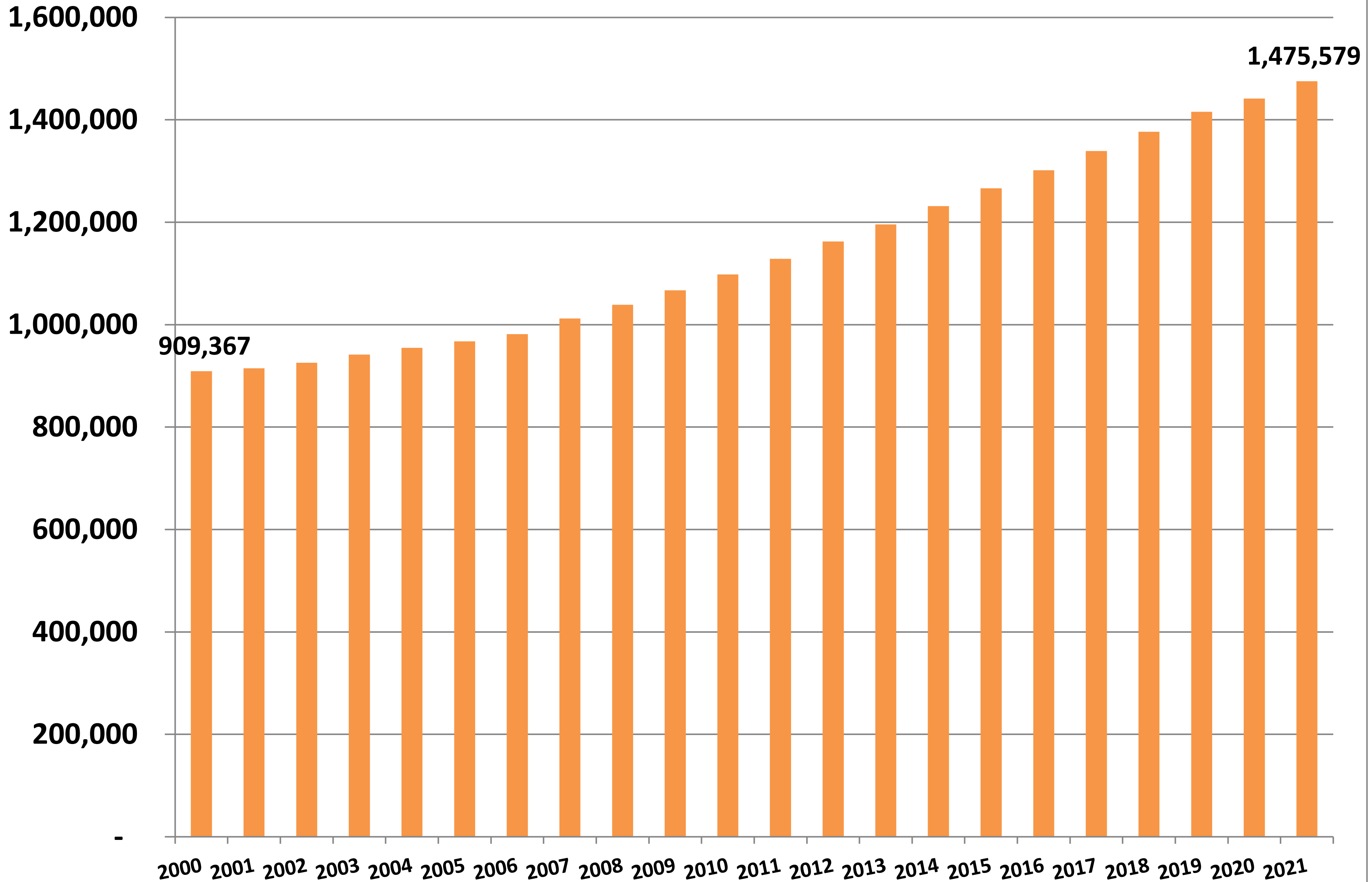
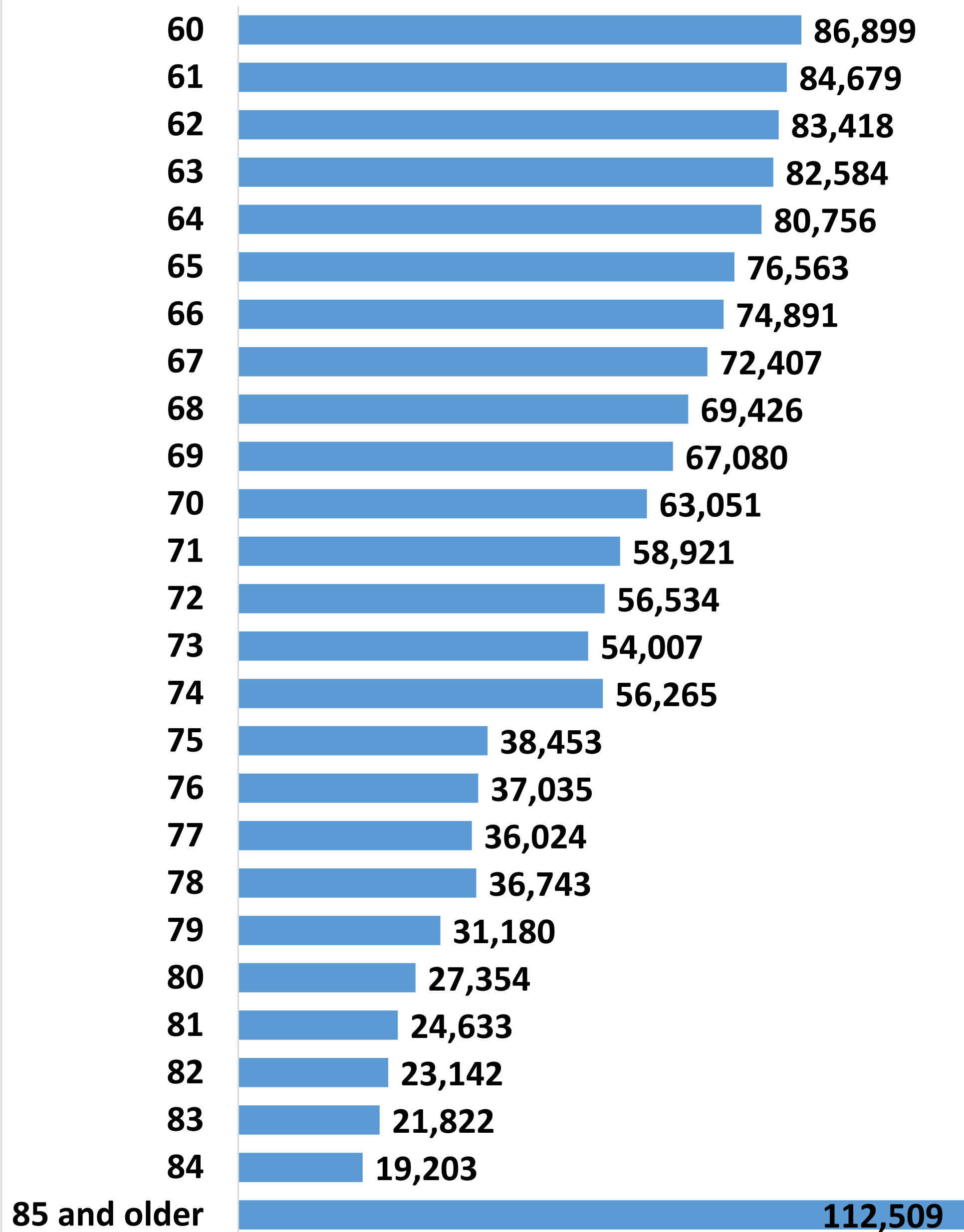
WISCONSIN DEPARTMENT of HEALTH SERVICES

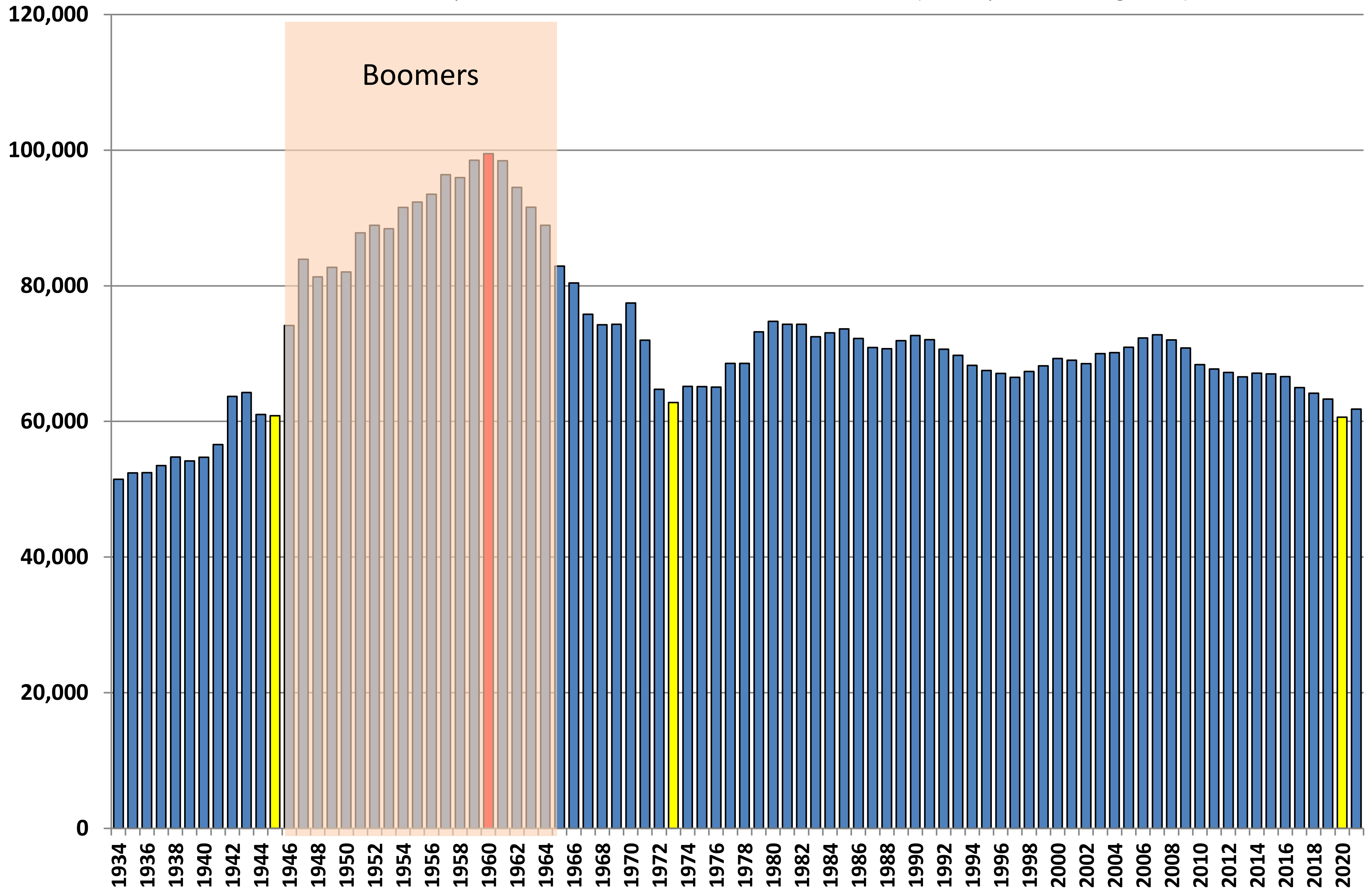
Profile of Wisconsin's Older Population

The Aging Population: Mental Illness, Substance Use Disorders and Dementia

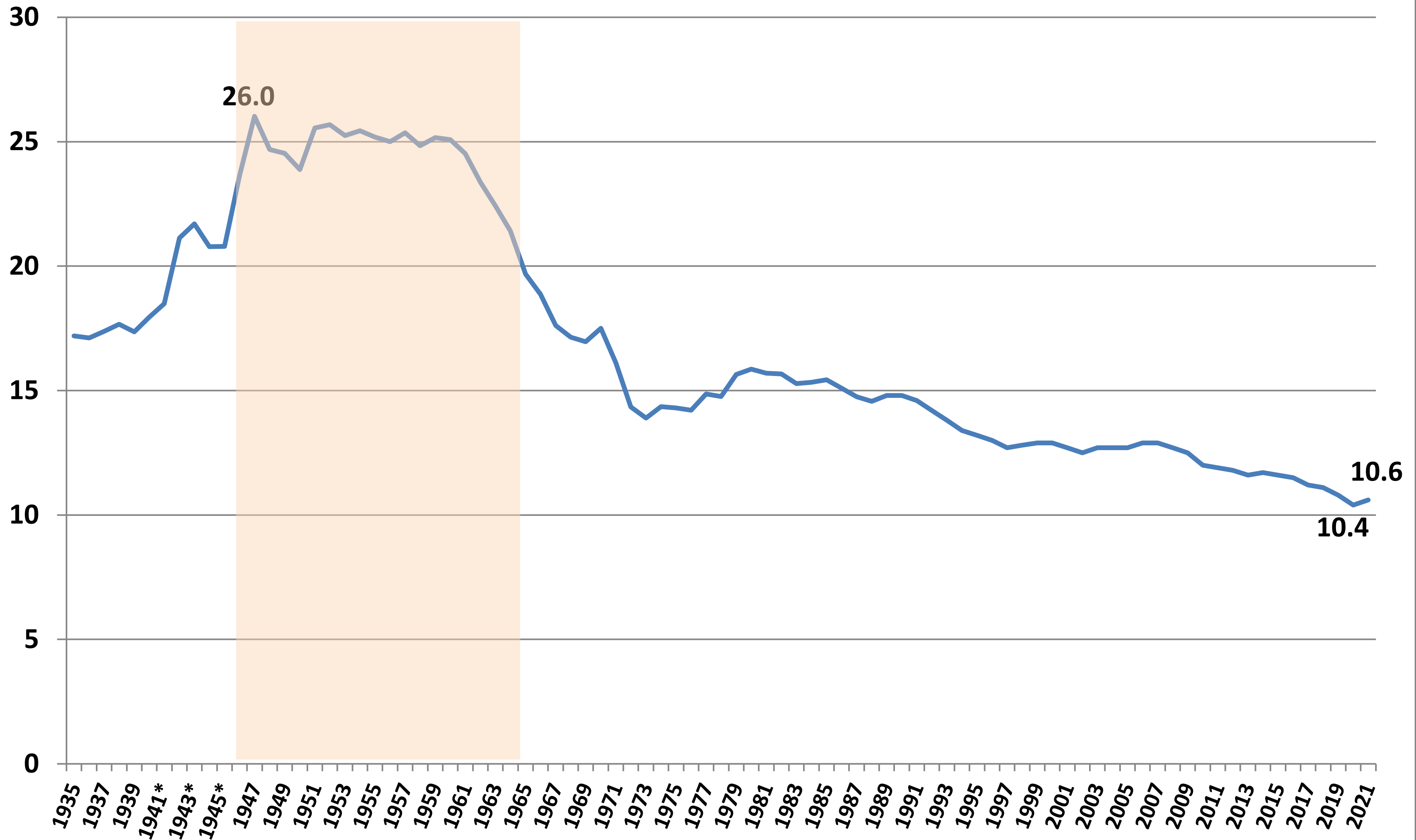
Eric Grosso
Demographer
Bureau of Aging and Disability Resources
Division of Public Health
Wisconsin Department of Health Services
January 18, 2023

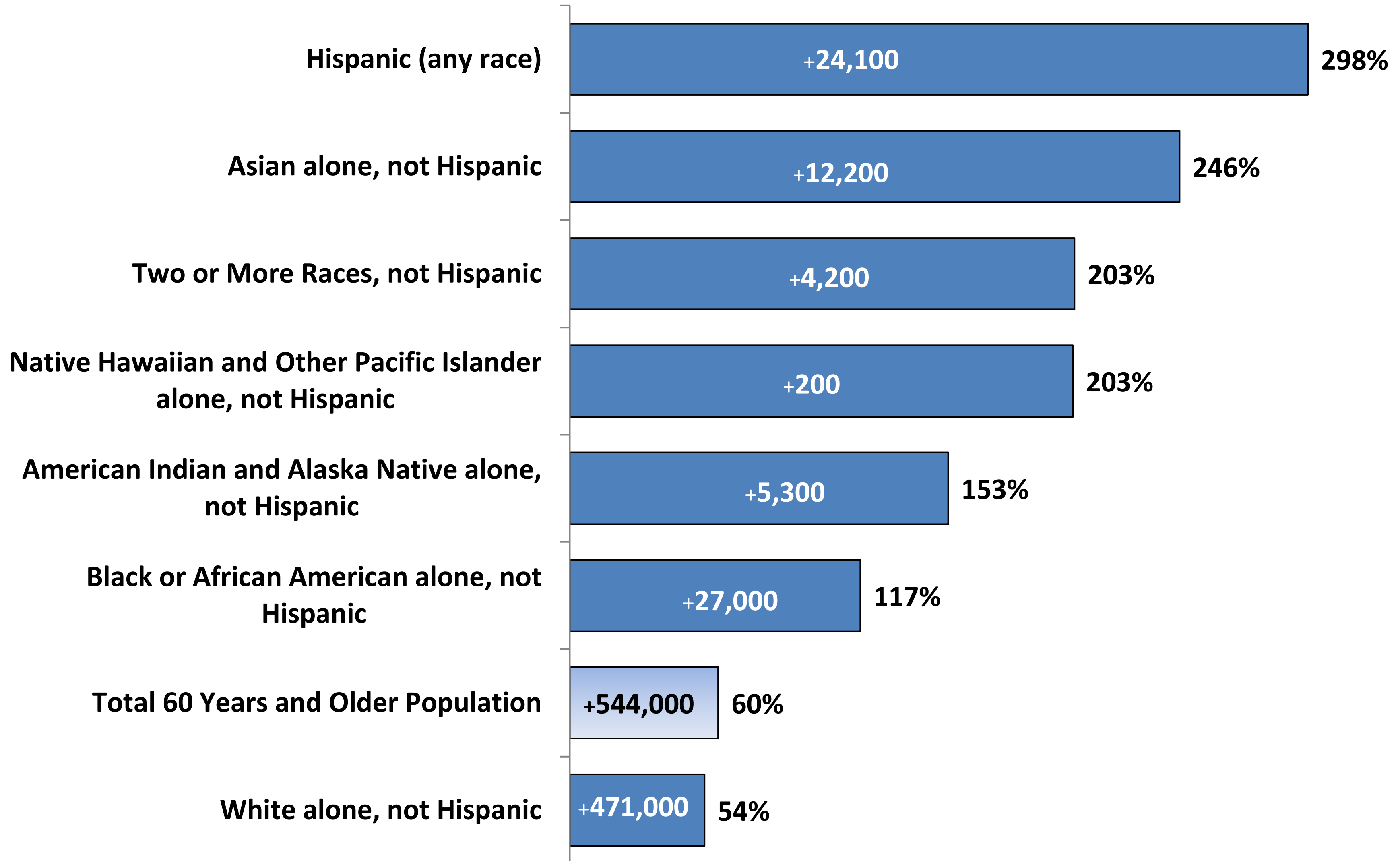

Number of Those Ages 60 and Older in Wisconsin, 2000-2021
Source: U.S. Census, Population Estimates Program
1,600,000
1,400,000
1,200,000
1,000,000
800,000
600,000
400,000
200,000
-
909,367
1,475,579
2000
2001
2002
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021


Population Ages 60 and Older, 2021
U.S. Census, Population Estimates Program, SC-EST2021-AGESEX-CIV
60
86,899
61
84,679
62
83,418
63
82,584
64
80,756
65
76,563
66
74,891
67
72,407
68
69,426
69
67,080
70
63,051
71
58,921
72
56,534
73
54,007
74
56,265
75
38,453
76
37,035
77
36,024
78
36,743
79
31,180
80
27,354
81
24,633
82
23,142
83
21,822
84
19,203
85 and older
112,509



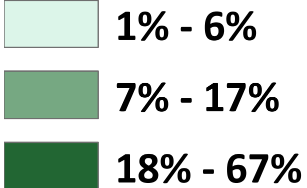
Annual Number of Live Births in Wisconsin, 1934-2021
Source: Wisconsin Department of Health Services, Vital Records Section (and its predecessor agencies)
Boomers
120,000
100,000
80,000
60,000
40,000
20,000
0
1934
1936
1938
1940
1942
1944
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020


Wisconsin Birth Rate (Births per 1,000 Population), 1935-2021
Wisconsin Department of Health Services, Office of Health Informatics, Vital Statistics
30
25
20
15
10
5
0
26.0
10.6
10.4
1935
1937
1939
1941*
1943*
1945*
1947
1949
1951
1953
1955
1957
1959
1961
1963
1965
1967
1969
1971
1973
1975
1977
1979
1981
1983
1985
1987
1989
1991
1993
1995
1997
1999
2001
2003
2005
2007
2009
2011
2013
2015
2017
2019
2021
*Rates for 1941-46 were calculated based on estimated civilian population as suggested by National Office of Vital Statistics of the U.S., 1950, Vol.1, page 29

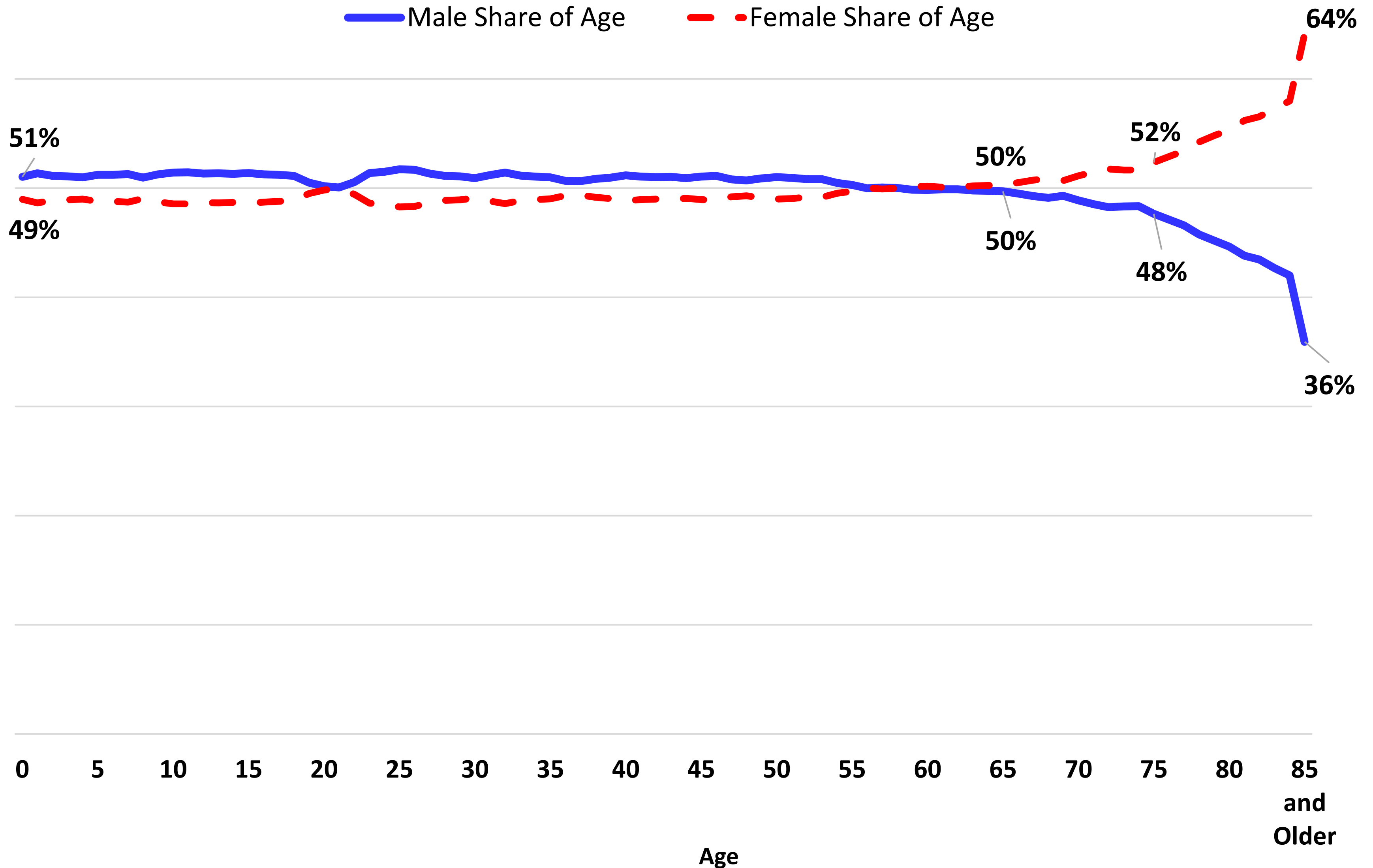

Numeric and Percent Growth of Population Ages 60 and Older by Race and Ethnicity in Wisconsin, 2000-2020
Source: U.S. Census, Population Estimates Program, June 2021
Hispanic (any race)
+24,100
298%
Asian alone, not Hispanic
+12,200
246%
Two or More Races, not Hispanic
+4,200
203%
Native Hawaiian and Other Pacific Islander alone, not Hispanic
+200
203%
American Indian and Alaska Native alone, not Hispanic
+5,300
153%
Black or African American alone, not Hispanic
+27,000
117%
Total 60 Years and Older Population
+544,000
60%
White alone, not Hispanic
+471,000
54%

Communities of Color, Share of Population Ages 60 and Older, 2020

Source: U.S. Census, Population Estimates Program, June 2021

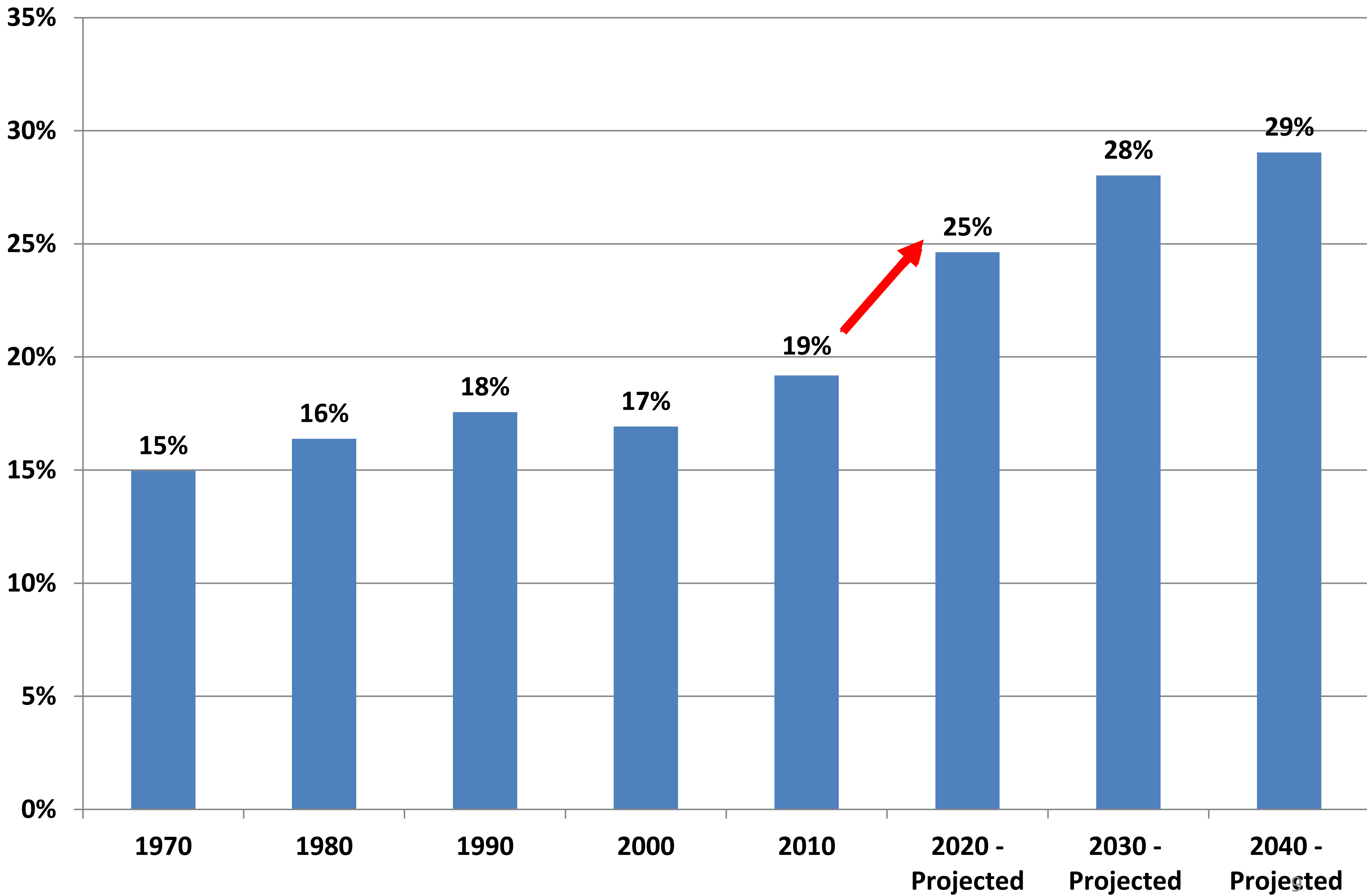


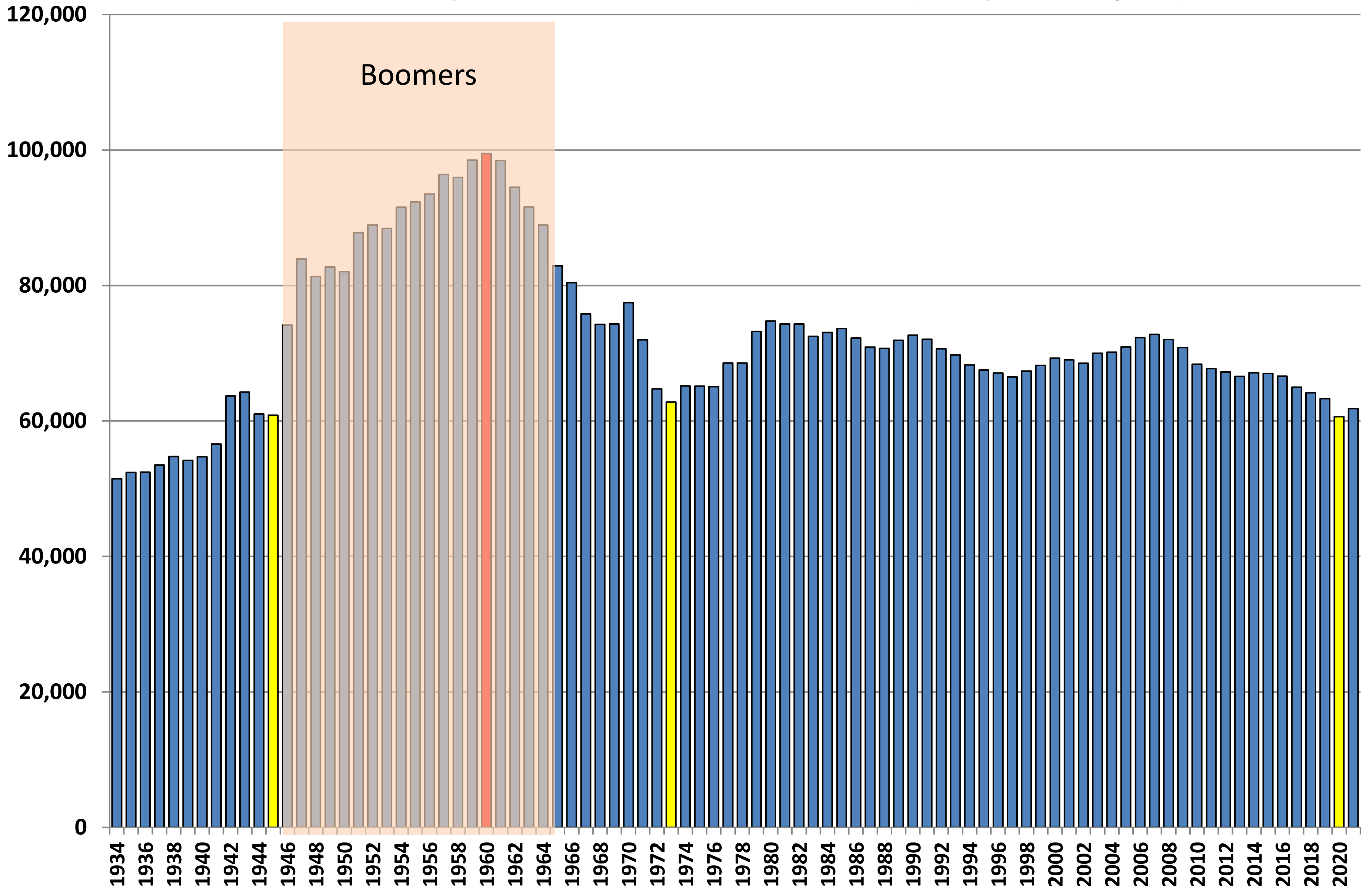
Statewide=8%


Percent of Population by Sex by Single Year of Age, Wisconsin, 2021
U.S. Census, Population Estimates Program, SC-EST2020-AGESEX-CIV
Male Share of Age
Female Share of Age
51%
49%
50%
50%
52%
48%
64%
36%
0
5
10
15
20
25
30
35
40
45
50
55
60
65
70
75
80
85 and Older
Age

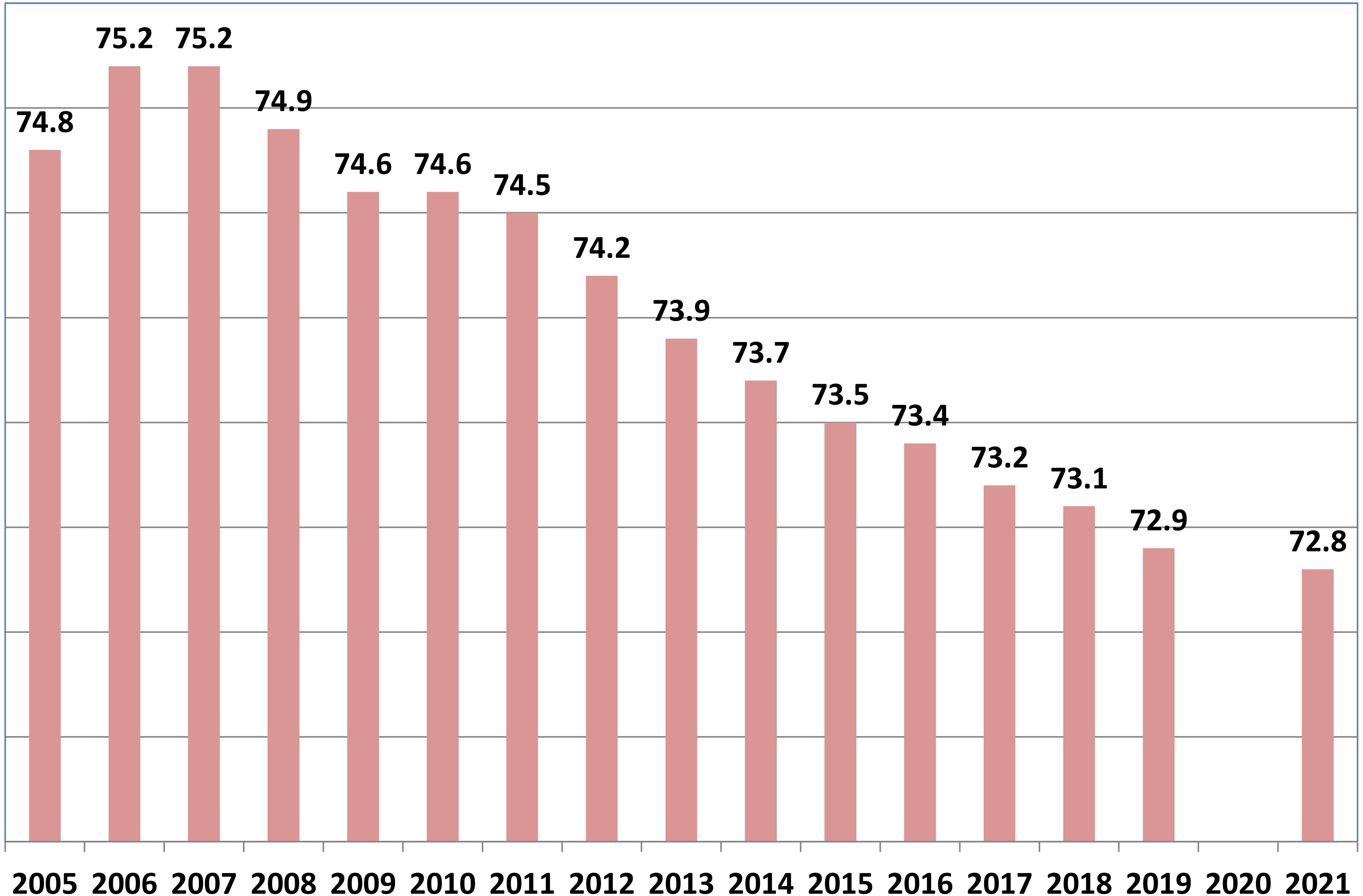
Wisconsin, Ages 60 and Older as Share of Total Population

Source: U.S. Census, Wisconsin Department Demographic Services Center, and IPUMS-USA, University of Minnesota, www.ipums.org.



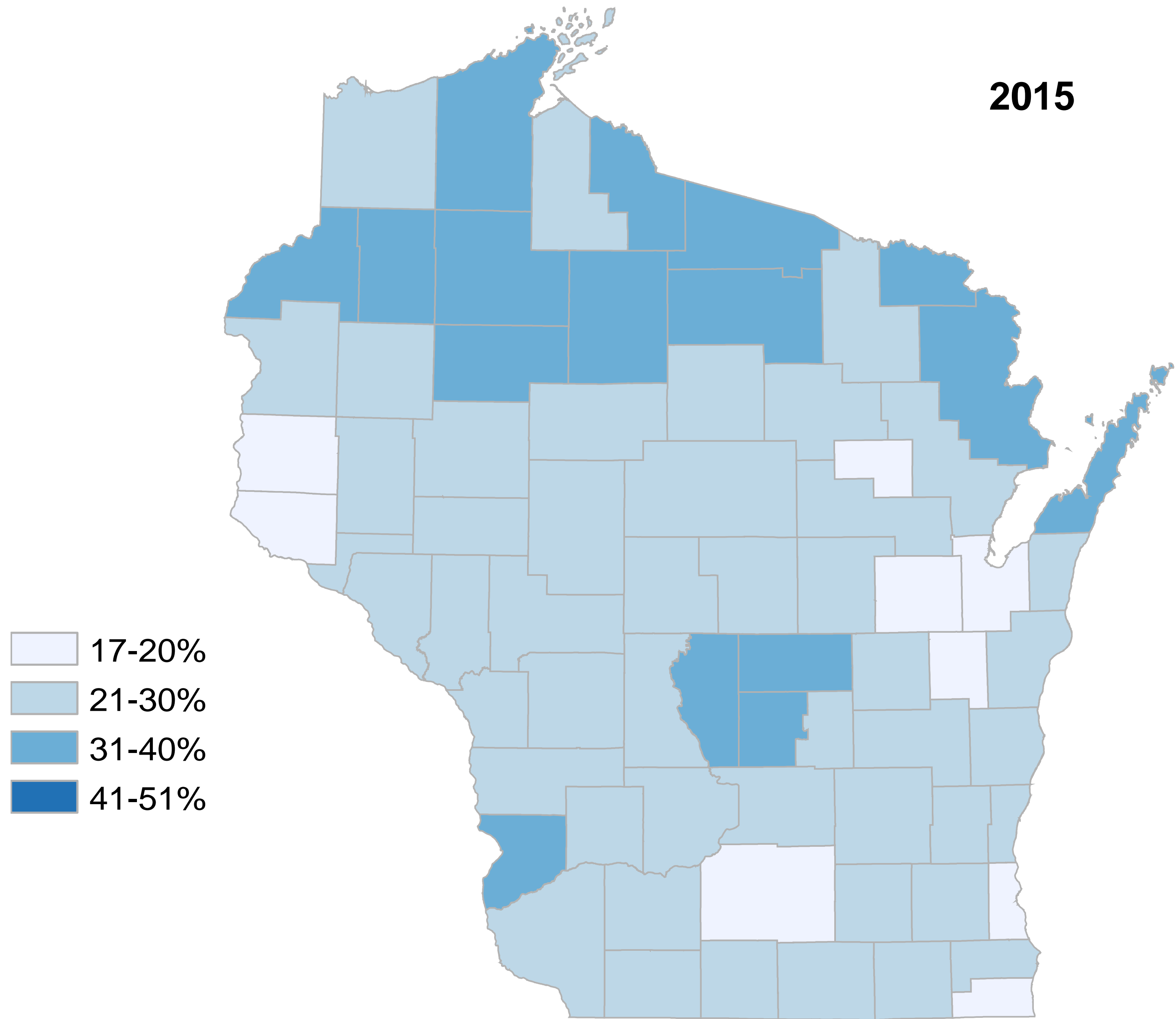


Annual Number of Live Births in Wisconsin, 1934-2021
Source: Wisconsin Department of Health Services, Vital Records Section (and its predecessor agencies)
Boomers
120,000
100,000
80,000
60,000
40,000
20,000
0
1934
1936
1938
1940
1942
1944
1946
1948
1950
1952
1954
1956
1958
1960
1962
1964
1966
1968
1970
1972
1974
1976
1978
1980
1982
1984
1986
1988
1990
1992
1994
1996
1998
2000
2002
2004
2006
2008
2010
2012
2014
2016
2018
2020



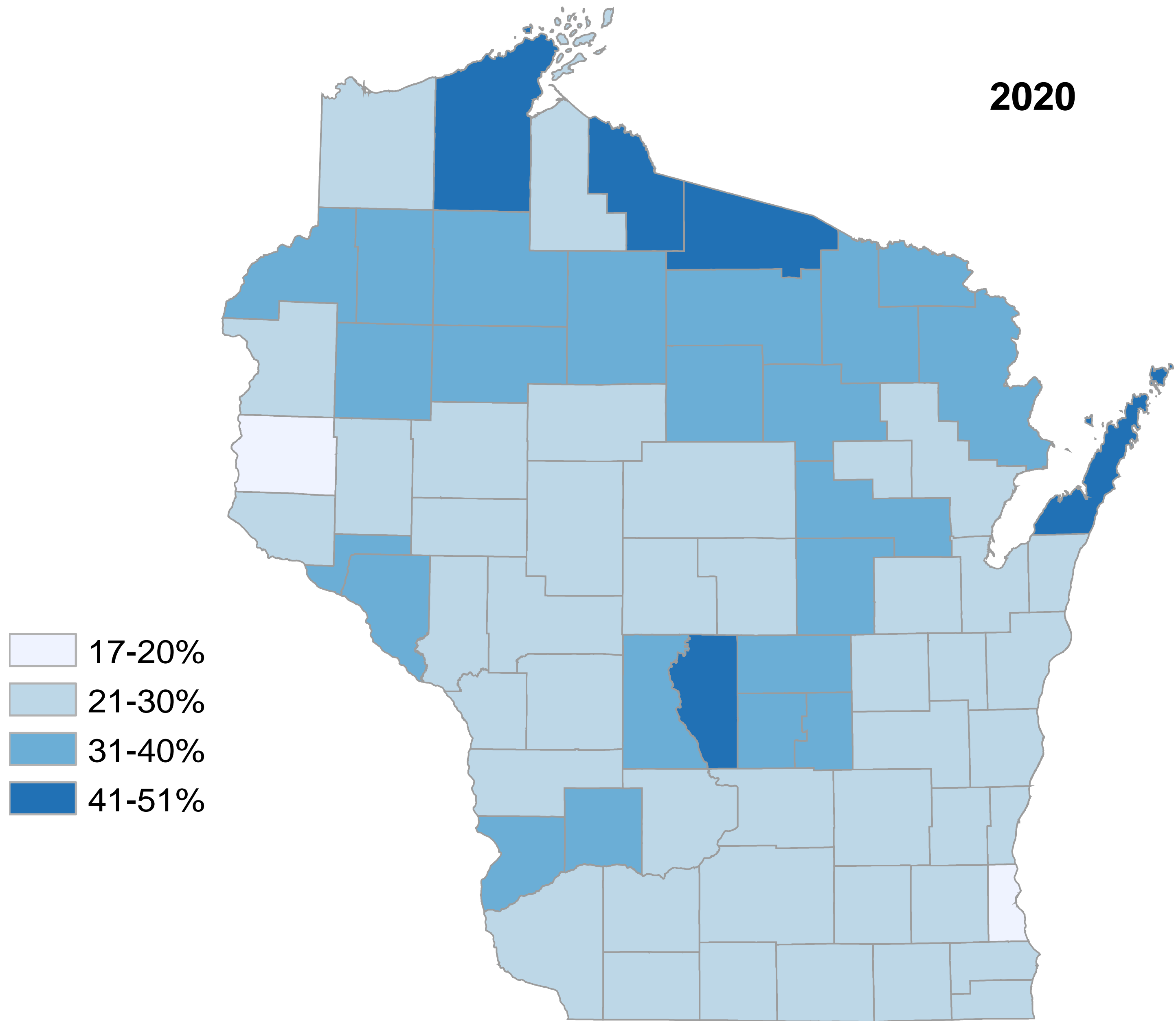
Median Age of Population Ages 65 and Older, Wisconsin, 2005-2021
Source: U.S. Census, American Community Survey, Table S0103
74.8
75.2
75.2
74.9
74.6
74.6
74.5
74.2
73.9
73.7
73.5
73.4
73.2
73.1
72.9
72.8
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
2021

Percent of the Projected Population Ages 60 and Older, 2015–2040



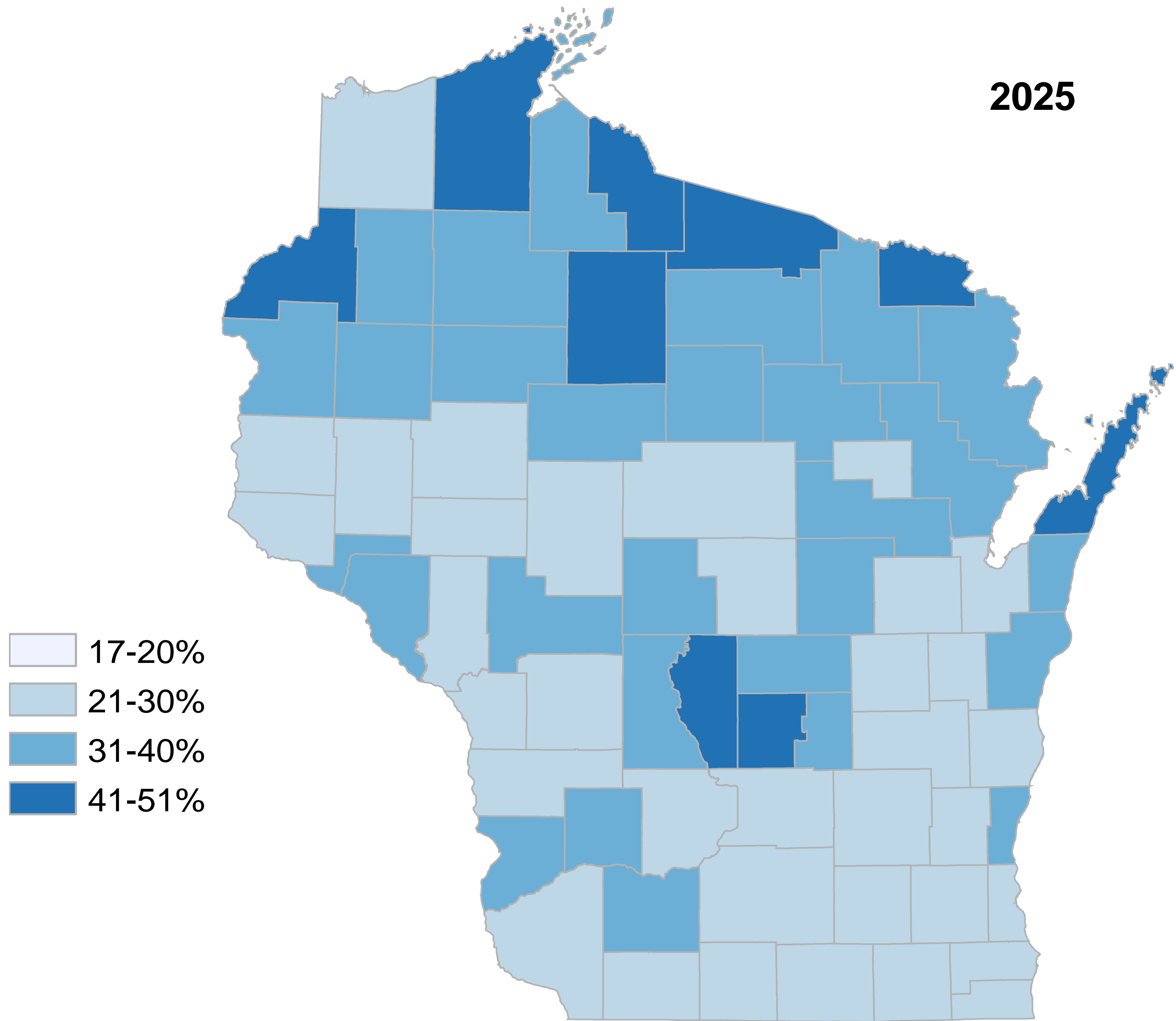
Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013

Percent of the Projected Population Ages 60 and Older, 2015–2040



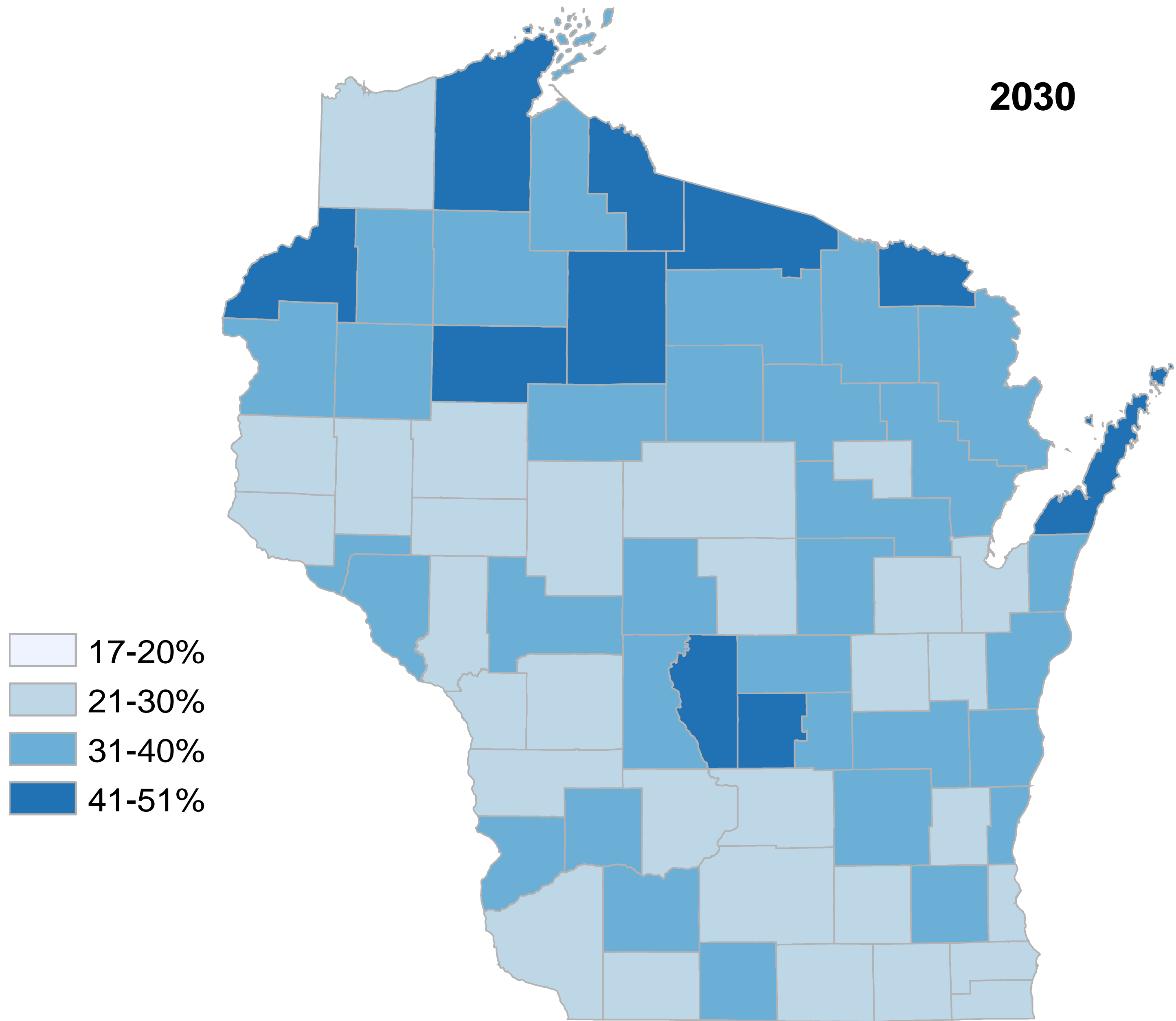
Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013

Percent of the Projected Population Ages 60 and Older, 2015–2040



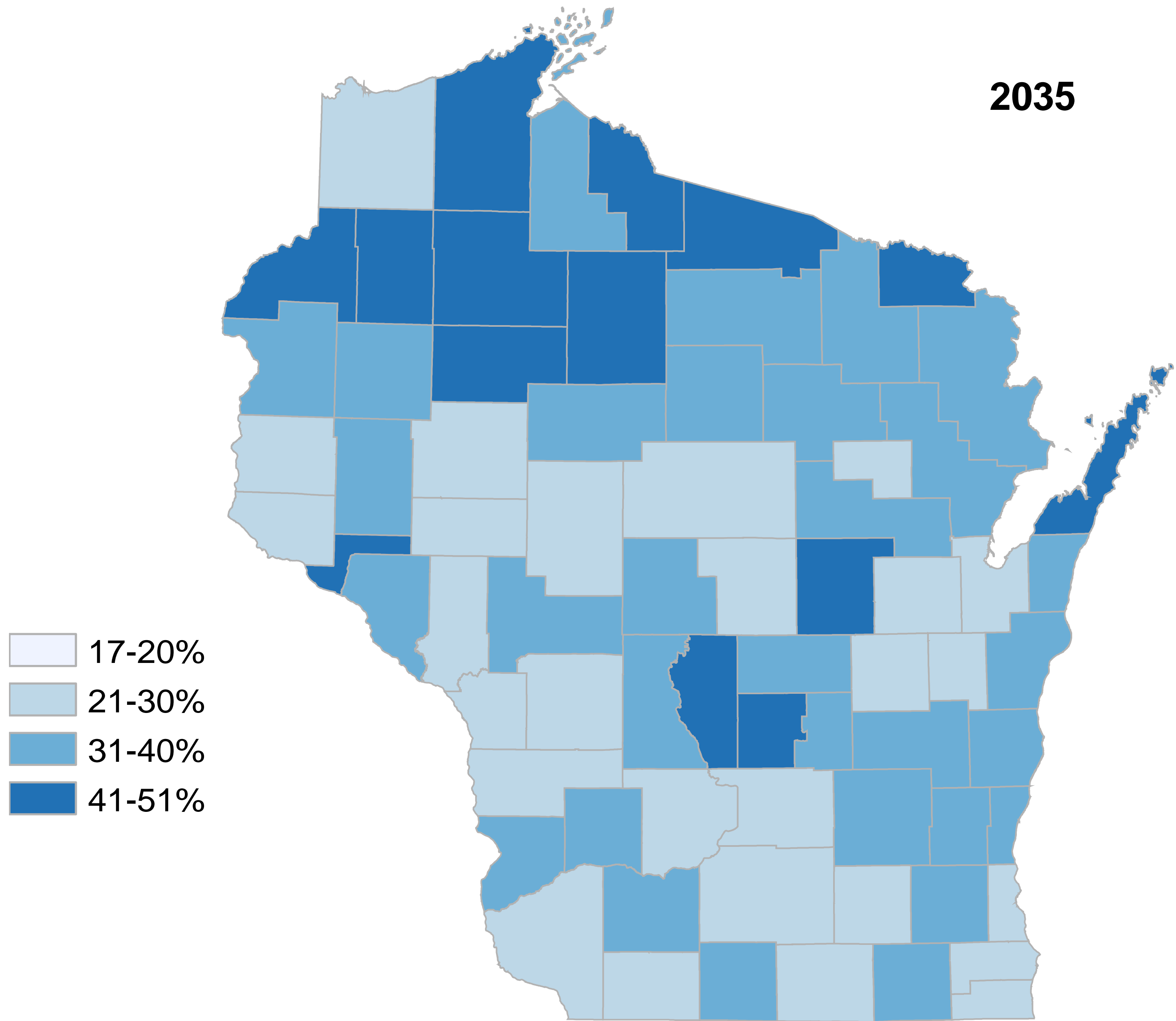
Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013

Percent of the Projected Population Ages 60 and Older, 2015–2040



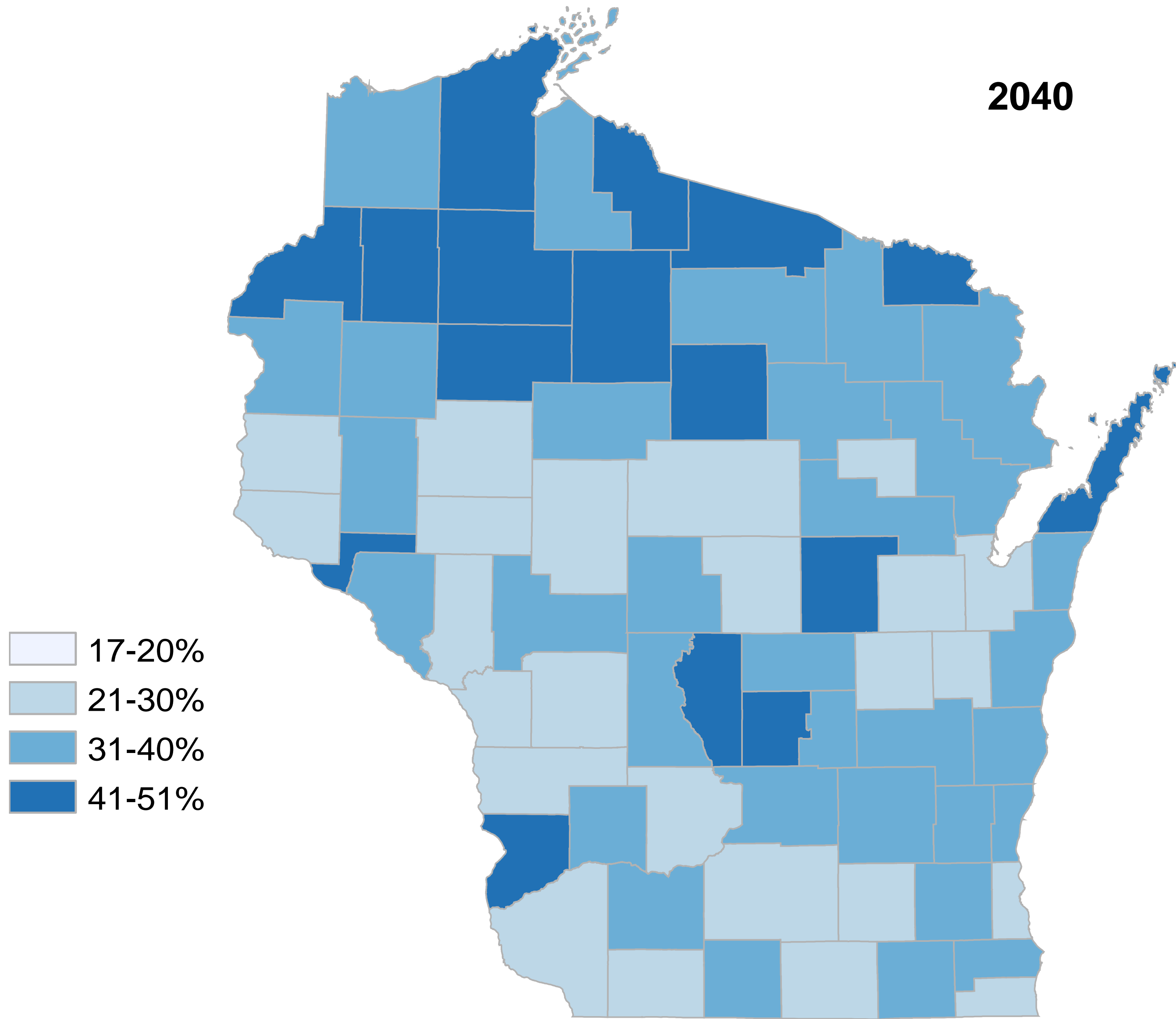
Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013

Percent of the Projected Population Ages 60 and Older, 2015–2040

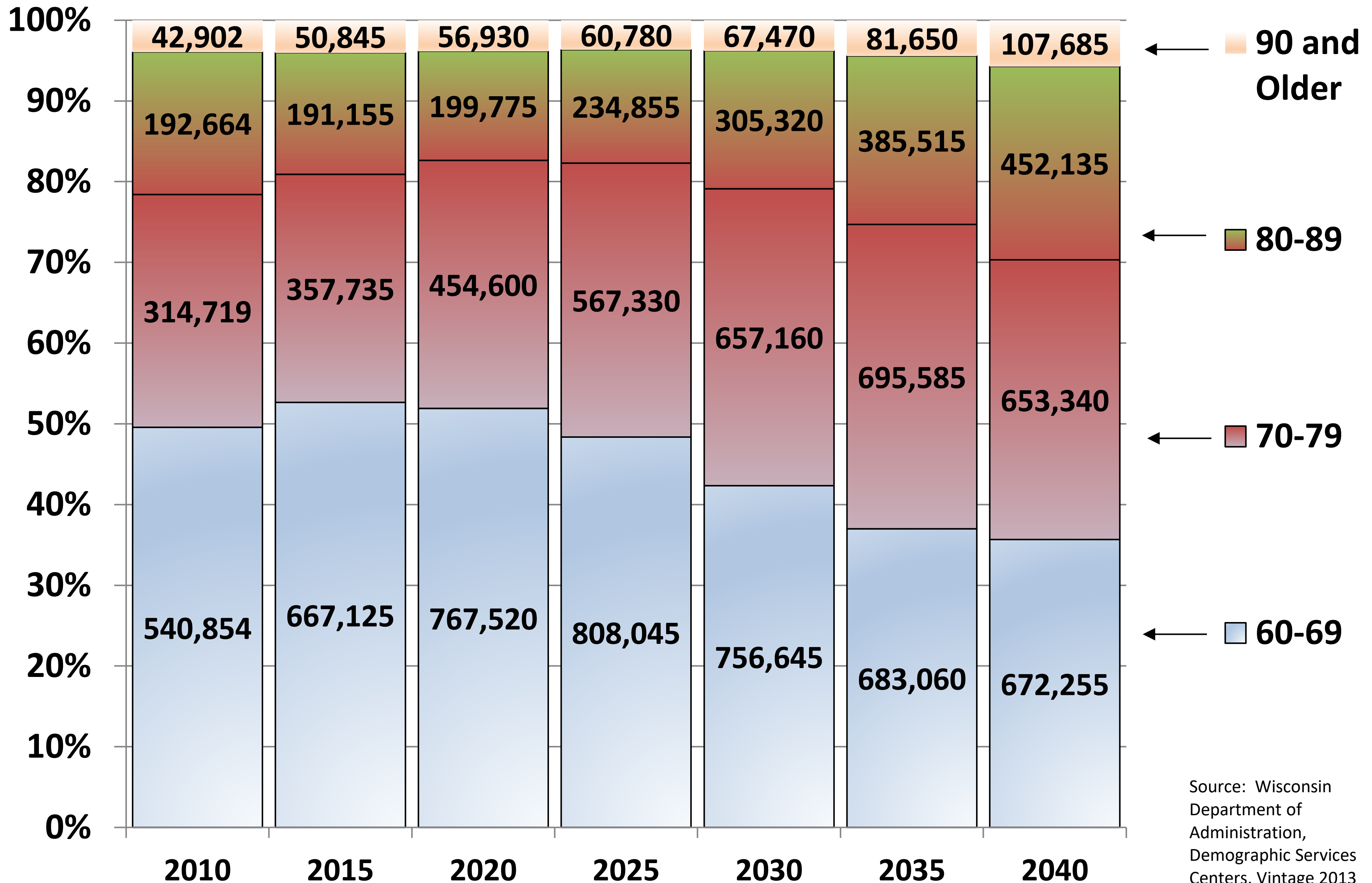


Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013

Percent of the Projected Population Ages 60 and Older, 2015–2040



Source: Wisconsin Department of Administration, Demographic Services, 2010–2040 Population Projections, Vintage 2013



Projected 10-Year Age Groups' Population Within Those Ages 60 and Older, Wisconsin, 2010-2040
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
42,902
50,845
56,930
60,780
67,470
81,650
107,685
192,664
191,155
199,775
234,855
305,320
385,515
452,135
314,719
357,735
454,600
567,330
657,160
695,585
653,340
540,854
667,125
767,520
808,045
756,645
683,060
672,255
2010
2015
2020
2025
2030
2035
2040
90 and Older
80-89
70-79
60-69
Source: Wisconsin Department of Administration, Demographic Services Centers, Vintage 2013

WISCONSIN DEPARTMENT *of* HEALTH SERVICES

Eric Grosso
608-266-7803
ericr.grosso@dhs.wisconsin.gov

The Aging Population: Mental Illness, Substance Use Disorders and Dementia

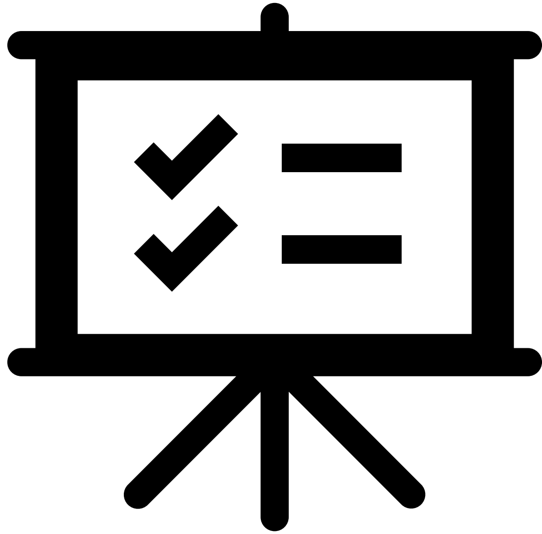
Art Walaszek, MD

January 18, 2023

Wisconsin Alzheimer's Disease Research Center
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

Wisconsin Alzheimer's Institute
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

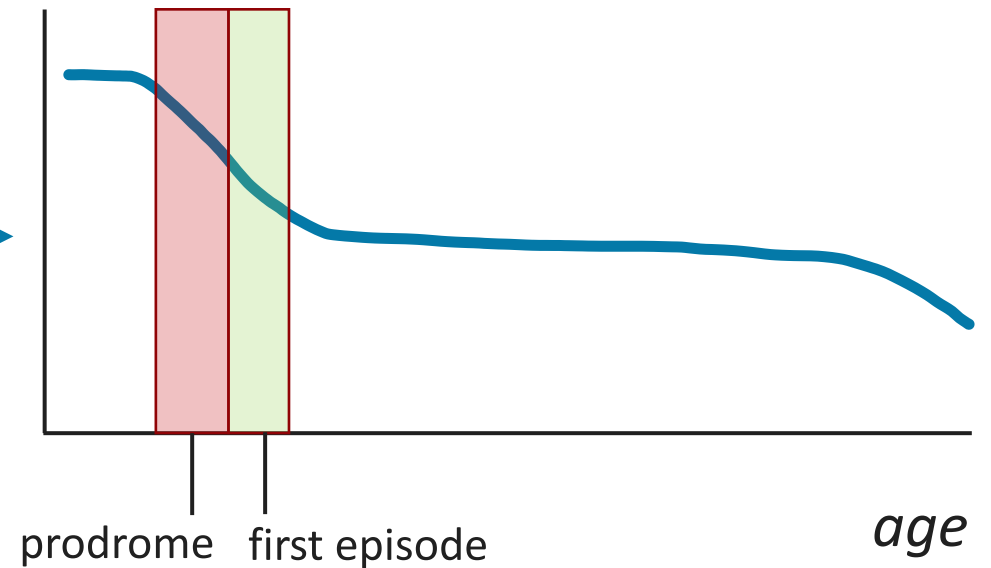
Today's agenda



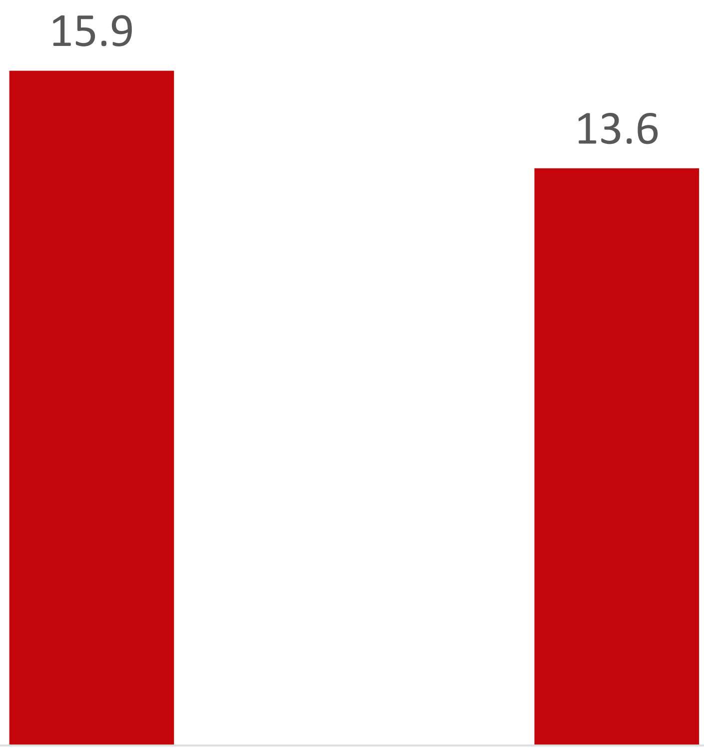
- Risk of dementia in people with chronic mental illness and substance use disorders
- When to suspect dementia in a person with chronic mental illness
- Distinguishing behavioral & psychological symptoms of dementia from symptoms of chronic mental illness
- How to respond to behavioral and psychological symptoms of dementia

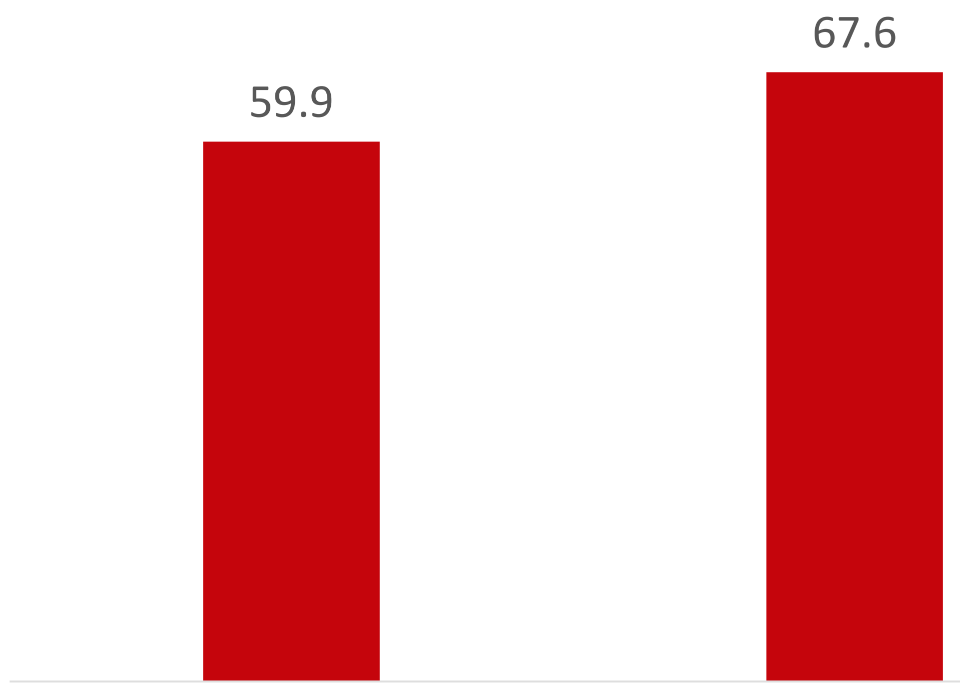
The course of schizophrenia

- clinical presentation
  - positive symptoms
  - negative symptoms
  - cognitive symptoms
  - functional impairment
- comorbidities that affect dementia risk
  - tobacco & other drug use
  - cardiovascular disease
  - diabetes mellitus



Schizophrenia shortens life expectancy





Schizophrenia & risk of dementia

Dementia at age 66:
- 28% of people with schizophrenia (SZ)
- 1% of people without severe mental illness (SMI)

With SZ
Black
Hispanic
Non-Hispanic White

Without SMI
Black
Hispanic
Non-Hispanic White

Individuals, %
100
80
60
40
20
0

66 68 70 72 74 76 78 80 82 84 86 88 90 92 94
Age, y

Bipolar disorder

- clinical presentation
  - manic or hypomanic episodes
  - depressive episodes
  - may include psychosis
  - recovery in between episodes
  - alcohol & other drug use
- cognitive impairment
  - bipolar euthymic > mild cognitive impairment
  - bipolar manic/depressed > frontotemporal dementia
- lithium
  - gold standard treatment for bipolar disorder
  - may be protective against dementia

Bipolar disorder & risk of dementia

People with bipolar disorder have roughly twice the risk of developing dementia as people without bipolar disorder

Survival Probability

1.0
0.8
0.6
0.4
0.2
0.0

Male & female veterans ages 65-79

0 2 4 6 8 10

Study Year

Diagnosis — No SMI — Bipolar — Schizophrenia

Major depressive disorder

- clinical presentation
  - episodes of changes in mood, behavior & thoughts
  - for roughly half of people, will become a recurrent illness
  - increased risk of suicide (true for other psychiatric disorders, too)
  - alcohol & other drug use
- risk of dementia
  - overall risk roughly doubled
  - markedly higher risk with late-onset (65+) depression
  - higher risk of vascular dementia than Alzheimer’s disease

Why does having a chronic mental illness increase the risk of dementia?

- tobacco, alcohol (more on next slide) & other drugs
- medical conditions such as diabetes and heart disease
- low physical activity
- poor access to healthy food
- risky behaviors
- poor access to medical care
- social determinants of health
- neuroinflammation
- decreased brain plasticity
- genetic risks
- lower cognitive reserve

Alcohol use in older adults

- NIAAA recommendation for people 65 and older:
  - no more than 3 drinks in a setting
  - no more than 7 drinks per week
- At-risk alcohol use (2+ drinks on a usual drinking day in past 30 days) or binge-drinking (5+ drinks on at least one day in past 30 days):
  - older men: 28%
  - older women: 11%

What is a standard drink?

12 fl oz of regular beer

8–9 fl oz of malt liquor (shown in a 12 oz glass)

5 fl oz of table wine

1.5 fl oz shot of distilled spirits (gin, rum, tequila, vodka, whiskey, etc.)

about 5% alcohol

about 7% alcohol

about 12% alcohol

about 40% alcohol

Alcohol use & risk of dementia

Age 60

Hazard ratio

8.0
6.0
4.0
2.0
1.0
0.5

0 10 20 30 40 50 60 70

Alcohol units/week

Risk of dementia increases with use > 14 drinks per week

To sum up …

People with chronic mental illness and/or alcohol use disorder have a higher risk of developing dementia.

When to suspect dementia in an older adult with chronic mental illness

- difficulty remembering new information or recent events
- repetitive conversation or word-finding problems
- not recognizing familiar people
- change from baseline cognition
- change in personality or behavior
- functional problems:
  - gets lost driving
  - difficulty with money management
  - less able to take care of self

Definition of dementia (major neurocognitive disorder)

- syndrome of acquired, persistent decline in several realms of intellectual ability:
  - problems with memory
  - problems with language
  - visuospatial problems
  - decreased problem-solving, abstraction and other executive functions
  - reduced attention
  - decreased ability to recognize faces, objects, etc.
  - decreased ability to perform complex tasks
- plus functional impairment

Causes of dementia

Alzheimer's disease

vascular dementia

62%
(AD alone)

11%

14%

1%

0.6%

1.2%

frontotemporal dementia

4%

5%

Lewy body disease

1.3%

alcohol

0.4%

other

Challenges in diagnosing dementia in people with chronic mental illness

- usual cognitive screening tools may not be as useful
- may have cognitive impairment at baseline
- baseline cognition/functioning may not be known
- poor access to medical care
- polypharmacy may contribute to cognitive impairment

Medication review

- review all medications, including over-the-counter medications and complementary & alternative medicine treatments
- older adults more prone to side effects of medications
- specific medications of concern:
  - antipsychotics: in younger people, associated with brain atrophy; unclear if associated with increased risk of dementia; greater risk of extrapyramidal symptoms and tardive dyskinesia
  - benzodiazepines: conflicting evidence about risk of dementia; do cause reversible cognitive impairment
  - anticholinergic medications: can cause reversible cognitive impairment in people with schizophrenia ≥ 50 years old
  - valproic acid: in people with dementia, may increase the rate of shrinkage of the brain

The Beers List

- Potentially inappropriate
  - tricyclic antidepressants
  - paroxetine
  - antipsychotics
  - benzodiazepines
  - z-drugs
  - other medications with anticholinergic effects
- Use with caution
  - antipsychotics
  - SSRIs
  - SNRIs
  - mirtazapine
  - tricyclic antidepressants
- Drug-drug interactions
  - lithium

What to do about psychotropic medications

- consult with healthcare professional
- consider reducing dose of or stopping:
  - anticholinergic medications
  - benzodiazepines
  - valproate
  - antipsychotics
  - lithium (if kidney function has declined and lithium levels are high)
- for behavioral and psychological symptoms of dementia:
  - add new medication only if there is imminent danger or severe distress

To sum up …

In older adults with chronic mental illness, changes in behavior or functioning should lead to an evaluation for dementia.

Behavioral & psychological symptoms of dementia (BPSD)

- About 90% of people with dementia will experience BPSD sometime over the course of their illness.
- BPSD can be distressing to persons living with dementia (PLWD) and their caregivers, can affect PLWDs' ability to live independently, and can be dangerous.
- Since people with chronic mental illness are at higher risk of dementia, there is a good chance they will develop symptoms that could either be BPSD or a recurrence of pre-existing mental illness.

Prevalence of specific BPSD

Symptom	Prevalence
apathy	49%
depression	42%
aggression	40%
sleep disorder	39%
anxiety	39%
irritability	36%
appetite disorder	34%
aberrant motor behavior	32%
delusions	31%
disinhibition	17%
hallucinations	16%
euphoria	7%

Possible indicators of BPSD

- new symptom
- symptom significantly different (e.g., change in hallucinations)
- new medical problem (e.g, stroke)
- medication recently added or changed
- specific symptoms that would suggest BPSD:
  - vivid visual hallucinations -> Lewy body disease
  - Lilliputian hallucinations -> Lewy body disease
  - apathy -> Alzheimer’s disease, vascular dementia, frontotemporal dementia
  - delusion that one’s home is not one’s own -> Alzheimer’s disease
  - delusion of infidelity -> Alzheimer’s disease, Lewy body disease
  - presence delusion -> Lewy body disease
  - pathological laughing & crying -> any cause of dementia
  - change in personality -> any cause of dementia
- specific symptoms that are probably not BPSD:
  - suicidal ideation

Assessing BPSD

- characteristics of BPSD: timing, severity, precipitants, consequences, history
- review medication list
- consider medical causes: infection, electrolyte disturbance, stroke, head injury

To sum up …

There may be some clues to help determine if symptoms are due to pre-existing mental illness or BPSD.

How to address BPSD

- treat underlying medical causes
- discontinue offending medications & substances
- support & educate caregivers & other family members
- develop a psychological, behavioral & environmental management plan
- avoid adding new medications, unless there is risk of harm to self or others
- if a medication is added, regularly monitor outcomes & attempt discontinuation
- ensure that PLWDs & caregivers are in a safe environment

Tips for communicating with primary care providers & other healthcare professionals

- Describe the situation concisely
  - e.g., “I believe that Mrs. X is developing dementia. Her memory is much worse than it used to be. She’s forgetting to her medications. Her blood pressure has been higher. She’s fallen a few times and hit her head.”
- Express your concern
  - e.g., “I’m worried that she may hurt herself accidentally because she’s no longer able to care for herself.”
- Assert what you think your client needs
  - e.g., “Could we schedule an appointment with you for an exam and any tests you think are necessary?”
- Reinforce a positive outcome
  - e.g., “I really appreciate your taking my concerns seriously.”

Practicing person-centered care

- Acknowledge and accept the experience of the person living with dementia.
- Take into consideration their prior life, which may provide clues about current behavior and about effective approaches to care.
- Identify past and current hobbies and interests.
- Take their report of events, feelings, and thoughts seriously.

Communicating effectively with a person living with dementia (PLWD)

- Don’t try to reason or convince. Their ability to use logic may not be working properly.
- Keep your questions, responses and instructions simple. Break down instructions into one or two steps at a time.
- Avoid open-ended questions. Offer two choices – and you may have to help them with the choice.
- Speak more slowly. Speak in simple and direct language.
- Give the PLWD enough time and opportunity to express themselves.
- Use calm, positive statements. Be reassuring and encouraging. Celebrate small successes. Express your gratitude.
- Avoid negative words, tone, and facial expressions. Don’t ask the PLWD to “try harder.” Don’t tell them that they are wrong.
- Consider using gestures, pictures, written words or verbal cues.

Changing the environment to support the person living with dementia

- The environment should feel comfortable and familiar – like a home, rather than institutional.
- Ensure that each PLWD has a private space in which they can feel safe.
- Ensure sufficient lighting.
- Place cues to help PLWDs find their way around the residence.
- Provide easy, safe and secure access to the outdoors.
- Reduce noise and clutter, for example, by eliminating non-emergency overhead paging systems or televisions.
- Create activity areas with recreational opportunities.
- Create low-stimulation areas where a PLWD can rest or take a break.

Promoting a regular daily routine

- Promote regularity of daily rhythms, including when the PLWD wakes up, gets medications, eats meals, participates in activities, and goes to bed.
- Expose PLWDs to as much daylight (or bright light) during the daytime as possible.
- Encourage physical activities. Promote contacts with other people. Support healthy eating.
- Encourage the PLWD to make his or her own choices in activities and to be as independent as possible with regard to activities of daily living.
- Schedule activities that the PLWD will find meaningful, pleasant, and doable.
- Assign staff to work consistently with the PLWD to promote a sense of safety and familiarity.
- Ensure that PLWDs, especially those who pace or wander, have adequate hydration and nutrition.

The DICE approach

Describe: caregiver describes problematic behavior: context, environment, patient perspective, degree of distress

Investigate: provider investigates possible causes: meds, pain, medical conditions, psychiatric comorbidity, sleep, sensory changes, loss of control, boredom

Create: caregiver and team collaborate to create and implement treatment plan: respond to physical problems, strategize behavioral interventions

Evaluate: provider evaluates whether interventions have been implemented, and have been safe and effective

To sum up …

Some of the safest and most effective ways to address BPSD include communicating effectively, changing the environment and promoting a regular daily routine.

Your questions?