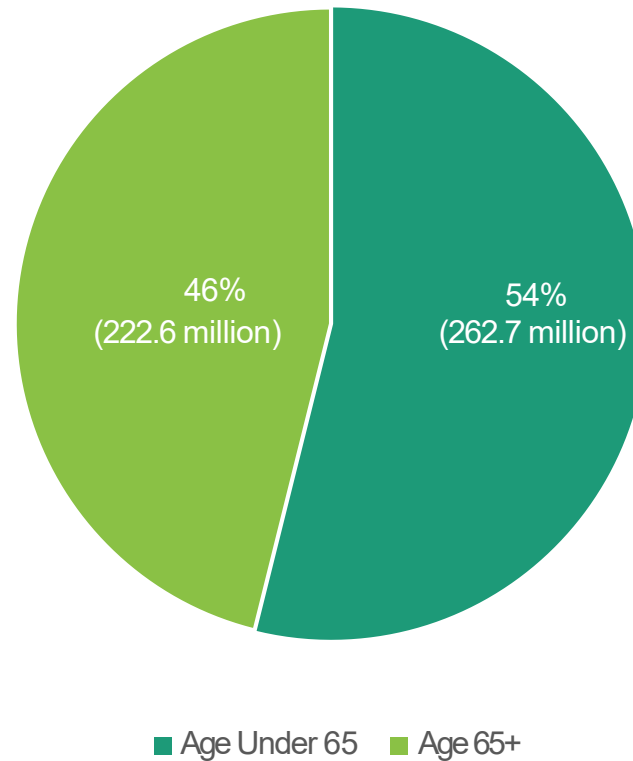


People of Color 65+ Will Increase from Around 25% to 45% Over the Next 40 Years¹



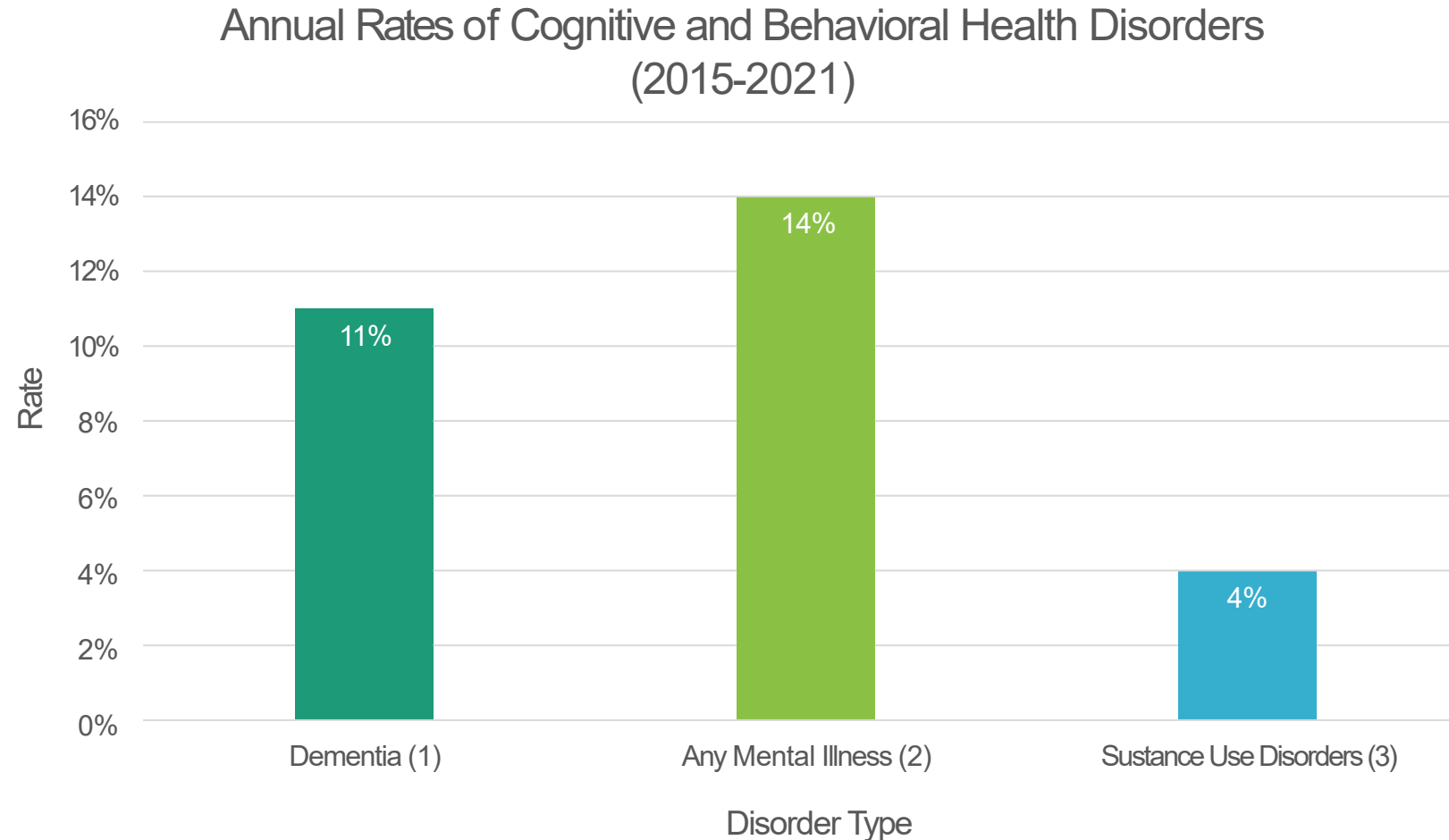
46% of Veterans in the U.S. Are Age 65+²

Living Veterans by Age Group (2018)



COGNITIVE AND BEHAVIORAL HEALTH PROBLEMS OF OLDER ADULTS

Cognitive and Behavioral Health Disorders Are Highly Prevalent Among Adults 50+^{3,4,5}



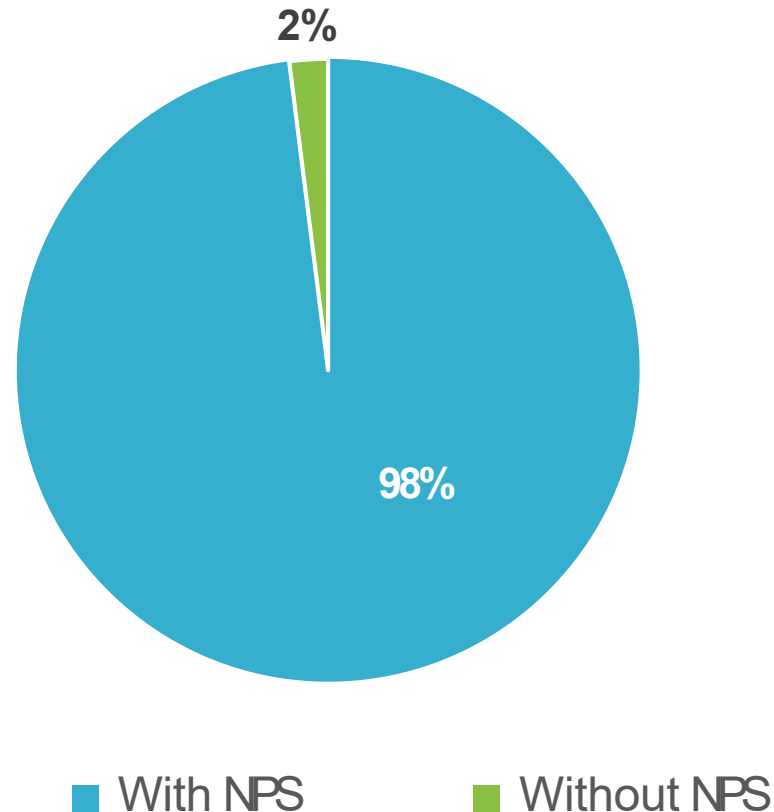
The Prevalence or the Burden of Dementia Increases With Age⁸

Age	Year				
	2011	2012	2013	2014	2015
70 – 79	5.3	5.2	5.4	4.7	4.9
80 - 89	16.3	16.7	16.3	15.6	16.1
90 +	32.7	31.7	30.8	31.9	30.6

Table: Prevalence (in percentages) of probable dementia among U.S. adults aged 70 and older, 2011-2015

While Living With Dementia, 98% of People Have Co-occurring Neuro-Psychiatric Symptoms, Such as Anxiety, Depression, or Psychosis¹⁰

People with Dementia and Neuropsychiatric Symptoms (NPS) in 2014

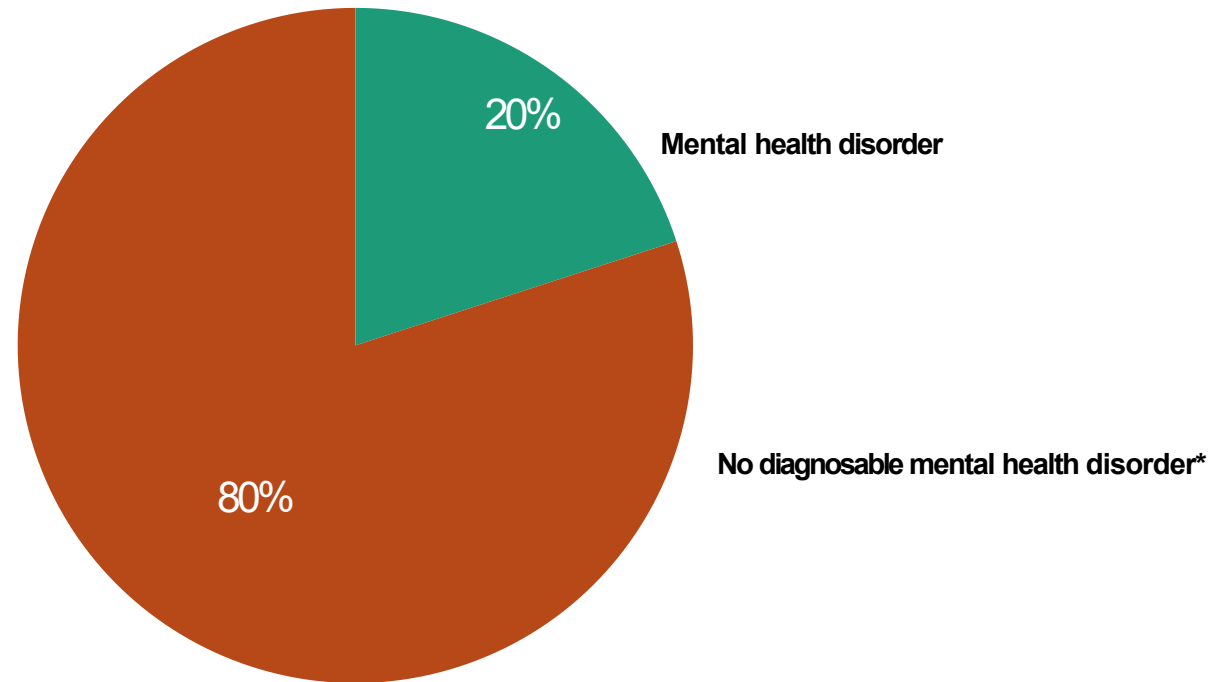


Co-Occurring Disorders in Adults Contribute to Higher Rates of Disability, Premature Death, and High Medical Costs

- Types of co-occurring conditions:
 - Co-occurring types of mental disorders, e.g., depression and anxiety¹¹
 - Co-occurring dementia and neuro-psychiatric symptoms including depression^{12,13}
 - Co-occurring mental and substance use disorders¹⁴
 - Co-occurring acute/chronic physical and behavioral health conditions^{14,15,16}
- Older adults with co-occurring disorders are at high risk for premature disability and death.¹⁷
- Older adults with co-occurring disorders require more care leading to high health care costs.¹⁸

Approximately 20% of Older Adults 55+ Have a Mental Health Disorders¹⁹

Proportion of Older Adults 55+ with a Mental Health Disorders



*Many people without a diagnosable disorder suffer from emotional distress.

Anxiety Disorders and Depression are Highly Prevalent Among Older Adults^{11,21}

Prevalence of Anxiety Disorders among 65+ Adults ^{11,21,27}	11.4%
Self-reported depression symptoms among 55+ adults ^{22,23,24}	13-15%
Prevalence of Major Depressive Disorder among 50+ Adults*	5.85%

* Estimates vary from 4.9%¹ to 6.8%.^{2,6,7} Average is 5.85%

Suicide Among Older Adults Is a Public Health Challenge in the U.S.²⁸

Average Rates of Suicide By Age in the U.S. 2015-2019
(Per 100,000)

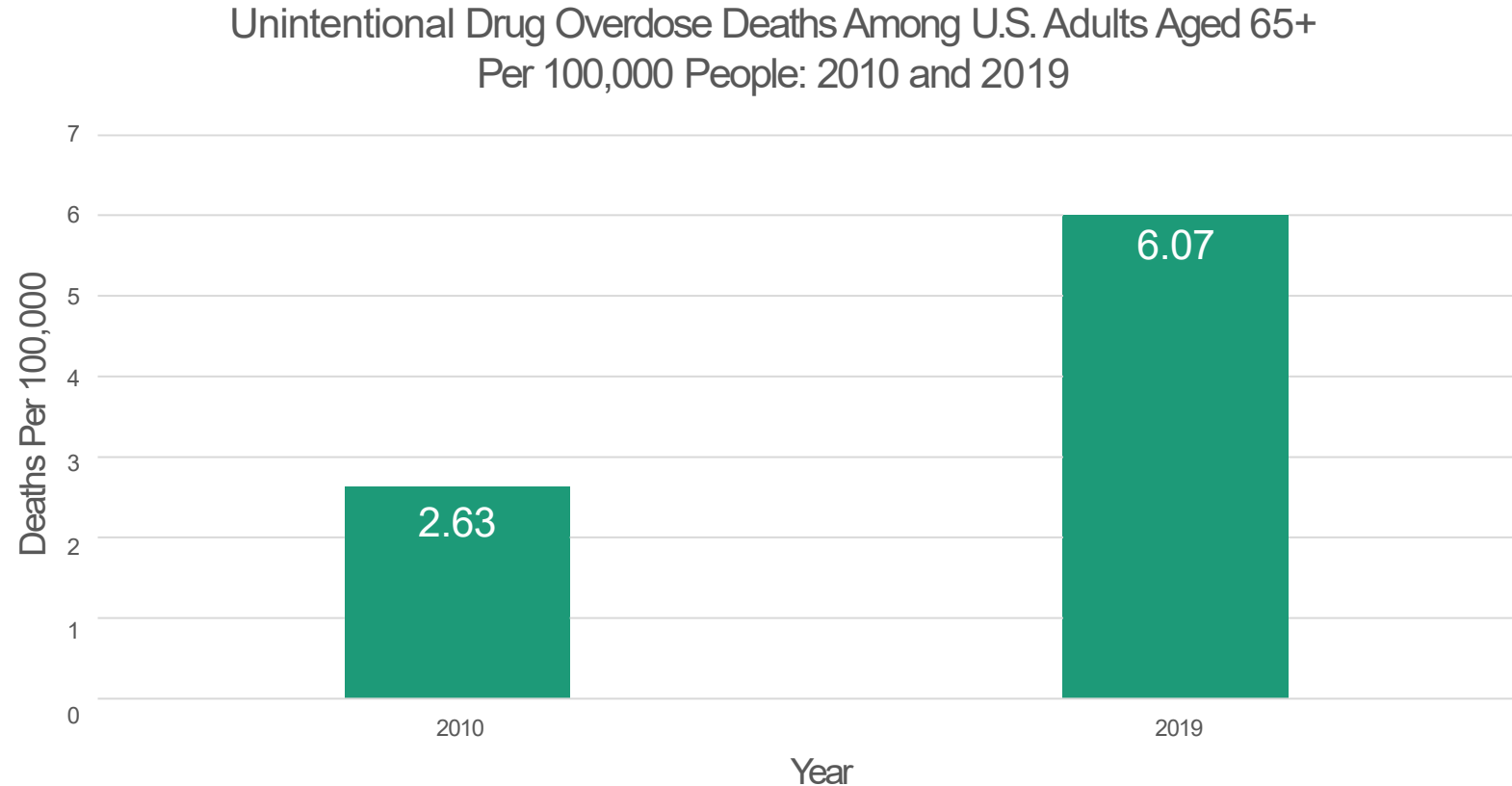
<u>Age</u>	<u>Suicide Rate</u>	<u>Female Suicide Rate</u>	<u>Male Suicide Rate</u>
All Ages	14.30	6.27	22.58
15-24	13.72	5.58	21.49
25-39	17.19	7.30	26.89
40-49	18.71	9.43	28.15
50-64	19.88	9.79	30.36
65+	16.91	5.22	31.57
75+	18.69	4.20	39.50
85+	19.56	3.71	48.56

*Women in the United States attempt suicide more often than men but attempts by men are more lethal overall

Misuse of Alcohol, Medications, and Illegal Substances Can Be Extremely Dangerous to Older Adults^{29,30}

- Nearly 1 million adults aged 65 and older live with a **substance use disorder** as reported in 2018 data.³³
- Approximately 14.5% of older adults consume more **alcohol** than is recommended by health authorities³¹ with high risks of falls³² and other accidents as well as physical illnesses.
- An estimated 3.6% to 7.2% of older adults age 50+ used **illegal drugs** between 2002-2012, including heroin, cocaine, methamphetamine and cannabis.^{29,33,34}
- Use of **cannabis**, the most commonly used “illegal” substance, is expected to rise due to relatively higher use by the baby boomer population and to the legalization of cannabis for medical and recreational purposes.^{30,31}
- **Misuse of prescription opioids** has resulted in addiction, overdoses, and later heroin use.³³
- The misuse of **prescription** and/or over-the-counter **medications** by older adults can result in injury, addiction, or death.^{29,32}

From 2010 to 2019, the Rate of Overdose Deaths Among 65+ Adults Rose 130%³⁶



HIGH RISK POPULATIONS

**CERTAIN COMMUNITIES ARE AT HIGHER RISK OF DEVELOPING COGNITIVE
AND BEHAVIORAL HEALTH CONDITIONS**

Older Black and Latino Adults Are at Higher Risk of Dementia³⁷

They Also Have More Limited Access to Behavioral Health Services³⁸

- **Dementia**

- Older Black adults are about two times, and Latinos are about one and one-half times, more likely than whites to have Alzheimer's and other dementias.³⁷
- Although the rate of Alzheimer's and other dementias among Black and Latino older adults is higher than among whites, they are less likely than whites to get diagnosed.³⁷
- Physical conditions, such as high blood pressure and diabetes, rather than genetic factors appear to account for the greater prevalence of Alzheimer's among Black and Latino older adults.³⁷
- It is likely that improved access to high quality health care could reduce the prevalence of dementia among Black and Latino older adults.³⁷

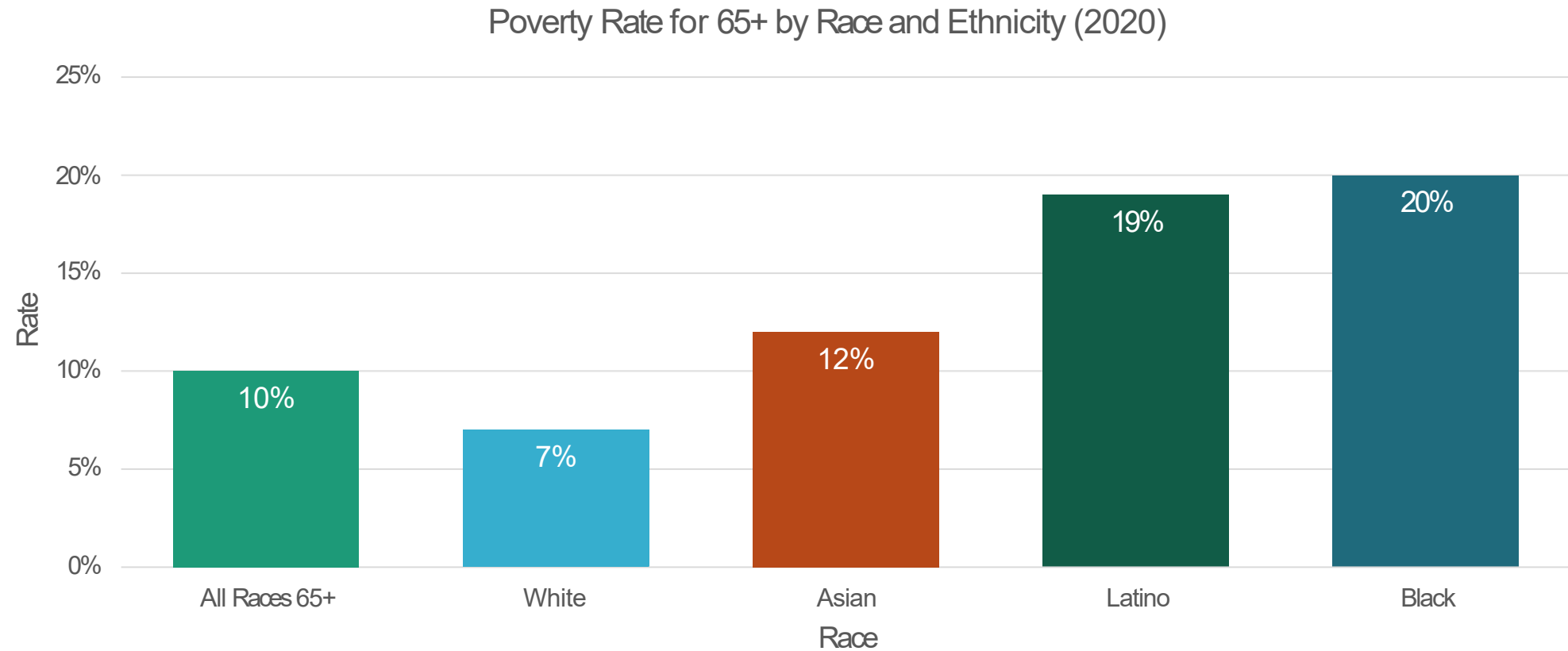
- **Mental and Substance Use Disorders**

- Rates of mental illnesses among Black Americans are similar to those of the general population. Rates among Latino-Americans is somewhat lower. Both Latinos and Blacks generally receive poorer quality of care and lack access to culturally competent care.³⁸
- Rates of substance use disorders among these populations are about the same as white non- Hispanics. Studies of disparities in the use of public behavioral health services reveal complex patterns of use and completion of services that vary by race, ethnicity, and socio-economic status.³⁹

Poverty Is Associated With Increased Risk of Cognitive Decline, Dementia, Mental Illness, and Suicide

- Poverty is associated with increased risk of cognitive decline and dementia. There may be intervening variables such as poor diet and loss of control of finances due to dementia.^{40,41}
- People living in poverty are at higher risk for developing mental illness, and people with mental illness are at higher risk of becoming impoverished, a “vicious cycle”.⁴¹
- People living in neighborhoods with high rates of poverty have less access to physical and behavioral health care.⁴²
- Lower levels of household income are associated with cognitive decline and mental illness.^{43,45}
- “Suicide rates in the U.S. are closely correlated to poverty rates.”⁴⁴

Approximately 10% of Older Adults Live in Poverty, Varying from 7% for White Older Adults to 20% for Black Older Adults⁴⁶



Women Are at Higher Risk for Some Cognitive and Behavioral Health Disorders

- As they age, **women become more at risk of social isolation** than men.⁴⁷
- **Women are at higher risk of dementia** than men and of faster decline after diagnosis^{48,49}
- **Women are at higher risk of anxiety and depression, but lower risk of substance use disorders.**⁵⁰
- **Women are 1.75 times more likely than men to attempt suicide, but men are almost 6 times more likely to complete suicide**⁵¹

Lesbian, Gay, Bisexual, Transgender, Questioning (LGBTQ+) Are At Higher Risk of Developing Behavioral Health Conditions

- An estimated 1.5 million adults age 65+ are LGB which is expected to grow to nearly 3 million by 2030 ⁵²
- 31% of LGBT elders have symptoms of depression-2 to 3 times higher than the general geriatric population; 39% report having suicidal ideation at some point in their lives⁵³
- Among the transgender elderly, 48% report symptoms of depression and 71% report a history of suicidal ideation⁵³
- Experience of victimization, internalized stigma, social isolation, financial barriers to health care, and poor physical health were linked to depression among LGB older adults⁵⁴
- 8.3% of LGBT elders reported being neglected or abused by a caretaker, including healthcare professionals, due to their sexual orientation or gender identity⁵³

Residents in Nursing Homes and Assisted Living Facilities Are at High Risk of Cognitive and/or Behavioral Disorders

- **Nursing Homes**^{55,56,57}

- About 2/3 of nursing home residents are cognitively impaired.
- Most of those with cognitive impairment also have neuropsychiatric symptoms.
- Many nursing home residents have a diagnosed cognitive or mental health disorder.

- **Assisted Living Facilities**^{58,59}

- About 2/3 of those in assisted living have some dementia, most with co-occurring neuro-psychiatric symptoms.
- Over 20% have a psychiatric disorder other than dementia or cognitive impairment.

Veterans Are at Significant Risk of Complex Co-Occurring Physical, Cognitive, and Behavioral Disorders

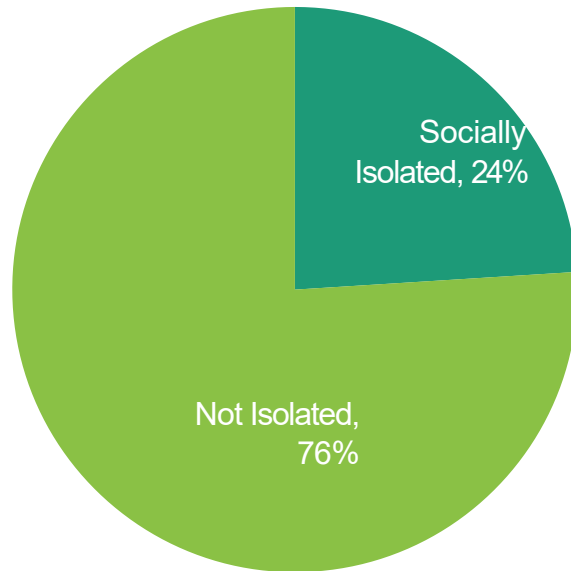
- Older veterans have co-occurring medical, mental health, substance use disorders, and cognitive impairments more frequently than younger veterans.⁶¹
- Rates of post-traumatic stress disorder (PTSD) are highest among Vietnam-era veterans.⁶¹
- In 2018, the rate of suicide among veterans was 32.0 per 100,000, compared with 17.2 per 100,000 for nonveterans.⁶²
- Alcohol and substance use disorders are more common among veterans than non-veterans and frequently co-occur with mental disorders, especially PTSD.⁶³
- Despite higher rates of PTSD, older veterans are less likely to seek mental health services, than younger veterans. ⁶¹
- This willingness to seek services will likely continue as this cohort ages and will require a system designed to support the increased care needs of an aging veteran population.⁶¹

Loneliness and Social Isolation Increase Risks of Physical, Cognitive, and Behavioral Health Disorders^{64,65}

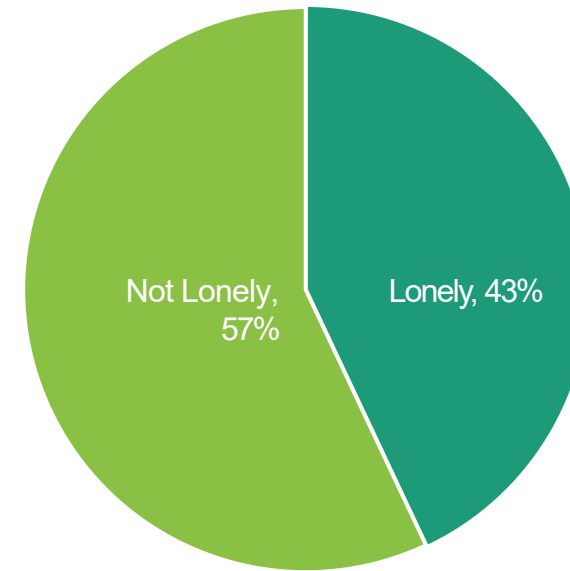
- Social isolation significantly increases a person's risk of **premature death** from all causes, a risk that may rival those of smoking, obesity, and physical inactivity.
- Social isolation is associated with about a 50% increased risk of **dementia**.
- Loneliness is associated with higher rates of **depression, anxiety, and suicide**.
- Poor social relationships are associated with a 29% increased risk of **heart disease** and a 32% increased risk of **stroke**.
- Loneliness among **heart failure** patients is associated with a nearly 4 times increased risk of death, 68% increased risk of hospitalization, and 57% increased risk of emergency department visits.

About 1/4 of Older Adults Are Socially Isolated & More than 1/3 Are Lonely⁶⁵

Socially Isolated Population 65+ (2020)



Loneliness in Population 60+ (2020)



Social isolation – a lack of social connections; can lead to loneliness in some people, but not in others.

Loneliness – feeling of being alone, regardless of the amount of social contact a person has.

Both contribute to physical and mental disorders, disability, and premature mortality.

Bereavement as a Risk Factor

- Losses frequently encountered in later-life that lead to bereavement
- May lead to Prolonged Grief Disorder
- Features that distinguish depression from bereavement:
 - Prominent feelings of guilt and worthlessness
 - Suicidal thoughts
 - Prolonged and marked functional impairment
 - About 1 in 5 bereaved people will develop major depression

Older Adults Are at High Risk for Trauma but Have Limited Access to Trauma-Informed Care

- 10-15% of older adults are victims of elder abuse^{66,67}
- Many older adults experience other forms of trauma, such injuries from falls and deaths of loved ones⁶⁸
- Traumatic experiences in old age can result in PTSD and other anxiety and mood disorders⁶⁸
- The trauma-informed perspective is under-utilized by mental health providers⁶⁹
- Improvements of clinical practice, training and education, research, and public policy are needed^{68,69}

At Least 10-15% of Older Adults Are Victims of Mistreatment and at Elevated Risk for Psychological and Physical Conditions^{66,67,70}

- Elder abuse, by definition, is committed by a person with caregiving responsibilities, including family members, home health aides, and long-term residential care staff.
- Elder abuse “can lead to early death, harm to physical and psychological health, substance misuse, ruptured social and family ties, social isolation, and/or devastating financial loss...”

WHO Rates of Elder Mistreatment

Overall Mistreatment	Psychological Abuse	Financial Exploitation	Neglect	Physical Abuse	Sexual Abuse
15.7%	11.6%	6.8%	4.2%	2.6%	.9%

Some older adults experience multiple forms of mistreatment.

The COVID-19 Pandemic Highlighted Psychological Vulnerability of Many Older Adults

- Overall, fewer older adults report emotional distress in response to the pandemic than younger adults possibly due to lower stress reactivity, and better emotional regulation, in general⁷¹
- However, a vast majority of 50+ adults reported a decline in their emotional well-being when asked about specific emotional health measures⁷²
- According to a survey conducted by CDC in August 2020, among 933 participants 65 years and older⁷³ –
 - 6.2% reported anxiety disorder
 - 5.8% reported depressive disorder
 - 9.2% reported trauma or stress related disorder

DIFFICULTIES IN ENSURING QUALITY CARE AND TREATMENT

QUALITY CARE AND TREATMENT CAN BE HARD TO GET

Dementia Care Remains Inadequate^{74,75}

- More extensive screening required:
 - Functional assessment of instrumental activities of daily living (IADLs), such as managing money, and activities of daily living (ADLs) such as self-care
 - Screening for behavioral and psychiatric symptoms
 - Safety screening including ability to drive, use of medications, suicide risk, possession of firearms, etc.
 - Screening for pain
- Earlier disclosure of diagnosis needed to enable advance care planning
- Education and support required for family caregivers
- Motivation/Incentives needed to encourage older adults to engage in healthy activities, especially exercise and diet
- More cautious and targeted use of medication regimens required for some forms of dementia
- Need better training for all physicians involved in dementia care including primary care, mental health providers, neurologists, geriatricians, etc; gerontologists; and caregivers

Most Older Adults with Mental Disorders Do Not Get Adequate Treatment⁷⁶

Most Older Adults with Mental Illnesses **Do Not Get Even Minimally Adequate** Mental Health Services

- Treatment by primary care physicians is **not** minimally adequate 87.3% of the time.^{77,82,83}
- Treatment by mental health professionals is **not** minimally adequate 51.7% of the time.^{77,83}
- Older adults are less likely to get health care in mental health specialty settings than other age groups.⁷⁸
- In-home service providers, such as home health aides, are rarely trained to identify or treat mental disorders.⁷⁸
- Community service providers in senior centers, adult day care, etc. are rarely trained in identification or treatment.⁷⁸
- Mental health care in nursing and adult homes is also uneven. Overuse of anti-psychotic medications is common and dangerous.⁷⁸

Primary Care Physicians Often **Fail to Identify or Treat** Mental Illness in Older Adults

- Almost 90% of older adults with depression get no treatment or inadequate treatment in a primary care setting.⁷⁹
- Older adults who meet diagnostic criteria for mental illness are less likely than young or middle-aged patients to receive specialty mental health care or to be referred from primary care to specialists.⁸⁰
- 58% (average) of older adults who complete suicide have seen their primary care physician within 30 days.⁸¹

CONSEQUENCES OF FAILURE TO IMPROVE BRAIN HEALTH

**THE FAILURE TO IMPROVE BRAIN HEALTH WILL HAVE GRAVE
CONSEQUENCES FOR INDIVIDUALS AND SOCIETY**

Major Anxiety and Depressive Disorders Can Have Serious Consequences

- Increased risk of dementia⁸⁴
- Increased risk of disability and premature death due to physical illnesses⁸⁵
- High rates of suicide⁸⁵
- Problems in relationships, loneliness, and isolation^{85,86}
- Reduced productivity^{85,86}
- Reduced engagement in pleasurable and/or meaningful activities^{85,86}
- High rates of substance use disorders^{87,88}
- Higher rates of nursing home admissions than those with dementia alone⁸⁶

People with Severe Mental Illness Are at High Risk for Serious Physical Disorders and Have Low Life Expectancy⁸⁹

- People with severe mental illness are at high risk of serious physical health conditions and low life expectancy due to:
 - High rates of smoking, obesity, diabetes, and heart disease^{89.90}
 - High rates of substance use disorders (about 50% lifetime)⁹¹
 - Lingering effects of homelessness and crime victimization⁹²
 - Poor access to adequate physical health care⁹³
 - Behaviors and lifestyles that increase health risk ⁹⁴
 - High suicide rates (8.5 times the general population)⁹⁵
- They are also at elevated risk for dementia.⁹⁶
- People with severe mental illness often rely on special housing and on public income supports to be able to live in the community.⁹⁷

Spending for Treatment of Mental and Substance Use Disorder

- Estimates range from \$225-\$280 billion per year.⁹⁹ A good estimate is about \$250 billion per year.
- Spending on mental health sector is far larger than on the substance use sector—roughly 75% vs. 25%.⁹⁹
- The highest cost cases are those with co-occurring disorders—chronic physical conditions, serious mental illness, substance use disorders, and dementia^{100,101}
- Older adults with anxiety disorders and/or depression have higher overall health care costs than those without.¹⁰²

NIMH Vision and Mission

VISION



NIMH envisions a world in which mental illnesses are prevented and cured.



MISSION

To transform the understanding and treatment of mental illnesses through basic and clinical research, paving the way for prevention, recovery, and cure.

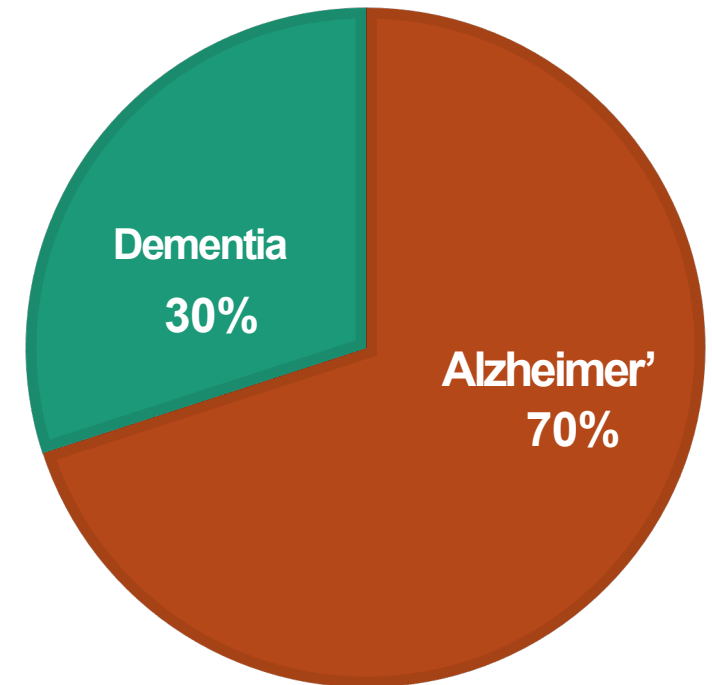
APPENDIX

Brain health includes multiple cognitive, behavioral, and emotional functions but definitions vary

- **US Centers for Disease Control:** An Ability to Perform all the Mental Processes of Cognition, including the Ability to Learn and Judge, use language, and remember.¹
- **American Heart/Stroke Association:** An Optimal Capacity to Function Adaptively in One's Environment; competencies/abilities across domains of “thinking, moving, and feeling,” including ability to pay attention, perceive, and recognize sensory input; to learn and remember; to communicate; to problem solve/make decisions; to have mobility; to regulate emotions.²

There Are Several Types of Dementia- Alzheimer's Disease Is the Most Common¹

- 5 most common types of dementia:
 - Mixed dementia (a combination of two or more types of dementia)
 - Alzheimer's disease
 - Frontotemporal dementia
 - Lewy body dementia
 - Vascular dementia
- Other conditions known to cause dementia/dementia- like symptoms:
 - Arggyrophilic grain disease
 - Creutzfeldt-Jakob disease
 - Huntington's disease
 - Chronic traumatic encephalopathy (CTE)
 - HIV-associated dementia
 - Parkinson's disease



Mild Cognitive Impairment (MCI)

- **Definition:** the stage between the expected cognitive decline of normal aging and the more serious decline of dementia
- **Characteristics:**
 - Problems with memory, language, thinking or judgment
 - Impulsivity, easily overwhelmed by making decisions/previously every-day tasks, poor train of thought
 - Awareness that your memory or mental function has "slipped"
- **Outcomes:**
 - Increased risk of later developing dementia caused by Alzheimer's disease or other neurological conditions (~10-15% of individuals with MCI develop dementia)
 - But some never get worse, and a few eventually get better

There Are Various Types of Behavioral Health Disorders

- Anxiety Disorders
- Depression and other mood disorders
- Psychoses
- Substance misuse and other addictions
 - Alcohol Overuse and Dependence
 - Medication Misuse
 - Misuse of, or addiction to, illegal substances
 - Gambling

There Are Various Types of Mood and Anxiety Disorders

MOOD DISORDERS

- Major Depressive Disorder
- Psychotic Depression
- Bipolar Disorder
- Persistent Depressive Disorder (“Dysthymia”)
- Minor/Subsyndromal Depression
- Seasonal Affective Disorder

ANXIETY DISORDERS

- Generalized Anxiety Disorder
- Panic disorder
- Phobias
- Post Traumatic Stress Disorder
- Social Anxiety Disorder

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